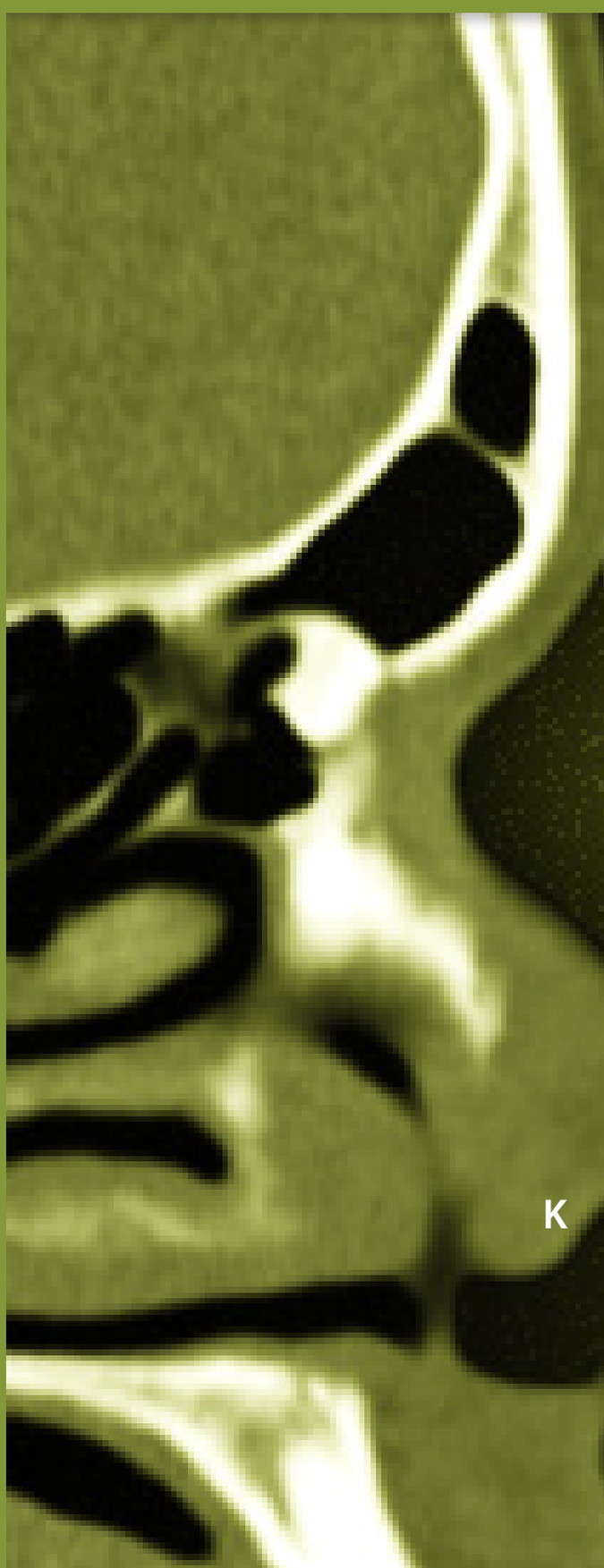
ISSN: 0300-0729

VOLUME 63 | SUPPLEMENT 34 | OCTOBER 2025

RHINOLOGY

Official Journal of the European and International Societies

VOLUME 63 | SUPPLEMENT 34 | OCTOBER 2025



ERS 2025 abstract book

30th congress of the European Rhinologic Society

Budapest, Hungary

June 22-26, 2025

2025

RHINOLOGY

Official Journal of the European and International Rhinologic Societies

Editor-in-Chief
Prof W.J. Fokkens

Associate Editors
Prof B.N. Landis
Prof S. Reitsma
Prof. A.R. Sedaghat
Prof S.K. Toppila-Salmi
Prof M. Soyka

Managing Editor
Dr. W.T.V. Germeraad

Editorial Assistant and Rhinology Secretary
Mrs. J. Kosman
Mrs. J. Keslere
assistant@rhinology.org

Webmaster
Prof D. Barać
rhinologywebmaster@gmail.com

Graphical design
Ms. E. Lowes
graphics@rhinology.com

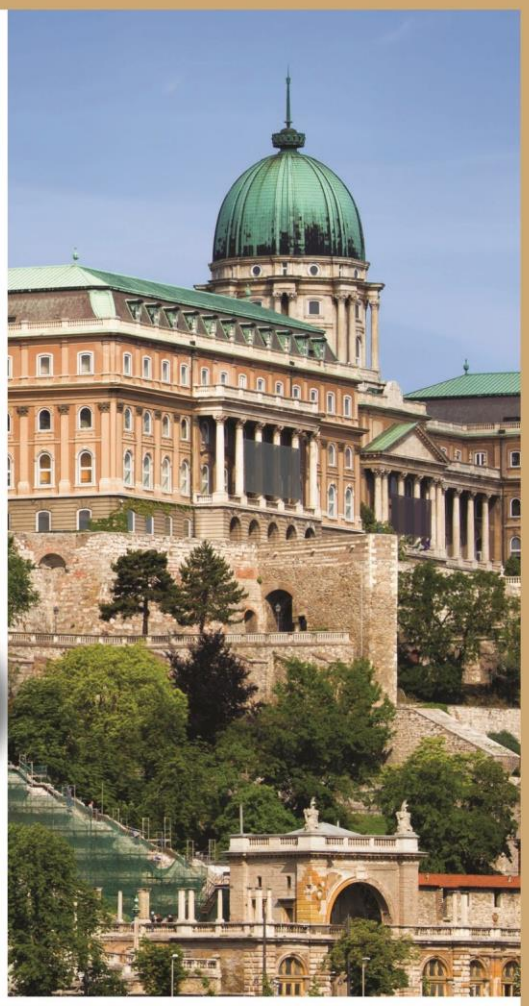
Address
Journal Rhinology, c/o AMC, Mrs. J. Kosman / A2-234, PO Box 22 660,
1100 DD Amsterdam, the Netherlands.
Tel: +31-20-566 4534
Fax: +31-20-566 9662
E-mail: assistant@rhinology.org
Website: www.rhinologyjournal.com

Rhinology (ISSN 0300-0729) is the official Journal of the European and International Rhinologic Societies and appears bimonthly in February, April, June, August, October and December. Cited in Pubmed, Current Contents, Index Medicus, Exerpta Medica and Embase.

Founded in 1963 by H.A.E. van Dishoeck, Rhinology is a worldwide non-profit making journal. The journal publishes original papers on basic research as well as clinical studies in the major field of *rhinology*, including physiology, diagnostics, pathology, immunology, medical therapy and surgery of both the nose and paranasal sinuses. Review articles and short communications are also pulished, but no Case reports. All papers are peer-reviewed. Letters-to-the-editor provide a forum for comments on published papers, and are not subject to editorial revision except for correction of English language.
In-depth studies that are too long to be included into a regular issue can be published as a supplement. Supplements are not subject to peer-review.

© Rhinology, 2025.
All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording or any information storage and retrieval system without prior permission in writing from the Publisher.
Submission of a manuscript for publication implies the transfer of the copyright from the author(s) to the publisher and entails the author's irrevocable and exclusive authorization of the publisher to collect any sums or considerations for copying or reproduction payable by third parties.





ERS2025

30th Congress of European Rhinologic Society

43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &

25th Congress of the International Rhinologic Society (IRS)

JUNE 22-25, 2025

HUNGEXPO, Budapest, Hungary

www.ers-isian2025.com



ABSTRACT BOOK



Contents

Oral Abstracts 5
Sinonasal Malignancy 1 5
Allergic Rhinitis 1 24
CRS – Surgical Management 1 33
Epistaxis and HHT 1 43
Best Abstract Presentation 50
ABSTRACT SESSION 7 - Best Junior Abstracts 50
CRS – Surgical Management 2 57
Paediatric Rhinology 2 63
CRS -Medical Management 1 72
Technological Advances 78
Rhinology – Miscellaneous 1 84
ABSTRACT SESSION 13 – Best Junior Abstracts 93
Sinonasal Malignancy 2 101
CRS – Outcome Assessment 2 109
Granulomatous Diseases of the Nose 1 117
Smell and taste 1 125
Septal and turbinate surgery 1 137
Imaging and Investigations 1 146
CRS – Biologics 2 152
Skull Base Surgery 1 160
Rhinoplasty 1 170
Rhinology – Miscellaneous 2 177
Skull Base Surgery 2 184
Acute Rhinosinusitis –Non-Allergic Rhinitis 191
CRS – Biologics 3 197
Allergic Rhinitis 2 204
Rhinoplasty 2 211





Smell and taste 2 216
Rhinology –Miscellaneous 3 224
CRS – Biologics 4 231
Diagnosis and Investigations 1 239
Facial Pain – Facial Plastic Surgery Beyond the Nose 247
Septal and Turbinate Surgery 2 254
CRS – Pathophysiology 1 261
CRS – Surgical Management 3 269
Snoring and OSA 1 276
Training 1 291
Imaging and Investigations 2 296
Lacrimal Surgery 299
Sinonasal Malignancy 3 307
CRS - Biologics 5 314
Smell and Taste 3 321
CRS – Diagnosis and Investigations 2 327
CRS Medical Management + Diagnosis & Investigations 334
Training 2 339
CRS – Medical Management (Excluding Biologics) 344
Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 349
Epistaxis and HHT 2 357
Pituitary & Orbital Surgery 364
CRS – Outcome Assessment 3 370
Non-Allergic Rhinitis – Snoring and OSA 2 377
Nasal & Facial Trauma - Benign Nasal Tumor 384
Smell and Taste 4 391
CRS – Surgical Management 4 399
CRS – Pathophysiology 2 404





Skull Base Surgery 4 406
Poster Abstracts 415
Acute Rhinosinusitis 415
Allergic Rhinitis 425
Benign Nasal Tumors 435
CRS – Biologics 471
CRS - Medical Management (Excluding biologics) 501
CRS – Diagnosis and Investigations 503
CRS – Medical Management 517
CRS – Outcome Assessment 532
CRS – Pathophysiology 543
CRS – Surgical Management 555
CSF leaks; diagnosis and management 570
Epistaxis and HHT 574
Facial Pain 580
Facial Plastic surgery beyond the nose 581
Granulomatous diseases of the nose 583
Imaging and Investigations 591
Lacrimal Surgery 598
Nasal and facial trauma 599
Non-allergic rhinitis 601
Orbital surgery 603
Paediatric rhinology 610
Pituitary Surgery 625
Rhinology – miscellaneous 626
Rhinoplasty 659
Septal and turbinate surgery 669
Sinonasal malignancy 681
Skull base surgery 713



Smell and taste 725

Snoring and OSA 740

Technological advances 753

Training 758

Authors Abstracts Index 763



Oral Abstracts

Sinonasal Malignancy 1

3668

Outcomes in Orbit-sparing versus Orbit-sacrificing Surgery for Sinonasal Malignancies with Orbital Involvement – A Systematic Review and Meta-Analysis

Claire Jing-Wen Tan[1], Manish Warrier[2], Lu Hui Png[1], Kimberley LiQin Kiong[1], Tze Choong Charn[1], Edward Kuan[3], Neville Wei Yang Teo[4]

[1]Department of Otorhinolaryngology – Head & Neck Surgery, Singapore General Hospital, Singapore, [2]Yong Loo Lin School of Medicine, National University of Singapore, Singapore, [3]Departments of Otolaryngology-Head and Neck Surgery and Neurological Surgery, University of California, Irvine, Orange, CA, USA, [4]Department of Otorhinolaryngology—Head & Neck Surgery, Singapore General Hospital

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

Background: Sinonasal tumours with orbital involvement may be managed with orbit-sacrificing or orbit-preserving surgical approaches, with a recent shift towards orbital preservation to reduce post-operative morbidity while maintaining oncological success. The current clinical data on the most optimal approach for managing such locally advanced tumours remains inconclusive.

Methods: PubMed, Embase and SCOPUS were searched from inception to 12 June 2024 for longitudinal studies investigating oncological and functional outcomes in sinonasal tumours with orbital involvement managed with orbit-sacrificing versus orbit-preserving surgery. Two independent authors selected relevant articles, extracted data, assessed bias using the Newcastle-Ottawa Scale and evaluated the quality of evidence following the Grading of Recommendations, Assessment, Development and Evaluations framework. Random-effects meta-analysis was performed to synthesize pooled oncological outcomes, while descriptive reviews was performed for functional outcomes.

Results: This systematic review and meta-analysis of 12 studies and 758 participants found that the five-year overall survival rate of patients managed with orbit-preserving surgery (55%, 95%CI: 0.32-0.76) was comparable to that in patients managed with orbit-sacrificing surgery (53%, 95% CI: 0.34-0.70). The five-year recurrence-free survival rate was significantly higher in patients managed with orbit-preserving surgical intervention (64%, 95%CI: 0.44-0.80), compared to those with orbit-sacrificing surgery (48%, 95% CI: 0.13-0.84). Descriptive review showed good functional outcomes in patients managed with orbit-preserving surgery.

Conclusion: Orbit-preserving surgery in selected cases of sinonasal tumours with orbital involvement is oncologically safe and can allow for the maintenance of a functionally useful eye. Greater number of large-scale, robust studies are required to further evaluate the outcomes in tumours with different characteristics.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4044

Metastatic Cancers to the Sinonasal Cavity: Clinical Features, Presentations, and Survival Outcomes

Marn Joon Park[1], Ji Heui Kim[3], Yoo-Sam Chung[3], Myeong Sang Yu[3], Yeong Ju Lee[3]

[1]Inha University Hospital, Department of Otorhinolaryngology, [2]Inha University Hospital, Department of Otorhinolaryngology, Inha University School of Medicine, [3]Department of Otorhinolaryngology - Head & Neck Surgery, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

Introduction: Sinonasal metastases are far rarer than primary sinonasal malignancies and are seldom reported or analyzed in the existing literature. To address these gaps, we have retrospectively analyzed 35 patients with sinonasal metastasis in a single university hospital setting over a 24-year period.

Materials and Methods: From 1998 to 2022, among 11,814 pathology reports of sinonasal tissues, 35 (0.3%) were identified with sinonasal metastasis from solid organ cancers, and were included. Patients' clinical characteristics, presentation, primary tumor profiles, treatment modalities for the sinonasal metastasis, and overall survival (OS) were retrospectively reviewed and analyzed, in addition to the literature review.

Results: Hepatocellular carcinoma (HCC) was the most common primary cancer (37.1%), followed by lung (14.3%), breast (11.4%), and thyroid (8.6%). The most common presentation was epistaxis (20%), however, 20% were identified incidentally. The nasal cavity (37.1%), sphenoid and maxillary sinus (31.4%), and skull base (34.3%) were the most prevalent metastatic locations. Although the median OS following a sinonasal metastatic diagnosis was 7.0 months, patients with isolated sinonasal metastasis, thyroid cancer- metastases, or definitive therapy for sinonasal metastasis had significant longer OS (p=0.037, 0.035, and p-trend=0.003, respectively).

Conclusion: In our study, HCC was the most common primary cancer for sinonasal metastasis, contrasting with renal cell carcinoma prevalence in Western literature, suggesting that regional cancer incidence variations may influence sinonasal metastasis epidemiology. Despite the poor prognosis in general, in selected patients with thyroid cancer or solitary sinonasal metastases, the definitive treatment for the sinonasal metastasis may aid in an increased duration of survival.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







4214

Induction chemotherapy as a Treatment Option for HPV-Positive Sinonasal non-keratinizing Squamous Cell Carcinoma

Mario Turri-Zanoni[10], Giorgio Sileo[1], Alberto Gandolfi[2], Marco Valentini[4], Alessia Lambertoni[5], Alberto Daniele Arosio[6], Alessandro Vinciguerra[7], Gianluca Dalfino[8], Gloria Schiavo[7], Davide Albertini[9], Daniel Balzi[9], Leonardo Toffenetti[9], Paolo Castelnuovo[9], Maurizio Bignami[9], Paolo Battaglia[9]

[1]ASST Settelaghi, ospedale di Circolo, Varese, [2]Università degli studi dell'insubri, Varese , [3]Università degli studi dell Insubria, Varese, [4]ASST-Lariana, St'Anna, Como, [5]ASST dei Sette Laghi, Ospedale di Circolo, Varese, [6]ASST dei Sette Laghi, Ospedale di Circolo, Varese , [7]ASST-Lariana, Ospedale st'Anna, Como, [8]ASST-settelaghi, Ospedale di Circolo, Varese , [9]Università degli studi dell'Insubria, Varese , [10]Università degli studi dell'Insubria, Varese

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

INTRODUCTION: Non-keratinizing squamous cell carcinoma (NKSCC) is a rare malignancy, and its association with human papillomavirus (HPV) has opened new perspectives in treatment approaches. The National Comprehensive Cancer Network (NCCN) guidelines consider sinonasal NKSCC primarily as a surgically managed disease. However, given the aggressive nature of these tumors and their complex anatomical location, the role of induction chemotherapy is under investigation as a potential strategy to improve clinical outcomes and facilitate less invasive surgical approaches.

MATERIALS & METHODS: A retrospective analysis was conducted on eight patients diagnosed with HPV-positive sinonasal NKSCC. Of these, three patients underwent induction chemotherapy, one patient was unable to receive induction therapy due to comorbidities, and the remaining four patients underwent surgery as the primary treatment. Treatment response, overall survival, and disease-free survival rates were assessed. Data were collected from institutional databases, and HPV status was confirmed through p16 immunohistochemistry and in situ hybridization (ISH) analysis.

RESULTS: Preliminary findings suggest that induction chemotherapy leads to significant tumor volume reduction, allowing for more conservative surgical approaches. In patients undergoing surgery, adjuvant radiotherapy was considered based on pathological findings. The treatment strategy demonstrated promising survival rates and manageable toxicity profiles with an overall improvement in prognosis ($p>0.001$).

CONCLUSIONS: Induction chemotherapy may represent a viable treatment option for HPV-positive sinonasal NKSCC, offering potential benefits in tumor control and organ preservation. Adjuvant radiotherapy remains a key component of treatment in selected cases. Further studies are necessary to validate these findings and optimize treatment protocols.



4364

Biopsy in local anesthesia for sinonasal malignancy – easy way of prolonging diagnostic pathway

Borna Miličić[1], Ema Čaušić[2], Katarina Đurić Vuković[1], Marija Pastorčić Grgić[1]

[1]University Hospital Centre Zagreb, Department of Otorhilolaryngology and Head and Neck Surgery.., [2]Children's Hospital Srebrnjak

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

Introduction: A unilateral mass in the nasal cavity raises suspicion of sinonasal malignancy. One of the initial steps in establishing a diagnosis is performing a biopsy, either using local anesthetic or under general anesthesia. We aimed to establish the accuracy of diagnostic biopsies performed under local or general anesthesia and the influence of the type of biopsy on the time to treat.

Methods: This retrospective study included all patients treated for sinonasal malignancy at University Hospital Centre Zagreb between 2010 and 2023. All patients underwent a preoperative biopsy, Multidisciplinary Team decision, and surgical resection.

Results: A total of 38 patients were analyzed, mean age of 57.5 years, 28 men. Initial biopsy was performed in local anesthesia in 18 patients and FESS biopsy in general anesthesia was performed in 20 patients. Biopsy was diagnostic in 11/18 (61.1%) patients in the first group and in 19/20 (95%) in the second. The difference between groups was significant (p=0.03). The time to treat from initial biopsy to surgery is doubled for the group of patients with inconclusive initial biopsy results, median of 67 and 36 days.

Conclusion: We found discrepancies between biopsy results and the final pathology report in a significant number of patients, leading to prolonged time to treat. Biopsies performed under general anesthesia were more reliable. In patients with suspicion of sinonasal malignancy, a biopsy under general anesthesia should be planned to speed up the accurate diagnosis and initiation of appropriate treatment.



4398

Outcome-oriented clinicopathological reappraisal of sinonasal adenoid cystic carcinoma with broad morphological spectrum and high MYB::NFIB prevalence

Tina Mauthe[1], Christian Meerwein[1], David Holzmann[1], Michael Soyka[1], Simon Müller[1], Ulrike Held[2], Sandra Freiberger[3], Niels Rupp[3]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich and University of Zurich, Zurich, Switzerland, *[2]Department of Biostatistics, at the Epidemiology, Biostatistics, and Prevention Institute, University of Zurich, Zurich, Switzerland*, *[3]Department of Pathology and Molecular Pathology, University Hospital Zurich, Zurich, Switzerland*

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

Introduction: Adenoid cystic carcinoma (AdCC) is a rare malignancy of the salivary glands that occasionally arises in the sinonasal tract. Due to its low incidence, prognostic factors and molecular characteristics remain incompletely understood. This study aimed to analyze clinical outcomes and histopathological parameters in patients with sinonasal AdCC.

Methods: A retrospective analysis was performed on all sinonasal AdCC cases diagnosed at the University Hospital Zurich between 2000 and 2018. Morphological tumor features were assessed, and molecular analyses were conducted to identify genetic alterations. Results: 14 patients were included, with a mean age of 57.7 years at diagnosis. MYB::NFIB gene fusion was detected in 11 of 12 analyzable cases. Solid histological subtype ($p < 0.001$), high-grade transformation ($p < 0.001$), and sphenoid sinus involvement ($p = 0.02$) were associated with poor prognosis. Median recurrence-free survival (RFS) was 5.2 years, while overall survival (OS) reached 11.3 years. The 1-, 5-, and 10-year RFS rates were 100%, 53.8%, and 23.1%, whereas OS rates at the same intervals were 100%, 91.7%, and 62.9%, respectively.

Conclusion: Solid histological subtype (≥30%), high-grade transformation, and sphenoid sinus involvement are significant negative prognostic factors in sinonasal AdCC. The high prevalence of MYB::NFIB gene fusion underscores its potential role in facilitating accurate diagnosis, particularly in morphologically ambiguous cases.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4400

Overall and disease-specific survival of sinonasal adenoid cystic carcinoma: a systematic review and meta-analysis

Tina Mauthe[1], David Holzmann[1], Michael Soyka[1], Simon Müller[1], Panagiotis Balermpas[2], Ulrike Held[3], Sandra Freiberger[4], Niels Rupp[4], Christian Meerwein[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich, University of Zurich, Zurich, Switzerland, *[2]Department of Radiation Oncology, University Hospital of Zurich, Switzerland*, *[3]Department of Biostatistics at Epidemiology, Biostatistics, and Prevention Institute, University of Zurich, Zurich, Switzerland*, *[4]Department of Pathology and Molecular Pathology, University Hospital Zurich, Switzerland*

Sinonasal Malignancy 1 | ROOM 8 - G3 - Level +1 |Sunday, June 22, 2025

Introduction: Sinonasal adenoid cystic carcinoma (snAdCC) is a rare malignancy with a tendency for local invasion and distant metastasis. Given its aggressive nature and the variability in reported outcomes, a comprehensive evaluation of survival rates and treatment efficacy is essential. This meta-analysis aimes to assess survival outcomes and clinicopathological characteristics in patients with snAdCC.Methods: A systematic literature review was performed following PRISMA guidelines. Studies reporting 5-year overall survival (OS) rates in snAdCC were included. Data extraction and quality assessment were conducted using the JBI critical appraisal checklist. Pooled survival rates and tumor characteristics were analyzed.

Results: 17 studies encompassing 2,259 patients met the inclusion criteria. The mean age was 58.1 years, with a nearly equal gender distribution (52.7% female, 47.3% male). The 5-year OS, 10-year OS, and 5-year disease-free survival (DFS) rates were 68%, 40%, and 47.2%, respectively. Most patients presented with advanced disease, with 23% classified as cT3 and 53% as cT4. Nodal (3.4%) and distant metastases (4.2%) were uncommon at diagnosis. Tumors were located in the nasal cavity (29.7%) and paranasal sinuses (67.6%), with maxillary sinus involvement in 50.9% of cases. Combined surgery and radiotherapy was the most frequent treatment strategy (45.4%), whereas 19.3% underwent surgery alone.

Conclusion: Survival outcomes in snAdCC remain limited by high rates of locally advanced disease at diagnosis. Given its propensity for recurrence and progression, long-term surveillance is essential. Multimodal treatment approaches appear beneficial, highlighting the need for individualized therapeutic strategies.



Paediatric Rhinology 1

3674

The utility of elective paediatric functional endoscopic sinus surgery in the era of balloon sinuplasty: a tertiary centre experience

Timothy Davies[1], Matthew Zammit[2], Grace Khong[4]

[1]Alder Hey Children's Hospital/Liverpool Head and Neck Centre , [2]Alder Hey Children's Hospital/ Liverpool Head and Neck Centre , [3]Alder Hey Children's Hospital / Liverpool Head and Neck Centre , [4]Alder Hey Children's Hospital

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

Introduction: Functional endoscpic sinus surgery (FESS) for the management of sinonasal pathology is a relatively rare intervention in paediatric patients, when compared to the adult population. Limited data exists outlining current practice in the UK regarding patient population, intra-operative management and outcome in paediatric patients undergoing FESS, since the advent and implementation of balloon sinuplasty.

Methods: Retrospective data collection was undertaken for patients undergoing elective paediatric FESS (pFESS) at Alder Hey Children's Hospital between January 2017 and December 2024.Results: Between 2017 and 2024 65 patients underwent elective pFESS at Alder Hey Children's Hospital. Patients had a median age of 12 years with a male to female ratio of 1.2:1. 6 patients included in the cohort required revision surgery, of whom, 4 (66%) had a diagnosis of cystic fibrosis (p=0.007). The mean Lund McKay score for patients treated for CRS was 11.68 (+/- 8.02). The mean Lund-McKay score for patients with treatment failure was 13.8 (+/-7.98) (p=0.014). 20% of patients included in our cohort had additional procedures, including broncholaveolar lavage, line insertion and septoplasty at the time of pFESS.

Discussion: pFESS remains an appropriate intervention in the management of sinonasal pathology in the paediatric setting. Here we demonstrate for the first time in the literature an association between a diagnosis of cystic fibrosis and a need for revision pFESS. It is our hope that this will form a component of the consent process for cystic fibrosis patients undergoing pFESS in the future. Additional procedures, such as bronchoalveolar lavage, were required in 20% of cases. Paediatric services should be designed so that additional cases requiring a general anesthetic can be coordinated at the time of pFESS.



3756

Paediatric septoplasty practice in the United Kingdom

Ding Yang[1], Edward Balai[2], Guled Jama[3], Grace Khong[4], Annakan Navaratnam[5], Peter Andrews[6]

[1]Royal Preston Hospital, UK, [2]Great Ormond Street Hospital, UK, [3]Department of Rhinology, Royal National ENT and Eastman Dental Hospitals, University College London Hospitals NHS Foundation Trust, London, UK , [4]Alderhey Children's Hospital, UK, [5]Royal National ENT and Eastman Dental Hospitals, UK, [6]Royal National ENT and Eastman Dental Hospitals

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

Introduction: Septoplasty is an effective treatment for nasal obstruction caused by septal deviation. Historically, there have been concerns about the potential impact on nasal and facial growth in children due to the role of the nasal septum in midfacial development. However, more recent evidence generally supports the safety of paediatric septoplasty. When performed conservatively, and with careful preservation of the mucoperichondrium and key growth areas, corrective septal surgery has been shown to enhance nasal function and quality of life. in children without compromising facial development. Paediatric septoplasty in the UK remains largely unexplored. This survey aims to map the current practice across the UK to direct future research

Methods: An online survey was sent out to ENT UK members and independent practitioners at individual NHS trusts. Data was collected on surgeon demographics and region of work and whether they currently have a practice in performing septoplasty in children. Specific data on the assessment and indications, as well as techniques used and attitudes towards septoplasty in children, was collated.

Results: Our results have shown that there is significant variation across the UK in practice and attitude towards septoplasty in children. Surgical technique is variable and the majority of surgeons agree that a conservative approach should be taken, although this should be balanced with the risk of revision. Surgeons were more likely to perform surgery on children older than 11 years.

Conclusions: There is significant variation in practice across the UK in paediatric septoplasty and this has largely been unexplored in the current literature. Despite a recent best practice statement from the ARS, this is an area that most ENT surgeons do not feel comfortable and would appreciate guidance. We hope to present our work as a free paper to generate discussion on how we can direct future research and perhaps guide European best practice going forwards



4138

Multicenter survey on severe complications of acute otitis media and sinusitis in healthy children in the context of covid pandemic – the CAOS-kids trial

Kornelia Andorfer[1], Torstein Grønseth[2], Juned Zafar Butt[2], Randall A. Bly[3], Jeremy S. Ruthberg[4], Peter Valentin Tomazic[5], Fatemeh Kashani[6], Maria T. Arcuri[7], Isabella Sjölander[8], Valentinos Sofokleous[9], Ivan Delchev[10], Christopher Bohr[11], Kathrin Renner-Sattler[11]

[1]Department of Otorhinolaryngology, University Hospital Regensburg, Regensburg , Germany, [2]Department of Otolaryngology, Head and Neck Surgery, Oslo University Hospital, Oslo, Norway, [3]Department of Otolaryngology, University of Washington, Seattle Children's Hospital, Seattle, Washington, [4]Department of Otolaryngology-Head and Neck Surgery, University of Washington, Seattle, Washington, [5]Department of Otorhinolaryngology, Medical University of Graz, Graz, Austria, [6]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital LMU, Munich, Germany, [7]Unit of Otorhinolaryngology-Head and Neck Surgery, Department of Surgical Specialties, Radiological Sciences, and Public Health, University of Brescia, Brescia, Italy, [8]Department of ENT, Surgical Science, Uppsala University Hospital, Uppsala, Sweden, [9]Department of Pediatric Otorhinolaryngology, Athens Children's Hospital "P. & A. Kyriakou", Athens, Attiki, Greece, [10]Medical University of Plovdiv, Plovdiv, Bulgaria, [11]Department of Otorhinolaryngology, University Hospital Regensburg, Regensburg, Germany

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

Introduction: Severe sinugenic and otogenic complications in children are rare. After lifting all COVID measures, cases appeared to rise sharply. As ENT colleagues from different nations had similar observations, we initiated a multicenter study to evaluate this "perceived accumulation".

Material and Methods: The study population included healthy children and adolescents treated at participating centers from January 2012 through December 2023 for intracranial complications of sinugenic or otogenic origin and orbital complications of sinusitis. Parameters studied included age, diagnosis, time, duration and type of inpatient therapy. Furthermore, data on microbiology, virology and differential blood count was collected.

Results: We received 289 valid data sets (103 female, 185 male, 1 divers) from eight centers. Mean incidence of patients being treated rose from 4/year for the sinugenic subgroup and 3/y for the otogenic subgroup respectively to 24/y in the sinugenic subgroup ($p<0,0001$) and 15/y in the otogenic subgroup ($p<0,0001$) in the post-pandemic period. After pandemic, more complications occurred in proportion to the number of patients.

Discussion: We observed an increase in patients with severe intracranial, sinugenic, and otogenic complications, as well as orbital complications following the lift of all corona measures. Since immunity to respiratory viruses is not permanent and needs to be established, COVID-19 protective measures may have led to a lack of stimulation of the immune system favoring the occurrence of superinfections. The trial underlines the importance of global respiratory infection research and infection surveillance programs as well as open data sharing and maintaining vaccine development and use in the pediatric population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4358

"The choice of Hercules, Virtue or Vice - Which path to choose?" – A case of multiple pathologies in a non-syndromic child

Alexios Vardouniotis[1], Ilias Lapousis[2], Konstantinos Ballas[3], Ioannis Papadakis[4]

[1]UNIVERSITY HOSPITALS SUSSEX, PRINCESS ROYAL HOSPITAL, HAYWARDS HEATH, UK, *[2]Interbalkan European Medical Center, Thessaloniki, Greece*, *[3]Communitas ENT Clinics, NHS, Croydon, UK*, *[4]PRIVATE PRACTICE*

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

INTRODUCTION: We present a case of a 4 year old boy with a history of a right side congenital cholesteatoma, a right side juvenile nasopharyngeal angiofibroma and an ossified subperiostal cephalematoma of the right side parietal bone. To our knowledge this is the only existing report in the literature of these three pathologies occurring simultaneously.

CASE STUDY: The etiology of congenital cholesteatoma has been debated at length, with the leading theory being the epithelial rest theory. Angiofibromas are benign, non-encapsulated lesions occurring in the nasopharynx, predominantly originating near the sphenopalatine foramen. Cephalematoma is more frequently associated with hard labor of infancy, but the incidence of ossified cephalematoma is a rare clinical entity.

RESULTS: Even though the child underwent successful surgery for removing the cholesteatoma, the healing process was halted by wound infection, slightly delaying the following operations. At the time being pre-surgical assessment through endoscopy and radiology evaluation is on the way for the additional treatments.

CONCLUSIONS: In Greek mythology, Hercules is offered a choice between Vice (Kakia) and Virtue (Arete) -a life of pleasure or one of hardship and honor, making his choice seem as a rather easier decision to make compared to out wavering. Nevertheless, the multi disciplinary team decision felt that the initial surgery had to be the removal of the cholesteatoma and then the preoperative embolization and removal of the angiofibroma only to be followed by the cephalematoma surgery, since the option of multiple procedures performed in the same session, was of increased risk of complications and technically impossible.



4460

Catastrophic Nasal Destruction and Mutilations in Lesch-Nyhan Syndrome

Hussein A. El-Shirbeny[1]

[1]Otorhinolaryngology Department, Faculty of Medicine, Kafrelsheikh University, Kafrelsheikh, Egypt

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

Background: Lesch-Nyhan syndrome (LNS) is an inherited recessive genetic X-related disorder caused by a deficiency of hypoxanthine-guanine phosphoribosyl transferase (HGPRT) which is responsible for purine breaking leading to various degrees of the disease ranging from mild to severe degree.

Case Presentation: An extremely rare case of an 8-year-old Egyptian male child with Lesch-Nyhan syndrome (LNS) who presented with catastrophic nasal deformity, circumferential oral mutilation, hand, and foot injuries was reported due to uncontrollable self-biting.

Conclusion: Lesch-Nyhan syndrome (LNS) is one of the genetic diseases that has defects in purine metabolism leading to various degrees of the disease ranging from mild to severe degree. Multiple systems could be affected, especially the neurological system which is considered the main system to be involved. Besides the severe destructive behavior, LNS patients have difficulties and limitations in management.



4564

Complications of acute bacterial rhinosinusitis in our pediatric otorhinolaryngological department between 2013 and 2023

Rupnik Zsuzsanna[1], Zsuzsanna Rupnik[1], Gabor Katona[2], Zsuzsanna Csakanyi[3]

[1]Hungarian Society of Otorhinolaryngology, [2]Hungarian Society of Pediatric ENT, [3]Hungarian Society of Pediatric Otorhinolaryngology

Paediatric Rhinology 1 | ROOM 9 - G6 - Level +1 | Sunday, June 22, 2025

Objectives: To evaluate the cases of children treated in our hospital for complications of acute bacterial rhinosinusitis.Methods: This retrospective study included patients treated for complications of acute bacterial rhinosinusitis between the 1st of January 2013 and the 31st of December 2023. Biometric data, time between the onset of the upper airway and complication suggesting symptoms, length of antibiotic treatment and hospitalisation, type of surgical approach if needed, results of lab and microbiological tests and anatomical situation were analysed.

Results: During the above mentioned 11 years 216 patients were treated for complications of acute bacterial rhinosinusitis in our hospital. Average age was 6,7 years (2 months – 17 years; median:4,6yrs). Majority of the cases were orbital complications (n=209), which occured approximately a week after the onset of upper airway symptoms (average=9,3+-7,5dys), whereas intracranial propagation developed after 4 to 10 days. Surgery was necessary in 72 cases. In 2023 the number of children who needed surgical treatment was higher (n=15 /year) than in the previous ten years (average per year=5,4±1,78). Average length of antibiotic treatment was 12 days, but in cases of intracranial complications multiple months was needed. The most common bacteria were Streptococcus intermedius and Streptococcus pyogenes.

Conclusion: Most of the evaluated patients were either toddlers or in the lower primary school age group. Complications were suspected in the presence of periorbital edema, prolonged or severe eye pain or headache and neurological symptoms. Notably, the number of children requiring surgical treatment was higher in 2023 than in the previous 10 years.



CRS – Outcome Assessment 1

3983

Improvement of life of quality for patient with rhinosinusitis combine with allergic rhinitis after FESS treatment

Yu Chun Kuo[1], Chih-Jaan Tai[1], Liang Chun Shih[2], Liang-Chun Shih[3]

[1]China Medical University Hospital, Taiwan, [2]China Medical University, Taiwan, [3]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University hospital, Taichung, Taiwan(R.O.C)

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Introduction: Prevalence of sinusitis in Taiwan is approximately 3–6.4%. Treatment options for sinusitis patients include antibiotics, nasal irrigation, corticosteroid sprays, oral corticosteroids, leukotriene receptor antagonists, immunomodulatory drugs, and monoclonal antibodies. Functional endoscopic sinus surgery is one of current treatment options for chronic sinusitis or complications of acute sinusitis.Allergic rhinitis is also a common nasal condition in Taiwan with high prevalence, and it has been increasing annually, significantly impacting patients' quality of life. This study categorizes patients based on the presence or absence of allergic rhinitis and investigates the improvement in symptoms and quality of life in sinusitis patients with comorbid allergic rhinitis after undergoing FESS.

Material & Methods: A retrospective study was conducted on patients who underwent FESS at our hospital between 2008 and 2024. Patients were categorized based on the presence or absence of allergic rhinitis. The SNOT-22 questionnaire was used to assess symptoms before surgery and at postoperative intervals of two weeks, one month, and three months. The study analyzed symptom improvement before and after surgery.

Results: This study collected data from a total of 1,058 patients, with 333 patients in the AR group (31.47%) and 725 patients in the non-AR group (68.53%). Before undergoing surgery, the mean SNOT-22 score was 39.0315 in the AR group and 30.6918 in the non-AR group. The improvement in mean scores at postoperative intervals of two weeks (-14.6955 vs. -9.4968, p = 0.0036), one month (-20.0725 vs. -14.9928, p = 0.0012), and three months (-22.5915 vs. -16.8818, p = 0.0055) showed statistically significant differences.

Conclusion: This study found that patients with sinusitis, the SNOT-22 was an effective tool for assessing symptoms and quality of life before and after surgery. The results indicated that patients combined allergic rhinitis experienced better improvement.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4159

Olfaction and trigeminal intranasal function in chronic rhinosinusitis after endoscopic sinus surgery: a systematic review with meta-analysis.

Concha Concepcion Gago-Torres[1], Ramón Moreno-Luna[1], Daniel-Iván Martín-Jiménez[1], Ramón Moreno[1], Julissa-Aída Vizcarra-Melgar[1], Miriam González-García[1], Serafín Sánchez Gómez[1]

[1]*Hospital Universitario Virgen Macarena*

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Background: Olfactory disfunction and nasal obstruction are cardinal symptons of chronic rhinosinusitis with nasal polyps (CRSwNP). The impact of endoscopic sinus surgery (ESS) has rarelly been assessed and reviewed by direct testing. The aim of this meta-analysis is to review the evidence regarding the impact of surgical treatment on olfactory and trigeminal dysfunction on CRSwNP.

Methods: This meta-analysis followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines, using PICOTS-structured research question. PubMed, Scopus and World of Science databases were searched for published articles from January 2015 to December 2024. Studies' quality of evidence was evaluated using the Critical Appraisal Skills Programme (CASP).The data was processed using Review Manager 5.4.1.Results. Twenty-five studies were included. Only one evaluated trigeminal function. Olfactory function was evaluated using Sniffin-Sticks test (n=3), UPSIT/UPSIT-TC (n=3), B-SIT (n=2), SIT-40 (n=2), Smell Threshold (n=2), VAS (N=4), Sino-Nasal Outcomes Tests (SNOT-22, n=3) and questionnaires (n=2). Weighted mean differences (WMD) demonstrated significant olfactory improvement in patients in patients assessed with Sniffin-Sticks test, UPSIT, B-SIT and VAS ($p<0,001$; $p<0,001$; $p=0,03$; $p<0,001$; respectively). Studies with ≥12 months follow-up showed significant sustained improvement ($p<0,001$). No meta-analysis could be performed for trigeminal function, although one study reported improved trigeminal threshold.

Conclusion: There exists a significant and lasting improvement in olfactory function in patients with CRSwNP after surgical treatment. There is a possibility that a significant effect is also observed in trigeminal function, but there are not sufficient published studies at the moment to evaluate this statement.



4261

Short- and long-term real-life results of biologic therapy in patients with chronic rhinosinusitis with nasal polyposis.

Paula Morales Chacchi[1], Cristina Vaduva, Juan Ignacio Riestra Ayora[1]
[1]*University Hospital of Getafe*

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Introduction: The short-term efficacy of biologic therapy in the treatment of severe chronic rhinosinusitis with nasal polyposis (CRSwNP) has been demonstrated in several randomized multicenter clinical trials. However, there is limited evidence of the real long-term effect of its use in patients with CRSwNP. The aim of this work is to study and compare the effect of dupilumab and mepolizumab in the short and long term in our patients with CRSwNP.

Methods: In this prospective longitudinal study we have included 35 patients with CRSwNP with indication for biologic therapy according to the EPOS 2020 in current follow-up in our clinics. Clinical variables such as degree of polyposis, SNOT22, smell, VAS sleep, VAS quality of life, need for oral corticosteroids, use of a concomitant monoclonal antibody and need for initial endoscopic sinus surgery (FESS) were previously evaluated in all patients. Patients were divided into two groups according to whether they started treatment with mepolizumab or dupilumab. These patients were followed up at 3, 6, 12, 12, 24 and 36 months. In each of the revisions, all the clinical variables described above were re-evaluated.

Results: 35 consecutive patients were evaluated in this study. 26 started treatment with mepolizumab and 9 started treatment with dupilumab. Only 15 patients were followed up for more than one year. We observed a significant improvement in most patients in all clinical variables in the first months after starting therapy with mepolizumab and dupilumab. However, in the long-term follow-up, especially after 24 months, we observed a stagnation in the clinical improvement of patients with poorer symptomatic control.

Conclusions: The short-term efficacy of mepolizumab and dupilumab therapy in patients with severe CRSwNP is amply demonstrated. However, in our study we have not observed the same response in the long-term follow-up of our patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3932

Blood and tissue eosinophils predict recurrence in Chronic Rhinosinusitis with Nasal Polyps

Fabiana C P Valera[1], Mateus Soares[1], Adriana A B Murashima[1], Denny M Garcia[1], Marina Z Fantucci[1], Francesca M Faria[2], Wilma T. Anselmo-Lima[1], Edwin Tamashiro[1]

[1]Division of Otorhinolaryngology, Department of Ophthalmology, Otorhinolaryngology and Head and Neck Surgery, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP), [2]Department of Pathology, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP)

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Introduction: Characterization of different endotypes in chronic rhinosinusitis with nasal polyps (CRSwNP) will better differentiate disease subtypes. This study evaluated whether tissue or blood eosinophilia is associated with the recurrence of CRSwNP and to determine threshold values that predict recurrence.

Methods: This cohort study included 307 patients who underwent Endoscopic Sinus Surgery (ESS) for CRSwNP between 1996 and 2016, with a minimum follow-up period of one year. The collected data included blood eosinophil levels, counts of eosinophils, neutrophils, and lymphocytes per high-power field (HPF) in nasal polyp biopsies, number of surgeries, presence of asthma, interval between surgeries, and follow-up duration. Patients were categorized into two groups: Group 1 (no recurrence) and Group 2 (recurrence after surgery and appropriate medical treatment).

Results: Of the cohort, 101 patients (32.9%) experienced at least one recurrence during the follow-up, necessitating additional surgery. Both blood and tissue eosinophilia showed statistically significant differences between groups. Asthma also influenced the recurrence rates and was included as a covariate in the analysis. Receiver Operating Characteristic (ROC) curves identified predictive cutoff values for recurrence: ≥ 600 blood eosinophils/µL and ≥60 tissue eosinophils/HPF. Kaplan-Meier analysis demonstrated an increased recurrence risk for patients with ≥60 eosinophils/HPF (HR=1.94) and ≥600 eosinophils/µL (HR=2.25). Combining these two factors increased the recurrence risk (HR=3.37), which was further amplified when asthma was present (HR=3.74).

Conclusion: Blood eosinophilia ≥600/µL and tissue eosinophil count ≥60/HPF are significant predictors of CRSwNP recurrence. The combination of these factors, particularly in patients with asthma, substantially increases recurrence risk for CRSwNP.



3765

Surgical Outcome Analysis in Taiwanese Patients with Primary Chronic Rhinosinusitis

Chia-Hsiang Fu[1], Ta-Jen Lee[2], Po-Hung Chang[2], Chen Yi-Wei[3]

[1]1. Division of Rhinology, Department of Otolaryngology, Head and Neck Surgery 2.Graduate Institute of Clinical Medical Sciences, College of Medicine, Chang Gung University, [2]Division of Rhinology, Department of Otolaryngology, Head and Neck Surgery, [3]1. Division of Rhinology, Department of Otolaryngology, Head and Neck Surgery

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Background: Chronic rhinosinusitis (CRS) is a prevalent yet complex airway disease that has shifted from a purely phenotype-based classification to incorporating endotypic information. Postoperative recurrence rates of CRS vary, and numerous factors have been identified as potential predictors of surgical outcomes. Asian patients, including those in Taiwan, often exhibit less type 2 (T2) and more mixed inflammation compared to Western patients. This study aims to identify the predictive factors associated with surgical outcomes in Taiwanese CRS patients.

Materials and Methods: A literature review was conducted to examine surgical outcomes in Taiwanese patients with primary CRS. Studies were excluded if they lacked data on primary surgery, surgical outcomes, or had a follow-up period under 12 months.

Results: Eighteen English-language studies were included. T Revision surgery occurred in 16% of cases, with higher rates in T2 CRS (20%) than non-T2 CRS (12%). Revisions typically occurred 2–5 years after the initial surgery. Poor surgical outcomes were associated with younger age, allergic conditions, asthma, lower preoperative nasal nitric oxide levels, and higher Lund-Mackay scores. For T2 CRS patients, elevated tissue and serum eosinophils and serum eosinophil cationic protein were linked to worse outcomes, while adjuvant use of biologics postoperatively significantly improved immediate recovery.

Conclusions: Predictive factors influencing surgical outcomes in Taiwanese CRS patients include inflammation type, comorbidities, and biomarkers. Personalised postoperative management, including biologics, may improve recovery and reduce revision risks, emphasising the need for tailored treatment strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4102

Comorbid Asthma as Predictor of Therapeutic Response to Biologics in CRSwNP

An-Sofie Viskens[1], Elien Borgers[2], Stijn Halewyck[3], Valerie Hox[4], winde Lemmens[5], Mark Jorissen[6], Florence Rogister[7], Kato Speleman[8], Laura Van Gerven[6], Olivier Vanderveken[9], Benedicte Verhaeghe[10], Anneclaire Vroegop[9], Peter Hellings[6]

[1]Laboratory of Allergy and Clinical Immunology, KU Leuven, [2]Department of Otorhinolaryngology-Head and Neck Surgery, UZ Leuven, Leuven, Belgium., [3]Department of Otorhinolaryngology, University Hospital Brussels, Jette, Belgium, [4]Department of Otorhinolaryngology, University Hospital Saint- Luc, Brussels, Belgium, [5]Department of Otorhinolaryngology, hospital Oost-Limburg, Genk, Belgium, [6]Department of Otorhinolaryngology-Head and Neck Surgery, UZ Leuven, Leuven, Belgium, [7]Department of otorhinolaryngology, CHU de Liège, Belgium, [8]Department of Otorhinolaryngology, General hospital Sint-Jan Bruges, Bruges, Belgium, [9]Department of Ear-Nose- Throat, Head and Neck Surgery, Antwerp University Hospital, Edegem, Belgium, [10]Department of Otorhinolaryngology, Onze Lieve Vrouw hospital Aalst, Belgium

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Background: Double-blinded placebo-controlled trials have demonstrated the efficacy of mepolizumab and omalizumab for chronic rhinosinusitis with nasal polyps (CRSwNP). No baseline clinical biomarkers or patient characteristics have been able to predict therapeutic response. In Belgium, mepolizumab and omalizumab are reimbursed for severe chronic CRSwNP since 2022, without predictive factors being identified for an excellent therapeutic response.

Methods: A total of 167 CRSwNP patients were analysed at baseline and after 6 months of omalizumab (n=23) or mepolizumab (n=144) therapy. Therapeutic response was categorized as excellent, moderate, or no/poor response according to the 2023 EPOS/EUFOREA criteria at 6 months. Baseline characteristics—including age, gender, comorbidities (such as asthma and aspirin intolerance), disease duration, number of FESS surgery, blood eosinophil count, and total IgE—were analysed using Spearman correlation analysis, chi-square test and ordinal logistic regression.

Results: Among the 167 patients, 46%, 42% and 12% showed an excellent, moderate or no/poor response respectively. Excellent responders had a significantly higher prevalence of asthma compared to no/poor responders (92% vs. 62%, respectively, $p < 0.05$). No other significant correlation was found between therapeutic response levels and the studied baseline biomarkers or characteristics.

Conclusion: Almost half of our patient's cohort showed an excellent therapeutic response to 6 months of therapy with mepolizumab or omalizumab. The significantly higher asthma prevalence in the excellent responder group suggests the comorbidity of asthma as a positive predictive factor.



4185

Predictors and Time Interval of Chronic Rhinosinusitis Recurrence after Endoscopic Sinus Surgery

Abdulaziz Alaraifi[1], Riyadh Alhedaithy[1], Shmokh Alsalamah[1]
[1]*King Abdulaziz Medical City, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia*

CRS – Outcome Assessment 1 | ROOM 10 - G7 - Level +1| Sunday, June 22, 2025

Background: Chronic rhinosinusitis (CRS) is a common inflammatory disease that significantly impacts the quality of life. Endoscopic sinus surgery (ESS) is indicated for refractory CRS. This study aims to estimate the predictors of CRS recurrence, and the rates with time intervals of recurrent CRS and revision ESS.

Material & Methods: A retrospective cohort study included 516 patients who underwent ESS for CRS between January 2017 till May 2020. Patients were followed for 12-48 months postoperatively. The study sample was divided into two groups based on the recurrence status and were compared using the appropriate statistical tests. Significant variables (p-value<0.05) were included in the logistic regression model to determine the predictors of CRS recurrence.

Results: The recurrence rate of CRS recurrence following ESS was 14.5%, with a time interval of 28.31 months, SD=18.76. On the other hand, the rate of revision ESS for recurrent CRS was 6.8%, with a time interval of 34.18 months, SD=16. In the multivariable logistic regression model, the significant predictors of recurrent CRS were a high Lund-Mackay (LM) score (OR: 1.055, p= 0.04) and a high eosinophil count (OR:3.619, p= 0.03). Almost half of the patients who developed recurrent CRS underwent revision surgery (46.7%).

Conclusion: CRS has a considerable recurrence rate despite the high success rate of ESS, and nearly half of the recurrent CRS need revision surgery. A high Lund-Mackay score and eosinophilic count significantly increase the likelihood of CRS recurrence.



Allergic Rhinitis 1

3655

Legionella Exacerbates Clinical Symptoms of Seasonal Allergic Rhinitis in Children via the FcεRI Signaling Pathway

Wenjing Liu[1], Wentong Ge[1], Yang Han[1], Wang Pengpeng[1]
[1]Beijing Children's Hospital, Capital Medical University

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

Subjective: Allergic rhinitis (AR) is a common chronic heterogeneous disease with a complex pathogenesis. The prevalence of AR in kids is rising annually, which has a major negative impact on kids' quality of life. There is growing evidence that the pathophysiologic process of AR involves the nasal mucosal microbiota.

Methods: A retrospective analysis was conducted on the clinical data of 174 school-aged children with AR from August 2022 to June 2023. Based on the results of allergen testing, they were divided into two groups: seasonal AR (n=104) and perennial AR (n=70). Using the Illumina Novaseq 6000 sequencing platform, their nasal secretions were gathered for a combined microbiomics and metabolomics analysis.

Results: Seasonal AR was more symptomatic when compared to perennial AR. Microbiomics results showed a significantly higher abundance of the bacteria Prevotella spp, Legionella spp, and Neisseria spp in the nasal secretions of the seasonal AR group compared to the perennial AR group. Metabolomics analysis showed 139 differential metabolites between the seasonal AR group and the perennial AR group. Co-analysis showed that Legionella spp. up-regulated histamine through the FcεRI signaling pathway.

Conclusions: As industrial modernization progresses and urban air conditioning and plumbing network systems are constructed, the danger of contracting Legionella rises. The FcεRI signaling pathway may be used by Legionella to worsen clinical symptoms in children with seasonal



3654

Artemisia annua sublingual immunotherapy in children with seasonal allergic rhinitis

Wenton Ge[1], Xiao Xiao[2], Tang Lixing[2], Li Ziyi[2], Yang Xiaojian[2]

[1]Beijing Children's Hospital, Capital Medical University, China, [2] Beijing Children's Hospital, Capital Medical University

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

In this study, we aimed to evaluate the safety and efficacy of A. annua-Artemisiaannua Allergens Sublingual Immunotherapy (SLIT) in children with SARs in the double-blind, placebo-controlled clinical trial . Fifty four patients (SLIT group: n= 36; placebo group: n= 18) completed the study . No significant differences were observed between the groups in terms of sex, age, atopic status, allergic comorbidities, and the combined symptom and medication score of rhinitisand rhinoconjunctivitis (CSMS-R and CSMS-RC) in the previous pollen season (p> .05).The temporal variation of daily CSMS-RC in both groups showed a similar trend of positive correlation with pollen concentration throughout the pollen season (SLIT group: r= .66, 95% CI: 0.53–0.76; placebo group: r= .68, 95% CI: 0.56–0.77). The SLIT group showed significant improvements in CSMS-R (1.55 ± 0.81 vs. 1.97 ± 0.73) and CSMS-RC (1.46 ± 0.75 vs. 1.88 ± 0.75) compared with the placebo group (p .05). Most TRAEs in the SLIT group were mild, similar to those in the placebo group.This is the first study to report the efficacyand safety of A. annua-SLIT in a Chinese pediatric population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3739

Radiofrequency ablation of intraturbinate posterior nasal nerve comparing to medical treatment for chronic rhinitis

Huang Chien Yu[1], Yi Li Hwang[2], Han Lo Teng[1], Ting Yu Shih[1], Jyun Yi Liao[1]

[1]Department of Otolaryngology, Ditmanson Medical Foundation Chia-Yi Christian Hospital, Taiwan, *[2]Department of Oral and Maxillofacial Surgery, Chia-Yi Chang Gung Memorial Hospital, Chiayi County, Taiwan*

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

Introduction: This study aimed to evaluate the outcome of radiofrequency ablation of the intraturbinate segment of the posterior nasal nerve (RAPN) compared to medical treatment with intranasal corticosteroid spray (INCS) plus oral antihistamine for treating chronic rhinitis.

Material and Methods: A retrospective cohort study was conducted from February 2023 to July 2024 on adult patients with chronic rhinitis who received INCS or RAPN due to being refractory to medical treatment. Patients with a total 24-hour reflective total nasal symptom score (rTNSS) ≥4 and rhinorrhea score ≥1 were included. Patients with previous nasal surgeries, caudal septal deviation, and acute or chronic rhinosinusitis were excluded. Patient characteristics were documented. The primary endpoints were changes from baseline in 24-hour rTNSS, NOSE scores, and complications.

Results: A total of 64 patients were included; 44 received RAPN, and 20 received INCS. The baseline rTNSS was 7.3±2.1 and 6.9±2.3 for RAPN and INCS**,** respectively, with no statistically significant difference (p=0.497). The 1-, 3-, and 6-month rTNSS and NOSE scores showed significant improvement compared to baseline (p< 0.001) in both groups. The RAPN group showed statistically significant greater rTNSS and NOSE score improvements than the INCS group during 1- to 3-month follow-ups (p=0.001). The subscore analysis found only rhinorrhea at 1 and 3 months and sneezing at 1 month were not significantly different between groups. One post-operative anterior epistaxis was noted in the RAPN group.

Conclusions: Both INCS and RAPN demonstrated significant improvement in chronic rhinitis control. Aside from rhinorrhea symptom control, RAPN showed superior efficacy compared to INCS, suggesting enhanced therapeutic benefits through this surgical intervention.



3789

Prospective Review of ClariFix Cryotherapy for Chronic Rhinitis

Simon Morris[1], Whittet Heikki[1], Arnold Charlotte[1]
[1]*Morriston Hospital Swansea, Wales, UK*

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

Introduction: The ClariFix procedure involves cryotherapy ablation of the posterior nasal nerves (PNN) to treat patients with chronic rhinits. This is a novel treatment option, which can be performed under local anaesthetic alongside inferior turbinate reduction, offering a less invasive option to PNN section or Vidian Neurectomy. This study aims to assess the efficacy of ClariFix when used to treat refractory chronic rhinitis.

Methods: A prospective analysis was performed of all patients who underwent the ClariFix procedure between 2022-2024 (n=38) in one ENT unit in the UK. The primary outcome measures were to compare the pre- and post-operative subjective and objective outcomes including: Total Nasal Symptom Score (TNSS), Sinonasal Outcome Test (SNOT-22), Nasal Obstruction Symptom Evaluation (NOSE) and nasal peak inspiratory flow (NPIF) scores.

Results: This study includes 38 patients, with follow-up ranging 2-18 months. 97.3% of procedures were performed under local anaesthetic. There was a statistically significant ($p<0.001$) improvement in mean TNSS, SNOT-22, NOSE and PNIF scores pre- and post-operatively; with 65.4% of patients showing a sustained improvement across all 4 measures. At discharge, 67% of patients were not using nasal steroid sprays.

Conclusion: Overall, our data supports the ongoing use of the ClariFix device for sustained treatment of chronic rhinitis refractory to medical therapy. In addition, it can be performed in the outpatient setting avoiding requirement for general anaesthetic, as well as potentially reducing need for ongoing topical nasal medical therapy.



3839

The effect of fluticasone nasal spray on patients with allergic rhinitis and chronic obstructive pulmonary disease

Liang-Chun Shih[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University Hospital, Taichung, Taiwan*

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

Background: Although upper and lower respiratory tract diseases coexist, studies discussing the relationship between allergic rhinitis (AR) and chronic obstructive pulmonary disease (COPD) are limited. Fluticasone nasal sprays are common treatment options for patients with AR. Therefore, we aimed to investigate the effects of fluticasone nasal spray on patients with both AR and COPD.

Methods: A retrospective review was performed using data from ex-smokers with AR and COPD at China Medical University Hospital (CMUH). Based on their medication history, patients were allocated into Group A, who had undergone complete treatment with fluticasone nasal spray, and Group B, who had never received this treatment. Pulmonary function test results from before and one year after treatment were collected for both groups. Statistical analysis was performed to evaluate the impact of fluticasone nasal spray treatment on pulmonary function.

Results: A total of 123 ex-smokers were included, with 62 patients in Group A and 61 patients in Group B. At the baseline, there was no significant difference in age, sex, and pulmonary function between the two groups. After one year of treatment, Group A showed an upward trend in pulmonary function, with FEV1 increasing from 1.613 ± 0.554 to 1.708 ± 0.675 ($P < 0.05$) and FVC increasing from 2.540 ± 0.694 to 2.670 ± 0.839 ($P < 0.05$). Whereas, Group B exhibited a downward trend in pulmonary function after one year, with FEV1 decreasing from 1.609 ± 0.554 to 1.544 ± 0.517 ($P < 0.05$) and FVC decreasing from 2.586 ± 0.665 to 2.495 ± 0.679 ($P < 0.05$).

Conclusions: The use of fluticasone nasal spray can improve pulmonary function in ex-smokers with both AR and COPD. This finding supports the "one airway, one disease" theory.



3862

Allergen Sensitivity Profile in a Tertiary Care Centre in Eastern India and Experience with Sublingual Immunotherapy

Yash Mittal[1], Arun Kumar[1], Mishra Abhijeet[1]
[1]*All India Institute of Medical Sciences, Bhubaneswar, India*

Allergic Rhinitis 1 | ROOM 11 – G10 - Level +1| Sunday, June 22, 2025

Introduction: Allergen sensitivity profiling helps in understanding about the common offending allergens along with aerobiology of the region. Comprehensive therapy with pharmacotherapy, allergen avoidance, immunotherapy and biologics offers a chance of significant benefit.

Materials and Methods: Patients with Allergic rhinitis with/without asthma were included in the study. The demographic and clinical characteristics were recorded and Skin Prick Test with 46 allergens was performed. A randomised control trial was performed to evaluate the efficacy of sublingual immunotherapy. The outcome measures were TNSS, SNOT-22, Total IgE and AEC count.

Results: 240 patients were tested and 208 patients had positive results in SPT. Mean age was 25.74 (Male: Female = 2.7:1). Most common Symptoms were Nasal (96.7%) > Ocular (73%) > Pulmonary (23%). Median IgE value was 958 IU/ml and Median AEC was 594 /cmm. Mean SNOT-22 was 47.6 and Mean TNSS was 7.4. Most common allergens were Dermatophagoides pteronyssinus (70%) > Dermatophagoides farinae (66%) > Blomia tropicalis (60%) > Cockroach (57%) > Housefly (57%). Most common pollens were Cynodon dactylon(10%) > Cassia siamea (9%) > Azadirachta indica (6.4%) > Ailanthus excelsa (6%). SLIT was started in 71 patients (77.4% - House Dust mite alone; 18.3% - House dust mite + Pollens; 3.8% - Pollens alone). Comparative analysis (Interventional vs Control Arm) revealed significant difference in SNOT-22 scores and TNSS scores at 6, 9 and 12 months (p-value <0.05). Total IgE values and AEC showed no significant difference at any period. The side effects were acute allergic episode triggered during dose escalation (11.6%) followed by Local irritation (6%).

Conclusion: The study contributes to identifying the most common allergens in Eastern India. Sublingual Immunotherapy is efficacious, well-tolerated with minimal side effects.



3979

Posterior nasal nerve ablation versus radiofrequency ablation of turbinates: A prospective study

Enes Dogan[1], Serdar Özer[2]

[1]Enes Dogan, MD, MRCS ENT, Department of Otorhinolaryngology, , [2]Serdar Ozer, MD, Department of Otorhinolaryngology,

Best Abstract Presentation | SYMPOSIUM 4 | ROOM 4 - F7 - Ground Floor | Monday, June 23, 2025

Introduction: Allergic rhinitis (AR) is a common inflammatory condition of the nasal mucosa that significantly impacts patients' quality of life. Septal deviation, frequently coexisting with AR, can exacerbate nasal obstruction and associated symptoms. Various surgical interventions, including septoplasty combined with posterior nasal nerve (S+PNN) ablation or inferior turbinate radiofrequency ablation (S+ITRA), have been employed to improve nasal airflow and reduce allergic symptoms. This study aims to prospectively compare the outcomes of septoplasty combined with PNN ablation versus septoplasty combined with ITRA using validated symptom assessment questionnaires.

Materials and method: Preoperative and postoperative 3-month symptom evaluations were conducted using the Mini-Rhinitis Quality of Life Questionnaire (Mini-RQLQ), reflective Total Nasal Symptom Score (rTNSS), and Nasal Obstruction Symptom Evaluation (NOSE) scale. Statistical analyses were performed to compare postoperative symptom improvements between the two groups.

Results: A total of 66 patients were included. Both groups showed significant postoperative improvements in Mini-RQLQ, rTNSS, and NOSE scores ($p < 0.0001$ for most parameters). In the S+PNN group, Mini-RQLQ improved from 59.70 ± 9.603 to 23.27 ± 5.575, while in the S+ITRA group, it improved from 60.91 ± 8.682 to 29.03 ± 6.029 ($p = 0.026$). The S+PNN group also demonstrated greater reductions in rTNSS-B ($p = 0.007$) and rTNSS-T ($p = 0.006$), indicating superior relief in allergic symptoms. NOSE score improvements were similar between groups ($p = 0.679$). Postoperative symptom improvement was more pronounced in the S+PNN group, particularly for allergic rhinitis and rhino conjunctivitis-related quality of life scores.

Conclusion: This study demonstrated that patients who underwent posterior nasal nerve ablation showed significantly greater improvement in allergic rhinitis symptoms compared to those who received inferior turbinate ablation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4182

A phase 1 research trial to evaluate the effectiveness of intranasal Botulinum Toxin Type A Spray for patients with Rhinitis

James Bates[1], Joshua Liaw[3], James Earnshaw[4], Abigail Walker[4]

[1]Buckinghamshire Healthcare NHS Trust , [2]Buckinghamshire Healthcare NHS Trust, [3]Royal Brisbane and Women's Hospital , [4]Royal Brisbane & Women's Hospital

Best Abstract Presentation | ROOM 5 - F8 - Ground Floor | Tuesday, June 24, 2025

Background: Botulinum toxin type A is a neurotoxic protein produced from the Clostridium botulinum bacteria. Botulinum toxin was first approved for use in 1989, since there has been a surge in its uses. The latest trend is the unapproved use of botulinum toxin for allergic / non-allergic rhinitis, advertised in cosmetic clinics as “Haytox”. Aims: To test the hypothesis that botulinum toxin type A is an effective treatment for rhinitis when delivered via intranasal spray, as measured by total nasal symptom score (TNSS).

Material and Methods: A single group open-label non-randomised phase 1 clinical trial was completed. Rhinitis and non-allergic rhinitis were confirmed via formalised testing, with total IgE and RAST testing. Each participant received a dose of 40 units Botulinum toxin type A administered topically intranasally, 20 units per nostril, using the LMA® MAD Nasal™ Intranasal Mucosal Atomization Device. Safety of the intervention was assessed with adverse event tracking logs. Symptom scores were used to assess symptom reduction, including TNSS, visual analogue scale (VAS) and peak nasal inspiratory (PNIF) measurements, at weeks 0, 2, 4 and 12. In addition, participants global impression of change (PGIC) was recorded at weeks 4 and 12.

Results: 15 participants received the botulinum toxin treatment, with no serious adverse events or related adverse events were reported. TNSS and VAS consistently reduced across the cohort from weeks 0 to 12. No significant difference in PNIF scores between weeks 0 and 4 were observed. Whilst the PGIC at week 12 showed 5 participants noticed a difference, 5 noticed no change and 1 participant’s symptoms worsened.

Conclusion: In this phase 1 trial topical application of botulinum toxin via spray was shown to be safe, without any adverse events. It effectively reduced the TNSS and VAS across the cohort, but there was no significant improvement in PNIF and the PGIC was inconclusive.



4099

Artificial Intelligence (AI)-assisted readout method for the evaluation of skin prick automated test results

Sven Seys[1], Valérie Hox[2], Adam Chaker[3], Glynnis De Greve[4], Winde Lemmens[5], Anne-Lise Poirrier[6], Eline Beckers[5], Rembert Daems[1], Zuzana Diamant[7], Carmen Dierickx[5], Peter Hellings[8], Caroline Huart[2], Claudia Jerin[3], mark Jorissen[8], Dirk Loeckx[1], Hanne Oscé[8], Karolien Roux[8], Mark Thompson[9], Sophie Tombu[6], Saartje Uyttebroek[8], Andrzej Zarowski[4], Senne Gorris[1], Laura Van Gerven[8]

[1]Hippo Dx, Aarschot, Belgium, [2]Service d'Otorhinolaryngologie, Cliniques Universitaires Saint-Luc, Brussels, Belgium, [3]Department of Otorhinolaryngology and Head and Neck Surgery, TUM School of Medicine and Health, TUM University Hospital Klinikum rechts der Isar, Technical University of Munich, Munich, Germany, [4]Department of Otorhinolaryngology-Head and Neck Surgery, GZA Sint-Augustinus, Antwerp, Belgium, [5]Department of Otorhinolaryngology-Head and Neck Surgery, ZOL, Genk, Belgium, [6]ENT Department, CHU Liège, Liège, Belgium, [7]Allergy and Clinical Immunology Research Group, Department of Microbiology, Immunology & Transplantation, KU Leuven, Leuven, Belgium, [8]Department of Otorhinolaryngology-Head and Neck Surgery, UZ Leuven, Leuven, Belgium, [9]Zurich University of Applied Sciences, Zurich, Switzerland

Best Abstract Presentation | SYMPOSIUM 33 | ROOM 5 - F8 - Ground Floor | Wednesday, June 25, 2025

Background: The skin prick test (SPT) is the gold standard for diagnosing allergic sensitization to aeroallergies. A novel device, Skin Prick Automated Test (SPAT), has previously demonstrated reduced variability and more consistent test results compared to manual SPT. The current study aimed to develop and validate an artificial intelligence (AI) assisted readout method to support physicians in interpreting skin reactions following SPAT.

Methods: 963 patients with suspected aeroallergies underwent SPT using SPAT for ten common allergens. To train and validate the AI algorithm, respectively 7812 (651 patients, 75%) and 2604 (217 patients, 25%) wheals were manually annotated by a person blinded to the outcome of the AI. The longest wheal diameter was measured by the treating physician and compared to the AI measurement. The AI-assisted readout was validated on a separate test cohort of 95 patients (1140 wheals).

Results: The AI measurements of the longest wheal diameter exhibited a strong correlation with the physician's measurements. The AI algorithm showed a specificity of 98.4% and sensitivity of 85·0% in determining positive or negative test results in the validation cohort. In the test cohort, physicians adjusted 5·8% of AI measurements, leading to a change in the test interpretation for only 0·5% of cases. AI-assisted readout significantly reduced inter- and intra-observer variability and readout time compared to manual physician measurements.

Conclusion: The AI-assisted readout software demonstrated high accuracy, with minimal misclassification of test results. Adding AI to SPAT further improved standardization across the SPT process, significantly reducing observer variability and time to readout.



CRS – Surgical Management 1

4355

Improving Prescriber Confidence in COX-2 Inhibitor Use for Aspirin-Exacerbated Respiratory Disease: Impact of a Standard Operating Procedure

Hocknell Emily[1], Peta-Lee Sacks[1], Vamadevan Ulka[1], Hopkins Claire[1]
[1]*Guys and St Thomas Foundation Trust*

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Introduction: Aspirin-exacerbated respiratory disease (AERD)/Samter's triad presents a challenge in perioperative pain management, as many prescribers are uncertain about the safety of COX-2 inhibitors in these patients. This study aimed to assess healthcare practitioners' confidence in prescribing analgesia for AERD patients and evaluate the impact of a standard operating procedure (SOP) on prescribing practices.

Methods: A survey was distributed to ENT surgeons, anaesthetists and pharmacists to assess their comfort level in prescribing analgesia, particularly COX-2 inhibitors, for AERD patients. Based on the findings, an SOP was developed to provide clear guidance. A follow-up survey was conducted after implementation to reassess practitioner confidence.

Results: Forty four practitioners responded to the survey. Of these, nineteen (43%) initially felt comfortable managing pain in AERD patients, with only six (14%) reporting that they would prescribe a COX-2 inhibitor. Following the introduction of the SOP, a re-audit demonstrated an increase in practitioner confidence in utilising COX-2 inhibitors safely.

Conclusion: A structured SOP effectively improved healthcare practitioners' confidence in prescribing COX-2 inhibitors for AERD patients. Clear prescribing guidelines may help bridge knowledge gaps and optimise pain management in this challenging patient population.



4220

Preoperative SNOT-22 Across Borders: A Systematic Review and Meta-Analysis

Kevin Hur[1], Jaynelle Gao[1], Miti Parikh[1], Antonio Franco[1], Lauren Sinks[2], Eman Ahmad[1]

[1]*University of Southern California*, [2]*Dartmouth Medical School*

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Introduction: The 22-item Sino-Nasal Outcome Test (SNOT-22), a validated patient-reported outcomes measure for chronic rhinosinusitis (CRS), is used worldwide. Patients with medically refractory CRS, characterized by persistent symptoms despite maximal medical therapy, are candidates for endoscopic sinus surgery (ESS). This study aims to systematically compare preoperative SNOT-22 scores from select countries across different continents.

Methods: A systematic review was conducted using PRISMA guidelines. PubMed, Embase, and Web of Science were searched from inception through January 2025 for primary research involving adults who underwent ESS and reported country-specific preoperative SNOT-22 scores. Average preoperative SNOT-22 scores were compared across countries. When possible, patients were stratified by polyp status and the presence of comorbid asthma or aspirin exacerbated respiratory disease.

Results: After deduplication, 1,927 references underwent screening, of which 642 studies met inclusion criteria. SNOT-22 scores were reported from the United States (US), China, the United Kingdom (UK), and India. A preliminary analysis revealed pooled pre-ESS SNOT-22 scores (mean ± SD) of 46.0 ± 21.7 ($n = 3869$) in the US, which served as the reference group. China (30.5 ± 18.5, $n = 1331$; $p < 0.001$) and the UK (40.1 ± 18.6, $n = 2330$; $p < 0.0001$) had significantly lower pre-ESS scores, while India had significantly higher scores (51.2 ± 18.5, $n = 1100$; $p < 0.0001$).

Conclusion: Preliminary data suggest significant geographic variation in preoperative SNOT-22 scores. Further research is needed to refine these estimates and provide a more comprehensive understanding of global differences in patient-reported CRS disease burden.



4178

How we made it easy: Designing mucosal flap for outside-in Draf 3 frontal sinusotomy

Sevil Nasirmohtaram[1], **Seyed Mousa Sadrehosseini**[2], Farhad Arbabzadeh[3], Azin Tabari[3]

[1]Assistant Professor, Otorhinolaryngology Research Center, Guilan university of medical Sciences, Rasht, Iran, [2]Professor, Department of Otorhinolaryngology, Imam Khomeini hospital complex, Tehran university of medical sciences, Tehran, Iran, [3]Assistant Professor, Department of Otorhinolaryngology, Imam Khomeini hospital complex, Tehran university of medical sciences, Tehran, Iran

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Background: One of the popular approaches for opening the frontal drainage pathway is the outside-in technique. It is preferred to cover the bare area after drilling with flaps, that is usually challenging and time consuming. The aim of the present study was to propose an easy to learn and perform technique of designing a nasal flap.

Material & Methods: In this pilot study during 2023, candidates for Draf3 frontal sinusotomy with normal or mildly polypoid mucosa in nasal vault area, were assessed for landmarks to design and harvest the laterally based nasoseptal flap. The continuity and preservation of the pedicle of the flap was checked in the end of the procedure. The condition of the flap was evaluated in the first and third month follow up visits.

Results: Thirty consecutive patients entered the study. Through outside-in technique, after harvesting the flap, appropriate access to frontal sinuses was achieved. The flap insertion was easily performed in all patients and the width of the pedicles was favorable. In addition, taking flaps from both sides, gave complete coverage of the whole bare area after drilling. Correction of septal deviation was needed in majority (83.3%) of patients. The most challenging step was to secure the suction, so as to save the pedicle till the end of the operation. The edema of the flap was resolved by the 3rd month visit.

Conclusion: The length of the inferiorly based lateral mucosal flap is desirable to cover the drilled frontal beak periosteum. Designing of the proposed flap is easily practicable.



3895

Safety and effectiveness of bioabsorbable steroid-eluting implants in frontal sinus surgery

Guled Jama[1], Anita Sedghi[1], Jennifer Magill[1], Mark Ferguson[1], William Grant[1], Catherine Rennie[1], Hesham Saleh[1]
[1]Department of Otolaryngology, Charing Cross Hospital, Imperial College Healthcare NHS Trust, London, UK

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Background: To evaluate the efficacy and safety of bioabsorbable corticosteroid-releasing implants as an adjunct in the treatment of patients undergoing endoscopic sinus surgery for complex frontal sinus disease. The study aimed to assess the long-term improvement in surgical outcomes, including patient-reported symptoms, frontal sinus patency, and need for further intervention.

Methods: A prospective, single-arm study was carried out at a tertiary rhinology centre involving consecutive patients undergoing endoscopic frontal sinusotomy with placement of a dissolvable stent delivering mometasone furoate (370 micrograms) into the frontal sinus ostia. All patients received standard postoperative care. Outcomes were recorded at regular intervals using validated symptom questionnaires and endoscopic evaluation.

Results: Seventy patients (median age 45.5 years, range 17-72) were enrolled between 1 April 2019 and 31 December 2024. SNOT-22 scores improved from a mean of 49.6 (±23.0) at baseline to 34.2 (±26.4) at 6 months post-procedure ($p<0.001$). Frontal sinus patency was maintained in 82.9% (58/70) of patients without requiring further intervention at a median follow-up of 17.5 months (IQR: 9.6-31.8). No implant-related adverse events were observed.

Conclusions: The current study provides real-world data and the largest UK series to date on the use of corticosteroid-eluting implants in complex frontal sinus disease. It demonstrates sustained improvements in patient-reported symptoms and sinus patency. With a median follow-up of 17.5 months, it provides valuable insights into the medium and long-term surgical outcomes, addressing a gap in the existing literature.



3741

Outcomes of endoscopic frontal sinus surgery: a single-center experience

Sergey Gorbunov[1], Georgiy Polev[2], Marina Nersesyan[3]

[1]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia, [2]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia, [3]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Introduction: Managing frontal sinus disease is one of the most challenging aspects of endoscopic sinus surgery. We presented our experience with Draf II and Draf III procedures.

Material & Methods: A single-center retrospective review of patients who underwent endoscopic frontal sinus surgery between 2020 and 2024 (n=50). Demographic data, surgical indications, endoscopic findings, imaging results, and recurrence rates were evaluated. Results. Of the 50 patients, 33 (65%) were male, with a mean age of 37±14 years. Three patients had a history of previous frontal sinus surgery. A total of 56 sinusotomies were performed: 44 Draf IIa procedures for patients with chronic (n=35) or acute (n=4) sinusitis, 9 Draf IIb procedures for patients with mucocele (n=5) and osteoma (n=5), and 3 Draf III procedures for patients with meningoencephalocele (n=2) and resistant chronic frontitis (n=1). There were no complications reported. Endoscopy and CT in 49 patients showed no recurrence over a mean follow-up period of 12 months. 1 (2%) patient developed scarring in the frontal recess 3 months after surgery, which required reoperation. One patient (2%) developed scarring in the frontal recess 3 months post-surgery, requiring reoperation. Another patient (2%) developed asymptomatic frontal recess stenosis (approximately 1 mm in diameter) after 3 months with opacification on CT scan. A mean follow-up period was 1 year.

Conclusion: Endoscopic frontal sinusotomy is a relatively safe and effective procedure for various indications, with a low complication rate observed in this study.



4150

Intracranial and intraorbital extension of benign nasal polyps in chronic rhinosinuitis with nasal polyposis (CRSwNP): A case report and literature review

Jakov Bilać[1], Katarina Đurić Vuković[2], Marcel Marjanović Kavanagh[3]

[1]Rhinology and Endoscopic sinus surgery, [2]Rhinology and Endoscopic sinus surgery, skull base surgery, allergology, [3]Rhinology and Endoscopic sinus surgery, skull base surgery

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Introduction: Chronic rhinosinuitis with nasal polyps (CRSwNP) is a common condition that can significantly affect a patient's quality of life. Contrary to the widely held belief in clinical practice that benign nasal polyposis cannot cause major problems beyond the usual symptoms of nasal obstruction, anosmia, and facial pressure, a handful of cases have been reported in the literature describing the extension of polyps beyond the confines of the sinuses into intracranial and orbital spaces. In this case report, we share insights from our experience in managing such an uncommon presentation and discuss the potential morbidity of nasal polyps beyond their typical manifestations.

Case study: Male patient born in 1996 was initially surgically treated in 2023 for CRSwNP at Department of ENT, University Hospital Centre Zagreb. He underwent "full house" functional endoscopic sinus surgery. Pathohistological report confirmed the clinical diagnosis. The operation and early postoperative course were uneventful but the patient failed to attend any of his follow-up appointments. A year later, he presented to the emergency department with swollen left upper eyelid and visual disturbances in the left eye. CT scan revealed resorption of lamina papyracea and posterolateral wall of frontal sinus with extension of polyps into the extradural space and left orbit. He was treated with a reducing dose of systemic steroids and underwent revision endoscopic surgery.

Results: Draf III procedure was performed resulting in successful recovery and complete resolution of symptoms without complications or the need for revision surgery. Histology confirmed benign eosinophilic polyps.

Conclusion: Aggressive growth of nasal polyps, beyond the confines of the bony sinus walls, can occur even without underlying malignancy, mucocele development or prior surgical dehiscence. This case demonstrates the potential for severe complications and consequences of untreated or poorly monitored disease.



4195

Prelacrimal recess approach: less invasive, more effective

Luz López Flórez[1], Sara Zaldívar Saiz-Maza[1], Daniela Cristina Paez Mantilla[1], Jéssica Mireya Santillán Coello[2], Gonzalo Díaz Tapia[3], José Miguel Villacampa Aubá[1]

[1]Rhinology and Skull Base Surgery Unit. Otorhinolaryngology Department. Hospital Universitario Fundación Jiménez Díaz. Madrid, Spain, [2]Rhinology and Skull Base Surgery Unit. Otorhinolaryngology Department. Hospital Universitario General de Villalba. Madrid, Spain, [3]Rhinology and Skull Base Surgery Unit. Otorhinolaryngology Department. Hospital General de Villalba. Madrid, Spain

CRS-Surgical Management 1 | ROOM 12 – G11 - Level +1| Sunday June22, 2025

Introduction: Maxillary sinus endoscopic approach could be challenging, especially achieving fullaccess to all the walls. Expanded surgery such as endoscopic modified medialmaxillectomy provides access to most areas. Nevertheless, the anterior wall remainsdifficult to approach. The prelacrimal recess approach (PRA) is a less invasivetechnique.

Material & methods: PRA includes the elevation of a mucoperiosteum flap to expose the bone of theanterior inferior turbinate (IT) and its attachment to the lateral nasal wall. The bone hasto be drilled in order to achieve exposure of the nasal lacrimal duct (NLD) and the removal of the IT headbone. At the end of the procedure the IT is repositioned along with the mucosa flap andsutured to its original location.

Results: PRA provides a wide surgical field of the maxillary sinus walls comparable to moreaggressive techniques (medial maxillectomy or the Caldwell-Luc approach), despitethe preservation of IT and the NLD, avoiding the morbidity related to those techniquesand preserving the nasal function with low morbidity.

Conclusion: Prelacrimal access is a minimally invasive approach to the maxillary sinus, preservinglateral nasal wall mucosa and NLD. This approach is an effective alternative to treatand surveillance of different maxillary sinus pathologies, especially for the anterior orinferior meatal wall lesions, which are difficult to visualize through routine middlemeatal antrostomy approach.



4085

Limited versus complete ESS in CRSwNP – outcomes of 24 months follow-up of a randomized AirGOs Operative trial

Paula Virkkula[1], Sari Hammarén-Malmi[1], Anu Laulajainen-Hongisto[1], Markus Lilja[1], Johanna Sahlman[2], Sietze Reitsma[3], Johanna Wikstén[4], Paula Kauppi[5], Lena Hafrén[6], Antti Mäkitie[7], Sanna Toppila-Salmi[8]

[1]Helsinki University Hospital and University of Helsinki, [2]Kuopio University Hospital, Kuopio, Finland, [3]Amsterdam UMC, Academic Medical Center, Amsterdam, Netherlands, [4]Henlsinki University Hospital and University of Helsinki, [5]University of Helsinki and Helsinki University Hospital, Helsinki, Finland , [6]Helsinki University Hospital and University of Helsinki, Helsinki, Finland, [7] Helsinki University Hospital and University of Helsinki, Helsinki, Finland, [8]University of Eastern Finland Joensuu, Kuopio; Wellbeing services county of North Savo; Helsinki University Hospital and University of Helsinki

Best Abstract Presentation | ROUND TABLE 3 | ROOM 3 - F6 - Ground Floor | Sunday June22, 2025

Introduction: The optimal surgical approach for uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP), particularly in primary cases, remains undetermined due to lack of prospective controlled studies. This study aimed to compare the outcomes of limited versus complete endoscopic sinus surgery (ESS) over a 24-month-follow-up period.

Material & Methods: Patients with Sino-Nasal Outcome Test (SNOT-22) score ≥30, bilateral nasal polyp score (NPS) ≥4, and Lund-Mackay CT score ≥14 were recruited. Additional eligibility criteria included a history of ≥ 1 course(s) of oral corticosteroids or ≥ 3 courses of antibiotics in the past two years, or a prior ESS. Participants with uncontrolled CRSwNP were randomized to undergo either (1) partial ethmoidectomy with maxillary sinus opening (limited ESS) or (2) complete sinus opening with mucosal preservation (complete ESS). SNOT-22, Sniffin` Sticks and NPS were recorded during the visits. Statistical analyses were conducted using per protocol linear mixed models.

Results: A total of 95 patients were followed. Mean SNOT-22 (total score and nasal subscore), NPS and, Sniffin' Stics score improved significantly after surgery in both groups ($p<0.001$). However, the improvement was significantly greater in the complete ESS group compared to the limited ESS group ($p=0.021$, $p<0.001$, $p=0.002$, $p<0.001$, respectively).

Conclusions: ESS significantly improves symptoms, NPS and sense of smell over a 24-month-follow-up period. Complete ESS appears superior to limited ESS in terms of improvement across these parameters.



4301

The MACRO Trial: A Randomised Controlled Trial of Clarithromycin and Endoscopic Sinus Surgery for Adults with Chronic Rhinosinusitis with and without nasal polyps

Claire Hopkins[1], Carl Philpott[2], Jonathan Cook[3], Elnaz Saeedi[4], Caroline S Clarke[5], Lucie Teoh[5], Stephen Morris[6], Mike Thomas[7], Paul Little[7], Jane Vennik[7], David Beard[3], Anne Schilder[8], Stephen Durham[9], James Boardman[10], Valerie Lund[11]

[1]ENT Department, Guy's and St Thomas' NHS Foundation Trust, London, UK, [2]Norwich Medical School, University of East Anglia, Norwich, UK; ENT Department, James Paget University Hospital NHS Foundation Trust, Great Yarmouth, UK, [3]SITU, University of Oxford, Oxford, UK, [4]Medical Statistician, University of Oxford, UK, [5]Research Department of Primary Care and Population Health, University College London, London, UK, [6]Department of Applied Health Research, University College London, London, UK, [7]University of Southampton, Southampton, UK, [8]eviDENT, UCL Ear Institute, University College London, London, UK, [9]Faculty of Medicine, National Heart & Lung Institute, Imperial College London, UK, [10]Fifth Sense, UK, [11]UCL Ear Institute, University College London, London, UK

Best Abstract Presentation | ROUND TABLE 10 | ROOM 3 - F6 - Ground Floor | Monday June 23, 2025

Background: Evidence regarding use of antibiotics and endoscopic sinus surgery (ESS) in managingchronic rhinosinusitis (CRS) is lacking. The trial objective was to compare clinical and cost-effectiveness of adding ESS or 3 months of clarithromycin to intranasal medication (IM) in adultswith CRS with (CRSwNP) or without nasal polyps (CRSsNP).

Methods: A 3-arm randomised controlled trial recruited at 20 UK sites. CRS patients remainingsymptomatic after receiving IM comprising corticosteroids and saline irrigations were randomised1:1:1 to receive ongoing IM plus either 1) ESS, 2) clarithromycin (250mg bd for 2 weeks then od for10 weeks) or 3) matched placebo. Participants and medical staff were blinded to medicalinterventions but not surgery. Primary outcome measure was the SNOT-22 disease-specific quality-of-life (QOL) questionnaire at 6 months. Secondary outcomes included generic QOL and cost-effectiveness. Planned sample size was 510. An intention-to-treat analysis was undertaken. ISRCTN:36962030.

Findings: 181/514 (35.2%) female and 333/514 (64.8%) male participants, with CRSwNP (n=410) orCRSsNP (n=104), were recruited between November 2018 and October 2023 and randomised to ESS(n=171), clarithromycin (n=172), or placebo (n=171). Statistically significant mean differences inprimary outcome favoured ESS over the other groups (-18.13, (98.33%,CI -24.26, -11.99) and -20.44,(98.33%,CI -26.42, -14.46), respectively).

Interpretation: ESS improves disease-specific QOL at 6 months in CRS patients. There is no evidence supporting theroutine use of low-dose clarithromycin in CRSwNP while benefit in CRSsNP remains uncertain.Primary and secondary care clinicians should be aware of the implications for practice to optimisetreatment pathways for patient/healthcare benefit.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4171

Indication for biologic treatment in a real-world cohort of chronic rhinosinusitis patients according to international recommendations: Evidence from the European CRS Outcome Registry (CHRINOSOR)

Josje Otten[1], Sven Seys[2], Joost de Kinderen[2], Giulia Bettio[2], Alexandros Andrianakis[3], Isam Alobid[4], Carlo Cavaliere[5], Peter Hellings[6], Laura Van Gerven[6], Valérie Hox[7], Claire Hopkins[8], Anetter Kjeldsen[9], Sven Schneider[10], Peter-Valentin Tomazic[3], Zuzana Diamant[11], Julia Eckl-Dorna[10], Wytske Fokkens[1], Clemens Holzmeister[3], Kenneth Larsen[9], Anu Laulajainen-Hongisto[12], Valerie Lund[13], Gert Mariën[2], Simonetta Masieri[14], Geoffrey Mortuaire[15], Mathilde Moyaert[6], Joaquim Mullol[4], Camilo Rodriguez van Strahlen[4], Marco de Vincentiis[5], Martin Wagenmann[16], Sietze Reitsma[1], Claus Bachert[17]

[1]Department of Otorhinolaryngology, Amsterdam University Medical Centres (AUMC), location AMC, Amsterdam, The Netherlands, [2]Galenus Health, Hasselt, Belgium, [3]Department of General ORL, Head and Neck Surgery, Medical University of Graz, Graz, Austria, [4]Rhinology Unit & Smell Clinic and Skull Base Surgery Unit, Otorhinolaryngology Department, Hospital Clinic Barcelona, Universitat de Barcelona, IDIBAPS, CIBERES, Barcelona, Catalonia, Spain, [5]Department of Sense Organs, Sapienza University, Rome, Italy, [6]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospitals Leuven, Leuven, Belgium, [7]Service d'Otorhinolaryngologie, Cliniques Universitaires Saint-Luc, Brussels, Belgium, [8]ENT Department, Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom, [9]Department of Otorhinolaryngology, Odense University Hospital, Odense, Denmark, [10]Department of Otorhinolaryngology, Head and Neck Surgery, Vienna General Hospital (AKH), Medical University of Vienna, Vienna, Austria, [11]Allergy and Clinical Immunology Research Group, Department of Microbiology, Immunology & Transplantation, KU Leuven, Belgium, [12]Department of Otorhinolaryngology-Head and Neck Surgery, Helsinki University Hospital and University of Helsinki, Finland, [13]Department of Rhinology, Royal National Throat Nose and Ear Hospital, London, United Kingdom, [14]Department of Oral and Maxillofacial Sciences, Sapienza University, Rome, Italy, [15]Otorhinolaryngology-Head and Neck Department, Huriez Hospital, Centre Hospitalier Universitaire (CHU) Lille, Lille, France, [16]Department of Otorhinolaryngology, Universitätsklinikum Düsseldorf (UKD), Dusseldorf, Germany, [17]Clinic for ENT diseases and Head and Neck Surgery, University Clinic Münster, Münster, Germany

CRS – Surgical Management 1 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Background: In recent years, treatment options for patients with uncontrolled severe chronic rhinosinusitis with nasal polyps (CRSwNP) have been expanded with biologics. Definitions of uncontrolled severe disease differ across international recommendations and the prescription of biologics further depends on national reimbursement criteria. Real-world data collected through the CHRINOSOR registry allows to analyze the applied criteria and their consequences in clinical practice.

Objective: To evaluate the indication for biologic treatment in a European cohort of CRSwNP patients, based on international recommendations.

Methodology: CRS patients who visited the outpatient ENT clinic of 10 tertiary referral centers were invited to use the Galenus Health mobile application for the management of their disease. The proportion of patients who fulfilled biologic indication criteria according to EUFOREA 2021 and EPOS/EUFOREA 2023 recommendations was evaluated. Results: 281 CRS patients from 7 European countries were recruited of which 227 (82.1%) were diagnosed as CRSwNP. Out of these 227 patients, 21 patients with prior biologic use were excluded for this analysis, resulting in a cohort of 206 patients. A total of 28.7% (50/174) and 47.6% (81/170) of CRSwNP patients, met the EUFOREA 2021 or EPOS/EUFOREA 2023 criteria for indication for a biologic treatment, respectively. Biologic treatment was initiated at the time of inclusion in the cohort in 18.9% (39/206) of CRSwNP patients.

Conclusions: According to international recommendations, 29-48% of CRSwNP patients in tertiary referral centers may be a candidate for biologic treatment. EPOS/EUFOREA2023 criteria were more inclusive than EUFOREA 2021 criteria with respect to biologic indication for CRSwNP. National reimbursement criteria prevail over international recommendations for actual biologic prescription and provide in some countries extended usage possibilities for a larger patient population.



Epistaxis and HHT 1

4176

One-Year Mortality and Morbidity of Epistaxis Compared to Controls in 1 789 Patients: Is Epistaxis Associated with Reduced Survival ?

François Radermecker[1], Anne lise Poirrier
[1]*Uliège*

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Introduction: Epistaxis is a common emergency referral in ENT, with some anecdotal reports suggesting a potential association with increased mortality. This mortality may be related to underlying frailty and general healthcare consumption, rather than epistaxis itself. The aim of this study was to assess the one-year mortality rate in patients with epistaxis, comparing it with a control group of patients presenting with other ENT-related emergencies.

Materials and Methods: This cohort study included all patients diagnosed with epistaxis between January 1, 2023, and December 31, 2023. A control group was established from patients presenting with other ENT-related emergencies during the same period. Subjects with a history of cancer were excluded from both groups. Demographic data and frailty factors were collected retrospectively, while morbidity and mortality outcomes were tracked prospectively at 30 days and 365 days post-admission. Secondary analyses evaluated factors associated with reduced survival.

Results: A total of 1,789 patients were included in the study. The overall one-year mortality rate was 2.7%, with no significant difference between the epistaxis group (3.2%) and the control group (2.0%, p=0.1245). Mortality was found to be significantly influenced by general frailty, including older age (p<0.0001) and a history of frequent hospitalizations (p<0.0001).

Conclusions: The overall one-year mortality rate for patients admitted for any ENT-related emergency, excluding cancer, was 2.7%. While epistaxis was the most common ENT emergency, it was not associated with a higher mortality risk compared to other general ENT emergencies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4333

Intranasal trigeminal and secretory function are impaired after topical anaesthesia or surgical treatment of epistaxis.

Michael Soyka[1], Joel Vavrina[1], Basile Landis[2], Thomas Hummel[3], Sonja Macario[4]

[1]University and University Hospital Zurich, [2]University Hospitals Geneva, [3]Medical Faculty Carl Gustav Carus, TU Dresden, [4]Geneva University Hospitals

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Background: The sphenopalatine artery (SPA) is closely associated with branches of the trigeminal nerve and both sympathetic and parasympathetic secretomotor fibers. In cases of refractory epistaxis, SPA thermocoagulation is widely used during surgery. However, its impact on adjacent trigeminal and parasympathetic branches—and consequently on intranasal sensitivity and secretory function—remains unclear.

Methods: This study investigated intranasal trigeminal function (INTF) using CO_2 stimuli before and after nasal decongestion, as well as following local anesthesia (xylocaine) in healthy subjects. Additionally, INTF and secretory function were assessed in patients undergoing SPA thermocoagulation for refractory epistaxis by comparing the treated and untreated nasal sides. Nasal and lacrimal secretions were measured using intranasal sponges and Schirmer's tests.

Results: A total of 37 healthy participants and 17 patients were included. Nasal decongestion had no significant effect on CO_2 sensitivity, whereas local anesthesia significantly reduced INTF in healthy subjects ($p < 0.001$, $t = 8.4$). In patients, the operated side exhibited significantly lower INTF ($p = 0.007$, $t = 3.1$) and reduced nasal secretory function ($p = 0.03$, $t = 2.4$), while lacrimal function remained unaffected ($p = 0.14$, $t = -1.6$).

Conclusion: Both local anesthesia and surgical intervention influence INTF. SPA ligation and thermocoagulation impair nasal secretory function, potentially leading to clinical symptoms. Surgeons should be aware of these effects when treating epistaxis to minimize unintended consequences.



4389

A quality improvement project to aim to assess and improve foundation doctor understanding and management of epistaxis

Thomas Brookes[1]

[1]*University Hospitals Birmingham,*

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Introduction: Anecdotally, Resident Doctors overall do not feel comfortable managing epistaxis in hospital. Many attribute this to lack of ENT training at medical school. A QIP targeting new FY1 trainees about to start their surgical rotation was designed and implemented, aiming to provide concise and effective teaching on the management EPISTAXIS

Methods: A workshop was designed, consisting of an initial presentation delivered by a previous FY1 trainee. This was followed by an interactive segment supervised by a local ENT consultant and registrar consisting of demonstrations and practice on how to insert nasal packs using interactive models.A pre and post workshop survey was sent out to assess basic confidence and knowledge of managing epistaxis to assess whether these had improved as a result of the workshop.

Results: Of the candidates that responded, there was a 36% increase in confidence of managing epistaxis. There was also a global improvement in the knowledge of how to manage epistaxis. Overall feedback was then obtained with 14 responses. This showed that the candidates felt that the workshop was engaging, and that they believed they had a much greater understanding of epistaxis and how to manage it.

Conclusion: There was an overall improvement in the candidate's confidence and knowledge about how to manage epistaxis on the wards. However due to the poor response rate, the workshop should be repeated with each 4 month rotation to collect a larger dataset



4532

A retrospective analysis of 12 years of epistaxis management at Department of ENT, University Hospital Centre Zagreb

Jakov Bilać, Katarina Đurić Vuković, Ema Čaušić , Marija Pastorčić Grgić

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Introduction: (Background and Aim)Epistaxis is a common otorhinolaryngologic emergency with diverse underlying causes and management strategies. Current guidelines recommend a stepwise approach, starting with conservative measures such as nasal packing, followed by surgical or interventional radiological treatment if needed. This retrospective study aims to analyze the characteristics, treatment approaches, and outcomes of patients presenting with uncontrolled epistaxis despite nasal packing in our institution over a 12-year period.

Material and Methods: A retrospective study was conducted on 98 patients admitted for uncontrolled epistaxis through the emergency department at Department of ENT, University Hospital Centre Zagreb between 2013 and 2025. Patients with malignant sinonasal tumors and those treated electively were excluded. Data collected included demographic information, comorbidities (hypertension, anticoagulant therapy), presence of nasal septal deviation, treatment modalities (nasal packing, surgery, endovascular intervention) and outcomes.

Results: Nasal packing was the primary treatment modality, with 95 out of 98 patients (96.9%) receiving some form of packing. Among them, 39 patients required combined anterior and posterior packing, while 37 underwent bilateral anterior packing and 19 unilateral anterior packing. Only three patients were managed without nasal packing. A total of 58 patients (59.2%) had hypertension, while 17 (17.3%) were on warfarin therapy, and 5 (5.1%) had trauma-related epistaxis. Nasal septal deviation was observed in 30 patients (30.6%). Surgical intervention was performed in 51 patients (52%), while 47 were managed non-surgically (48%). The surgical group had a significantly higher incidence of septal deviation than the non-surgical group (21 vs. 9 patients). Among the surgically treated patients, 18 underwent sphenopalatine artery coagulation or ligation, 16 received septoplasty, 11 underwent functional endoscopic sinus surgery (FESS) without coagulation of any major nasal blood vessle, 15 were treated with mucosal coagulation of the nasal septum or turbinates, and 4 underwent anterior ethmoidal artery coagulation. Among surgically treated patients, 27 had comorbidities (hypertension or warfarin use), while 24 did not. In contrast, among the 47 non-surgical patients, 35 had comorbidities, while 12 had no underlying conditions. Endovascular evaluation via digital subtraction angiography (DSA) was performed in 14 patients, but embolization was required in only 5 cases.

Conclusion: Less than half of patients were successfully treated with just nasal packing, without additional surgical or endovascular intervention. Hypertension and anticoagulant use were frequent comorbidities, however surgical intervention was more common in patients without comorbidities. The higher incidence of septal deviation in the surgical group suggests that septal asymmetry contributes to treatment failure with nasal packing, likely due to the difficulty in achieving adequate tamponade. While sphenopalatine artery coagulation or ligation was the most common surgical procedure, septoplasty, FESS, and anterior ethmoidal artery coagulation were also performed. DSA was performed in select cases, with a low rate of embolization. Our findings reinforce the stepwise treatment approach recommended by current epistaxis management guidelines, where nasal packing remains the first-line therapy, with surgical or endovascular treatment reserved for refractory cases. Further studies are needed to evaluate long-term outcomes and optimize treatment algorithms for severe epistaxis cases.



4213

Pulsed dye laser treatment for epistaxis secondary to hereditary haemorrhagic telangiectasia: A comparison between the Epistaxis Severity Score and a novel simplified scoring system as patient-reported outcome measures

Jacob Rapier, Stephen Bennett[1], Simon Dennis[1], Mark Brewin[2]

[1]ENT Department, Salisbury NHS Foundation Trust, *[2]Salisbury Laser Clinic, Salisbury NHS Foundation Trust*

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Introduction: Hereditary haemorrhagic telangiectasia (HHT), or Osler-Weber-Rendu disease, is a vascular disorder affecting vessels in skin, mucosa and viscera. It predisposes individuals to form aberrant blood vessels such as telangiectasia and arteriovenous malformations. 95% of HHT patients suffer from recurrent epistaxis, which has a significant negative impact on their quality of life and can be life threatening. Pulsed dye laser (PDL) treatment for nasal mucosal telangiectasia in HHT patients, first piloted at Salisbury NHS Foundation Trust, has been shown to reduce the frequency and duration of bleeding in this difficult to treat cohort. The Epistaxis Severity Score (ESS) is the gold-standard patient-reported outcome measure (PROM) for nosebleed severity in HHT patients. However, patients can find it complex and too objective which has led to our centre developing a new scoring system. In a review of patients undergoing PDL for HHT-associated epistaxis we compare treatment outcomes using the ESS and our own scoring system.

Materials & Methods: Patients undergoing PDL treatment for HHT-associated epistaxis were recruited consecutively from 2023 to 2025. Patients completed the ESS and our own scoring system prior to treatment and after every treatment episode up to 1 year.

Results: Our scoring system compared favourably with the ESS in terms of concordance of severity of disease.

Conclusions: PDL remains an effective treatment for HHT-associated epistaxis improving quality of life up to 1 year post treatment using the ESS and our scoring system as measures. The ongoing use of the ESS as the gold-standard PROM in this patient cohort needs urgent review.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4283

Developing a Novel Patient Passport to Improve Emergency Management of Epistaxis in Hereditary Haemorrhagic Telangiectasia

Talisa Ross[1], Ritika Gera[1], Elizabeth Bullock[1], Mina Rezaei[1], Catherine Rennie[1]
[1]*Imperial College London*

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Objectives: Hereditary haemorrhagic telangiectasia (HHT) is a rare autosomal dominant condition that can cause recurrent severe epistaxis. Patients often present to Emergency Departments (ED) with potentially life- threatening epistaxis and commonly report that ED clinicians are unfamiliar with the nuances of managing HHT-related epistaxis.

Methods: A patient passport was developed for HHT patients It provides a summary of HHT, rst steps for managing acute HHT-related epistaxis, criteria for contacting the on-call ENT team, and discharge instructions. To evaluate its efcacy, a survey was conducted to evaluate how HHT patients in our national HHT centre perceived the patient passport.

Results: A patient passport was developed for HHT patients It provides a summary of HHT, rst steps for managing acute HHT-related epistaxis, criteria for contacting the on-call ENT team, and discharge instructions. To evaluate its efcacy, a survey was conducted to evaluate how HHT patients in our national HHT centre perceived the patient passport.

Conclusions: This project highlights the importance of tailored management for HHT-epistaxis in Emergency Departments. The patient passport provides practical guidance to ED clinicians and emphasizes key differences compared to the normal management of epistaxis. Survey responses indicate positive feedback and emphasize the need for improved clinician awareness. Further work is being carried out to expand the patient passport to other centers.



4421

Survival is shorter than expected in Hereditary hemorrhagic telangiectasia - results from a national population based register study."

Cecilia Ahlstrom Emanuelsson[1], Anders Ehnhage[2], Mats Holmström[2], Marit Westman[2]

[1]Lund University, Skane University Hospital, [2]Karolinska institutet, [3]Lund University, Institution Clinical Science, Skane University Hospital

Epistaxis and HHT 1 | ROOM 13 – G15 - Level +1| Sunday June22, 2025

Introduction: Hereditary hemorrhagic telangiectasia (HHT) is an autosomal dominant genetic disorder and diagnosis is based on the four Curaçao Diagnostic Criteria. This national, populationbased study investigate if HHT is associated with a higher mortality than a control group.

Material and methods: The Swedish National Patient Register was used to identify individuals with HHT according to the International Classification of Diseases (ICD), I 78.0. Study population was all individuals ever recorded with the ICD code I78.0 in the in- or outpatient register between 2001-01-01 and 2003-12-18 (N=393). These 393 persons constitute our case group. For every study person 5 control persons, matched according to age and gender was served by Statistics Sweden (SCB, scb.se). In total 1965 controls were included. This cohort of cases and controls were followed regarding survival up to 2018, using the Swedish National Cause of Death Register (DORS), which covers all deaths that occur in Sweden.

Results: Expected survival for the cases, after the age of 30 years, was estimated to be 73.0 (68,5-77,0) years and for the controls the expected survival was 80,5 (78.9-81,9) years.Three groups of cause of death were overrepresented among HHT patients; Ischemic heart diseases (I20-I25), Diseases of arteries and arterioles and capillaries (I70-I79) and Diseases of the liver (K70-K77).

Conclusion: Patients with HHT have an extensive shorter expected survival after the age of 30, 7,53 (3,01- 12.46) years, compared to the controls. "Ischemic heart diseases", "Diseases of arteries /arterioles/capillaries" and "Diseases of the liver" were significant overrepresented as cause of death.



Best Abstract Presentation

ABSTRACT SESSION 7 - Best Junior Abstracts

4106

Identification and 3D reconstruction of sinonasal inverted papilloma pedicle

Domenica Giunta[1], Sveva Introini[1], Bogdan Nacu[1], Michele Demaria[1], Roberto Sannnasardo[1], Anna Ferrauto[1], Nicolo' De Faveri[1], Andrea Zerilli[1], Fabio Pagella[1]

[1]*Otorhinolaryngology Unit, Fondazione IRCCS Policlinico San Matteo, 27100 Pavia, Italy - University of Pavia, Pavia, Italy*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Inverted papilloma (IP) is a rare benign nasal tumor with unclear etiology and a low malignant transformation rate. It appears as a unilateral, polypoid “raspberry-like” lesion, often causing nasal obstruction. The tumor originates from a pedicle, usually associated with local hyperostosis. Diagnosis relies on biopsy, while surgery is the primary treatment, guided by preoperative CT or MRI. Given the high recurrence rates, mainly due to incomplete pedicle removal, we adopted a pedicle-oriented endoscopic approach (debulking, pedicle identification, periosteal dissection, and bone milling). This study assesses the value of 3D CT reconstruction in visualizing IP morphology and pedicle characteristics.

Methods: We analyzed 141 patients undergoing primary endoscopic surgery for IP. Among them, 89 underwent CT imaging, and 28 had valuable scans for 3D reconstruction (CT slices 0.5–1 mm). Pedicle identification was classified as non-identifiable, doubtful, or sure. In 52 patients without imaging, lesion characteristics were assessed intraoperatively. We evaluated lesion volume, surface, base area, shape, and origin site, comparing CT findings with surgical observations.

Results: 3D reconstruction revealed a correlation between pedicle size and IP volume, with smaller base areas linked to smaller IPs. Base and surface areas were highly variable, but a significant correlation was found (p=0.001). The maxillary (40.8%) and ethmoidal sinuses (41.5%) were the most common origins. CT prediction value ranged from 89% to 95% but was unreliable in 24.1% of cases. Hyperostosis was observed in 75.9% (CT) and 95.4% (surgery).

Conclusions: CT and 3D reconstruction can lead in surgical planning and personalization for IP excision.



3914

Dupilumab monthly dose de-escalation maintains efficacy in CRSwNP: a two-year real-world study

Claudio Montuori[1], Eugenio De Corso[2], Gabriele De Maio[1], Leandro Maria D'Auria[1], Alberta Rizzuti[1], Maria Clara Pacilli[1], Giuseppe D'Agostino[1], Rodolfo Mastrapasqua[3], Dario Antonio Mele[4], Jacopo Galli[5]

[1]Department of Head-Neck and Sensory Organs; Catholic University of Sacred Heart, Rome, Italy., *[2]Otorhinolaryngology Unit, A. Gemelli University Hospital Foundation IRCCS, Rome, Italy.*, *[3]ENT Department, Rivoli Hospital, ASL TO3, 10098 Rivoli, Italy*, *[4]Otorhinolaryngology Unit, A. Gemelli University Hospital Foundation IRCCS, Rome, Italy*, *[5]Department of Head-Neck and Sensory Organs; Catholic University of Sacred Heart, Rome, Italy*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Objective: The aim of this study was to evaluate if dupilumab interval dose de-escalation to every 4 weeks negatively impacts treatment outcomes in real-life practice for severe uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP) during the first 2 years of treatment.

Methods: We enrolled 148 patients who completed 2 years of follow-up. We compared 2 homogenous groups in terms of severity: group A included 77 patients who never modified the interval of administration during follow-up; group B included 71 patients who extended the dosing interval to monthly administration. We compared the treatment outcomes and differences in safety.

Results: The monthly interval dose prolongation was started in 22/71 patients (30.99%) at 6 months, in 11/71 (15.48%) at 9 months, in 22/71 (30.99%) at 12 months, and in 16/71 (22.54%) at 18 months. The dose prolongation was to manage minor adverse events in 9 of 71 patients; persistent eosinophilia in 26/71 patients; specific request of patients who had confirmed sustained control as determined by the physician's assessment in 36/71 cases. Mean values of all outcomes of response to treatment (i.e., volume of polyps, nasal obstruction, quality of life, olfaction) significantly improved at 6, 12, and 24 months compared to baseline ($p<0.01$) in both groups A and B. No significant differences were found comparing the groups A and B for any of the outcomes examined over the 2 years of follow-up ($p<0.01$).

Conclusion: These results suggest that extending to monthly dosing of dupilumab in real-life does not negatively impact outcomes in patients with severe uncontrolled CRSwNP.



3646

Prelacrimal window approach to the maxillary sinus: a systematic review and meta-analysis of the literature

Andre Sousa-Machado[1], Hans Briner[2], Francisco Alvarez[3], Daniel Simmen[2]

[1]ULSTMAD; Faculdade Ciencias da Saude - Universidade da Beira Interior, [2]ORL-Zentrum, [3]CHUCB; FCS-UBI

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: The prelacrimal window approach (PLWA) is a minimally invasive surgical technique that has been proposed as an alternative to the traditional approaches to access the maxillary sinus.

Methods: A systematic review with meta-analysis was performed following PRISMA guidelines and identified 368 articles for initial review of which 14 (610 participants) met the criteria for meta-analysis. Four databases, including PubMed, Google Scholar, Web of Science and Scopus, were searched to identify relevant articles. Two independent reviewers conducted the eligibility assessment for the included studies. Methodology quality and risk of bias were evaluated by New Castle Ottawa scale. The outcomes assessed were recurrence of the pathology, postoperative morbidity including epiphora, dry nose, facial, gingival numbness, epistaxis or local infection.

Results: The present data suggest a significant reduction in the recurrence rate of maxillary sinus pathology following PLWA when compared to conventional surgery (endoscopic medial maxillectomy, endoscopic sinus surgery and the Caldwell-Luc operation). The rates of epiphora, facial or gingival numbness, epistaxis or infection requiring intervention, were not significantly different between the procedures.

Conclusions: Maxillary sinus pathology can be effectively treated using the PLWA technique, as it has been shown to result in a lower recurrence rate compared to conventional surgeries.



3992

Endoscopic Endonasal Approach for Management of Petrous Apex Cholesterol Granuloma: Case Series & Literature Review

Farhad Arbabzadeh[1], Seyed Mousa Sadrehosseini[1], Mehdi Zeinalizadeh[3]

[1]Imam Khomeini Hospital Complex, Tehran, Iran, [2]Otolaryngology Head Neck Surgery Department, Tehran University of Medical Sciences, Tehran, Iran, [3]Neurological Surgery, Tehran University of Medical Sciences, Tehran, Iran

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Petrous apex cholesterol granuloma (PACG) is a rare condition. It can present with a wide range of symptoms. Various treatment approaches have been described for management of this condition. Endoscopic endonasal access to the petrous apex has described. The purpose of this study is to evaluate endoscopic endonasal approaches outcome in drainage of petrous apex cholesterol granuloma.

Methods: A retrospective review of patients with symptomatic PACG who underwent expanded endoscopic endonasal approaches was performed.

Results: In our study, 12 patients with symptomatic PACG between 2010 to 2024 in Imam Khomeini hospital complex, Tehran were evaluated. The most common symptom was headache (8 patients), followed by sixth nerve palsy (5 patients). All patients managed via endoscopic approaches. The surgical approaches included transsphenoidal (3 cases), transclival (7 cases) and transpterygoid (2 cases). Nasoseptal flap was utilized in 6 patients alone and in 3 patients in combination with silastic stent. In all patients, headache improved immediately after surgery. Diplopia resolved immediately in 2 patients, while in 3 others, it gradually improved over 3 months. The most common complications were dry eye in 2 cases and septal abscess in one case.

Conclusion: Expanded endoscopic endonasal approaches could provide adequate access for PACG drainage with little complications. Complete cyst drainage can result in immediate headache relief. To prevent restenosis of the cyst opening, designing a nasoseptal flap and placing it at the cyst opening is recommended.



3686

The Association of Smell Impairment and Cognitive Decline: A Meta-Analysis of Longitudinal Studies

Brian Sheng Yep Yeo[1], Harris Jun Jie Muhammad Danial Song[1], Benjamin Kye Jyn Tan[2], Adithya Suresh[1], Owen Tsung Wen Ho[1], Jun He Chan[1], Esther Yanxin Gao[3], Claire Jing-Wen Tan[3], Chong Boon Teo[1], Christopher Li-Hsian Chen[1], Laura Tay[4], Ecosse L. Lamoureux[5], Hummel Thomas[6], Anna See[3], Shuhui Xu[3], Song Tar Toh[3], Tze Choong Charn[3], Neville Wei Yang Teo[3]

[1]National University of Singapore, *[2]Department of Otorhinolaryngology—Head & Neck Surgery, Singapore General Hospital, Singapore*, *[3]Department of Otorhinolaryngology—Head & Neck Surgery, Singapore General Hospital*, *[4]Department of Geriatric Medicine, Sengkang General Hospital*, *[5]Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne*, *[6]Smell & Taste Clinic, Department of Otolaryngology, Technische Universität Dresden, Dresden, Germany*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Olfactory Impairment (OI) is linked to poor ageing outcomes and is common in neurodegenerative diseases, but its temporal relationship with Cognitive Decline (CD) remains unclear. This study evaluates the long-term association between OI and CD.

Material & Methods: PubMed, Embase and Web of Science were searched up to 9 August 2024 for longitudinal studies reporting on the association between OI and CD in adults. Independent authors extracted data, evaluated for bias and assessed the strength of evidence. A mixed-effects meta-analysis was performed to calculate pooled outcomes, using Risk Ratios (RR) for dichotomous data and Standardized Mean Differences (SMD) for continuous data. Additional subgroup, sensitivity and bias analyses were conducted. The Population Attributable Fraction (PAF) of OI-related CD was tabulated.

Results: This review included 48 articles comprising 37,783 participants. OI was associated with a 2.06-fold greater risk of any CD compared to those with normal olfactory function (RR=2.06; 95%CI=1.87-2.26, I2=0%). A positive dose-response relationship was found between worsening olfactory status and cognitive decline. Additionally, OI patients had poorer cognitive scores than controls at both baseline (SMD=-0.36; 95%CI=-0.60 to -0.13, I2=72%) and follow-up (SMD=-0.77; 95%CI=-1.08 to -0.45, I2=73%). Our results remained robust to subgroup, sensitivity, influence and bias analyses. The PAF of OI-related incident CD was 18%.

Conclusion: OI may be linked to a greater risk of any CD, with poorer olfactory status associated with heightened risks. OI could be used for early cognitive screening in high-risk patients, and those with long-standing OI should be considered for cognitive evaluation.



3819

Health consequences of urbanization: effects of air and electromagnetic pollution on the prevalence of obesity, diabetic complications and olfactory dysfunction in patients with type 2 diabetes mellitus

Arianna Cardella[1], Livio Luzi[2], Francesco Mozzanica[3]

[1]Department of Otorhinolaryngology, IRCCS Multimedica, Milan, Italy, [2]Department of Biomedical Sciences for Health, University of Milan, Milan, Italy, [3]Department of Clinical Sciences and Community Health, University of Milan, Milan, Italy

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: The health consequences of urbanization demand clinicians' attention. Both air and electromagnetic (EM) pollution have been associated to type 2 diabetes mellitus (T2DM). This study aims to evaluate the effects of such pollutants on the prevalence of obesity, T2DM complications and olfactory dysfunction (OD) in two groups of T2DM patients living in different areas of the Lombardy region of Italy with different pollution exposure.

Materials & Methods: Two comparable groups of T2DM patients (power analysis: 68 per group) coming from an area with a higher level of air and EM pollution in the past 10 years (Milan) and one with a lower level of pollution (Sondrio) were analyzed. Each patient underwent standard diabetology and ENT evaluations, psychophysical olfactory testing, and filled in a questionnaire on olfactory-related quality of life (QoL). Statistical analysis used non-parametric tests and logistic regression.

Results: The prevalence of diabetic complications (48.5% vs.25%, p=0.007) and of OD (60.3% vs. 41.2%, p=0.039) was significantly higher in patients from Milan than from Sondrio, while no difference was found for obesity (p=0.716). The group with a greater prevalence of OD also reported worse olfactory-related QoL. Regression analysis showed a significant association between OD and diabetic complications (OR: 3.021; CI: 1.302 – 7.255; p=0.011) and between complications and T2DM duration (OR: 1.186; CI: 1.095 – 1.301; p<0.001). Pollution exposure was a weak independent predictor for both OD and complications in T2DM patients.

Conclusions: Our study showed that T2DM patients subject to a higher pollution exposure were more frequently affected by diabetic complications and OD compared to patients with a lower exposure. We were also able to highlight a strong association between OD and T2DM complications and gathered evidence to support the hypothesis that pollution exposure is associated both with OD and complications in T2DM patients.



3685

The effect of intranasal quercetin on nasal mucosal healing in healthy and diabetic rat models

Enes Dogan[1], Serdar Ozer[2], Ayşe Arzu Yiğit[3], Tuğçe Anteplioğlu[4]

[1]Enes Dogan, MD, MRCS ENT, Department of Otorhinolaryngology, , [2]Serdar Ozer, MD, Department of Otorhinolaryngology, , [3]Ayse Arzu Yigit, Prof., Department of Physiology, [4]Tugce Anteplioglu, Department of pathology, Veterinary Faculty

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Quercetin, a natural flavonoid, is effective in wound healing due to its anti-inflammatory and antioxidant properties, as well as its ability to enhance fibroblast activity, promote collagen synthesis, and induce cellular repair. Diabetes negatively impacts all stages of wound healing, yet no studies have evaluated the effects of diabetes and quercetin on nasal mucosal healing.

Material & Methods: Fifty-six male Wistar rats (250–300 grams) were included. Diabetes was induced in half via intraperitoneal streptozotocin. A 2.2 mm septal perforation was created in all subjects. Rats were divided into saline or quercetin groups, receiving either 0.2 cc of 0.9% saline or 0.3% quercetin intranasally twice daily. Half of each group was sacrificed on day 7, and the remainder on day 14 for histomorphometric and histological analysis.

Results: Defect closure rates in the healthy quercetin group were 85% (day 7) and 77% (day 14), significantly higher than the healthy saline group at 67% and 62% (p=0.034, p=0.033). On day 14, the healthy saline group showed 63% closure, compared to 40% in the diabetic saline group (p=0.0142). In both healthy and diabetic rats, quercetin induced vascularization (p=0.0045, p=0.0238), fibroblast activity (p=0.0178, p=0.0379), and collagen production (p=0.0260, p=0.0225). In healthy rats, it additionally promoted granulation tissue formation (p=0.0238), epithelial and cartilage regeneration (p=0.0357), and suppressed epithelial degeneration (p=0.0311). Conversely, diabetes suppressed fibroblast activity (p=0.0489) and collagen production (p=0.0114), while inducing epithelial degeneration (p=0.0438).

Conclusion: These findings support the efficacy of topical quercetin in nasal mucosal healing, highlight its beneficial effects even in diabetic subjects, and demonstrate the detrimental impact of diabetes on nasal mucosal healing.



CRS – Surgical Management 2

3988

Efficacy of Posterior nasal nerve neurectomy for the treatment of chronic rhinosinusitis with nasal polyposis: a randomized controlled trial

Yash Mittal[1]

[1]All India Institute of Medical Sciences, Bhubaneswar, India

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Background: Managing Chronic Rhinosinusitis with Nasal Polyposis (CRSwNP) is always challenging due to the chronicity of the disease and its intractable course. Posterior nasal neurectomy (PNN) can be effective in alleviating symptoms of CRSwNP.

Materials and methods: The study was conducted in a tertiary care referral hospital from August 2019 to April 2022. A total of 46 patients of CRSwNP were included (23 patients in the study and 23 in the control group). Patients in the study group underwent endoscopic sinus surgery (ESS) and PNN and patients in the control group with ESS. The symptoms and quality-of-life improvement were assessed at 1, 4, 12, and 24 weeks after the surgery

Results: On intra-group analysis between the preoperative and postoperative scores (SNOT-22, RSDI and LK Score), we found a significant difference for each ($p<0.05$). When the improvement of outcome scores was compared between the two groups, a significant difference was obtained for SNOT-22 and RSDI scores at 1 week and 4 weeks ($p<0.05$). There was no significant difference found for the duration of surgery/complications between the two groups ($p=1.00$).

Conclusion: The PNN can be an effective add-on procedure in patients with CRSwNP in alleviating short-term control of the symptoms and the quality of life. A larger sample size with long-term follow-up may be required for a better understanding of the efficacy of the PNN in patients with CRSwNP.



4166

Relevance of anatomical remnants for revision sinus surgery

Concha Gago Torres, Ramón Moreno-Luna[1], Daniel-Iván Martín-Jiménez[1], Juan Maza-Solano[1], Serafín Sánchez Gómez[1]
[1]Hospital Universitario Virgen Macarena

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Objectives: Review of the scientific literature dedicated to investigating how residual structures impact surgical outcomes in chronic rhinosinusitis (CRS) patients, providing information on the frequency of anatomical remnants after endoscopic sinus surgery (ESS).

Methods: This review has been reported following the recommendations of the SWiM guideline. PubMed, Cochrane Library, Embase, and Web of Science were searched until April 2024. Selected studies' quality and risk of bias were assessed using the Oxford Centre for Evidence-Based Medicine Levels of Evidence and STROBE. The findings were analyzed descriptively and qualitatively, aligning with EPOS and ICAR guidelines.

Results: Fourteen relevant studies met the inclusion criteria for qualitative synthesis. Prospective and retrospective cross-sectional designs, focusing on revision ESS, were included. Four studies examined full-house functional ESS (FESS), three focused on frontal sinus surgery, four on conventional FESS and three did not specify the surgery type. The risk of bias was assessed, revealing significant variability in study quality and a low level of evidence. Wide variability was found in anatomical structures remaining after ESS, most notably in retained uncinate process (29.6–64%), agger nasi cell (4.5–83.33%) and frontoethmoidal cells (40.7–96.8%). Observations on concha bullosa, septal deviation and lateralization of the middle turbinate revealed distinct patterns among the included studies.

Conclusion: This systematic review underscores the persistent challenge of incomplete resection of anatomical structures in revision surgeries for CRS. The variability in the retention of key structures highlights the complexity of surgical outcomes and the need for further refinement in surgical techniques.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4008

Middle turbinate axillectomy and anterior ethmoid artery location identification: two key steps in endoscopic endonasal frontal sinusotomy

Alessandro Varini[1], Giulia Del Piero[1]
[1]ENT department Policlinico Triestino, Trieste, Italy

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: Endoscopic endonasal frontal sinusotomy (EEFS) failure and frontal ostium (FO) iatrogenic stenosis are commonly due to disorientation and inadequate or incomplete removal of ethmoid cells. Intraorbital or intracranial violation are possible complication in the frontal recess (FR). The axillectomy punch-out procedure can provide wide exposure of this challenging area. At the same time, the anterior ethmoid artery (AEA) may serve as a landmark in FO identification. In this study we present our approach to the FO, based on previous anatomical studies.

Materials and methods: We retrospectively analysed 50 consecutive patients affected by chronic rhinosinusitis with nasal polyps (CRSwNP) between January and June 2022. In all cases we applied the axillectomy technique and first identified the AEA before approaching the FO. FO patency and morbidities were assessed after at 1 year.

Results: The overall FO patency rate was 100%. Even in case of residual middle turbinate stump lateralization and adhesion the FR was not obscured. In 6% of the patients, edema of the ethmoid roof was detected at 1 year.

Conclusion: Exposure in EEFS is crucial and it may be obtained by the punch-out procedure at the expense of the middle turbinate axilla and the conchal plate of Mouret. AEA usually lies along the posterior border of the first foveola ethmoidalis and it is mostly located between second and third lamella, where it can be identified through the hiatus semilunaris superior. Once the AEA has been identified, it constitutes an optimal landmark for the FO.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4033

MUCOSAL FLAPS stabilized by STEROID-ELUTING implant for revision frontal sinus surgery: technical notes

Gloria Schiavo[1], Alessandro Vinciguerra[3], Sara Gotti[4], Mario Turri-Zanoni[5], Paolo Battaglia[5]

[1]asst Lariana, Ospedale Sant'anna , [2]asst Lariana, Ospedale Sant'anna, Como, [3]asst Lariana, Ospedale Sant'anna, [4]uninsubria, [5]asst-Lariana, Ospedale Sant'anna - Uninsubria

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

INTRODUCTION: Draf type III is an endoscopic endonasal procedure which consists in creating a frontal drainage pathway from one lamina papyracea to the other. The main concern about this procedure is the high rate of restenosis due to neo-osteogenesis and scar tissue formation lightened from the exposed bone. Several techniques have been introduced to prevent this complication, most of which are no more available in revision surgery. We describe a novel lateral-based local flap stabilized by steroid-eluting implant for revision frontal sinus surgery.

METHODS: two horizontal mucosal incisions (one anterior, one posterior) are performed on the scar tissue in front of the anterior margin of the previously performed DRAF type III. The flap is elevated from one side, leaving the pedicle random-based on the other side. The newborn bone is removed to restore ventilation of the frontal sinuses. The lateral-based flap is turned upward to cover the exposed bone on the anterior circumference of the frontal neo-ostium.The final step is the positioning of the steroid-eluting implant which has a double function: to prevent the restenosis of the frontal sinusotomy by extended steroid release; to buttress, stabilize and keep in place the flap.

RESULTS: A total of three patients were treated with revision Draf type III frontal sinusotomy using flap stabilized by steroid-eluting implant between November 2023 - November 2024 at ENT departments of Sant'Anna Hospital, Como, Italy.No patients reported restenosis of the revision frontal sinusotomy nor displacement of the flap during these 12 months of follow-up.

CONCLUSIONS: The use of this novel lateral-based flap could be an option to resurface the frontal neo-ostium and prevent the osteitic process induced by exposed bone. The addition of the steroid-eluting implant enhances the effect of isolating the inflammation but also contrasts it with long steroid releasing; at the same time, it stabilizes the flap preventing its displacement.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4063

Does the extent of surgery for CRSwNP correlate with postoperative control and patient satisfaction?

Gata Anda[1], Silviu Albu[1], Daniel Corneliu Leucuta[2]

[1]II-nd Department of Otorhinolaryngology, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj Napoca, Romania, [2]Medical informatics and Biostatistics Department, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj Napoca, Romania

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Background & Aim: Postoperative control in CRSwNP is one of the most debated subjects in rhinology, with the extent of surgery being one of the most important controversies. The present study aims to correlate the extent of surgery with postoperative disease control evaluated through objective and subjective parameters.

Material and Methods: Patients undergoing surgery for CRSwNP were prospectively enrolled. Preoperative demographic data, blood tests, SNOT-22 and Lund-Mackay (LM) scores were gathered. Patients were followed-up at one month postop and each three months thereafter, for 36 months. At each follow-up patients filled SNOT-22 questionnaires and the endoscopy was graded using POSE score. During follow-up, for patients who performed a CT scan, ACCESS score was calculated.

Results: 49 patients (F:M/14:35) were enrolled in the study. 15 patients associated asthma, 11 presented NSAIDs hypersensitivity and 20 presented blood hypereosinophilia. There was a statistically significant correlation between preoperative LM and postoperative ACCESS score ($p<0.001$). No correlation was observed between ACCESS score and patient-based SNOT-22 scores (preoperative SNOT $p = -0.02$, postoperative 18 months SNOT $p = -0.18$, postoperative 36 months SNOT $p = -0.05$). ACCESS score did not correlate with postoperative objective POSE score (POSE 6 months $p = -0.06$, POSE 18 months $p = -0.08$, POSE 36 months $p = 0.18$).

Conclusion: The extent of surgery in CRSwNP does not correlate with postoperative disease control evaluated through objective and subjective methods.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4401

Draf III In A Tertiary Centre - Surgical Outcomes And Predictive Factors For Stenosis

David Farinha[1], Vítor Oliveira[1], Mariana Calha[1], César Silva[1], Maria José Santos[1], Rita Tomás[1], Rodrigo Franco[1], Claudia Rosa[1], Bernardo Batista[1], Mariana Caetano[1], António Nicolau-Fernandes[1], Leonel Luís[1]

[1]ENT Department - Unidade Local de Saude de Santa Maria

CRS – Surgical Management 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: The DRAF3 procedure is an effective approach for treating complex or recurrent frontal sinus disease. Stenosis is a well-documented drawback, though its incidence and contributing factors vary across the literature. This study aims to assess the surgical outcomes of the DRAF3 procedure in our series and identify predictive factors for stenosis.

Material and Methods: A retrospective analysis was conducted on patients who operated with DRAF3 between 2018 and 2024 in a tertiary institution. The main outcome was defined as frontal sinus patency. The association between clinical variables and the occurrence of stenosis was analyzed using the chi-square test and odds ratio (OR).

Results: A total of 49 patients underwent the DRAF3 procedure, with a mean age of 55.8 years; 51% were male. Among these patients, main diagnoses were mucocele (42.9%), neoplasms (30.6%) and chronic rhinosinusitis (16.3%). In 38.8% of cases, it was revision surgery. The average follow-up duration was 2.4 years. Frontal sinus patency was achieved in 42 patients, demonstrating an 85.7% surgical efficacy rate. Four patients required revision surgery for total stenosis (8.2%), while three patients experienced partial stenosis and remained under observation. No perioperative complications were reported. No statistically significant association was found between the underlying aetiology and the occurrence of stenosis (p=0.513). However, aspirin-exacerbated respiratory disease (AERD) was identified as a significant risk factor for stenosis (p=0.0071; OR 30.75).

Conclusions: In this series, the DRAF3 procedure proved to be an effective and safe option for managing complex frontal sinus pathology. Surgical success was achieved in most patients, with minimal morbidity and a low revision rate. The presence of AERD was identified as a significant risk factor for stenosis. Identifying preoperative risk factors may help optimize surgical outcomes and improve postoperative management.



Paediatric Rhinology 2

3618

Acquired CFTR dysfunction and dense distribution of ionocytes in nasal mucosa of children with CRS

Yang Han, Chao Jia, Pengpeng Wang, Wentong Ge
[1]56 NanLishi Road, Xicheng District, Beijing 100045, China

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Aims: Ionocytes, rare cells in the airway epithelium, are characterized by high CFTR expression. This study investigates the morphology, distribution of ionocytes, and CFTR function in the nasal mucosal epithelium of children.

Methods: Exfoliated nasal mucosa cells from 101 children were analyzed using flow cytometry to assess ionocyte and CFTR numbers and CFTR function. Additionally, nasal mucosa and polyps from 10 CRSwNP patients were collected. RNAscope was performed on FOXI1 and CFTR in pathological paraffin sections to examine ionocyte and CFTR expression and distribution in nasal mucosa and polyp epithelium.

Results: In CRS patients, ionocyte numbers in nasal epithelium were reduced, with a higher frequency of CFTR-negative ionocytes and decreased CFTR function. CFTR in the nasal mucosa of CRS patients displayed a locally dense distribution pattern that intensified with inflammation spread. Ionocytes appeared “tadpole-shaped” in high CFTR expression areas, where intracellular CFTR expanded in clusters. CFTR-negative ionocytes were more prevalent in nasal polyps.

Conclusions: CRS patients exhibit decreased ionocyte numbers and CFTR function in nasal mucosa. With inflammation expansion, CFTR and ionocytes showed increased dense distribution. Some ionocytes lost CFTR expression and their typical "tadpole" morphology, potentially contributing to polyp formation.



3658

Chronic graft-versus-host disease and refractory rhinosinusitis after allogeneic hematopoietic stem cell transplantation in children

Jinhao Zhao[1], Yang Han[1], Pengpeng Wang[1], Wentong Ge[1]

[1]Department of Otolaryngology, Head and Neck Surgery, National Center for Children's Health, Beijing Children's Hospital, Capital Medical University, 56 NanLishi Road, Xicheng District, Beijing 100045, China

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Background: A 15-year-old boy with cGVHD and CRSwNP was admitted to our hospital. He had undergone allo-HSCT for AA. One year post-transplantation, he was diagnosed with CRSwNP, with no prior history of sinusitis. Over six years, he **underwent FESS seven times. The focus is elucidating immunological factors causing nasal polyps recurrence.**

Method: Metagenomic sequencing was done on nasal pus, and various analyses including pathological, whole-exome, transcriptome, and single-cell transcriptome sequencing were conducted on nasal polyps. These findings were compared to those from non-transplanted children with nasal polyps. Cell culture and karyotyping were also performed on the patient's nasal polyps.

Results: Metagenomic sequencing of nasal pus identified opportunistic pathogens. Whole-genome sequencing revealed a chimeric genotype. Transcriptomic analysis showed upregulation of cell cycle and tumor proliferation pathways, and dysregulation of inflammatory pathways. Pathological examination of nasal polyps indicated eosinophilic infiltration, squamous metaplasia, reduced goblet cells, and decreased epithelial cilia. Immune analysis found an imbalance in CD4+ and CD8+ lymphocytes in the mucosa.

Conclusion: Immune dysregulation, especially the imbalance between CD4+ and CD8+ lymphocytes, seems crucial for epithelial damage and tissue remodeling. Our results suggest a possible connection between post-transplant chimerism and nasal polyp development, indicating a need for more research on the transdifferentiation of hematopoietic stem cells. Moreover, cell cycle-related pathways seem to be involved in abnormal tissue responses in this post-transplant case. Single-cell transcriptome sequencing also suggests that inflammatory cells mainly come from females, from the X chromosome.



3963

Nasal nuggets: Excavating dermoid cysts

Shruti Aggarwal[1], Balakrishnan R.[2], Rohit Singh[3]

[1]Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, Manipal, *[2]Professor and Rhinology unit head, Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, Manipal*, *[3]Professor and Head Otorhinolaryngology, Kasturba Medical College Manipal, Director- Alumni Relations, Manipal Academy of Higher Education, Manipal*

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Background- Nasal dermoid sinus cyst are rare congenital midline nasal masses with ectodermal entrapments along embryonic closure lines. Accounting for 3of all dermoids and 12% of head and neck dermoids, with an incidence of 1:20 to 40,000 birthsAim and objectives- To analyse the clinical presentation and diagnostic challenges faced in management and treatment of nasal dermoid cyst and the role of external open and endoscopic approaches, in South Indian population.

Materials and Methods: A retrospective observational study on paediatric patients with nasal dermoids with or without a sinus tract over a period of ten years (January 2014 – January 2025) comprising of ten males and one female, with a mean age of presentation to be five, was conducted. All patients underwent a CT scan/ MRI scan or contrast enhanced sinogram to study the extent. All cases were managed surgically and followed up.

Results: Hartley classification was used to classify cases and decide their surgical management as superficial (5), intraosseus (1), intracranial extradural (5). All superficial swellings were locally incised with horizontal/ vertical incision, sinuses required elliptical/ rhomboid excision with primary closure or a local flap for reconstruction, with midfacial degloving for intracranial part excision. On follow up 1 case out of 11 had recurrence in a decade.

Conclusions: Open surgery is a better indicator for the extent than radiology, as CT/MRI failed to account for intracranial extension in 25% of cases. Complete excision and a good cosmetic repair is mandatory for good results.



4522

Diagnosis And Management Of Nasal Obstruction In Newborns And Infants: A Five-Year Experience

Stavroula-Alexandra Faliagka[1], Eleftheria Miliori[2], Asimina Malliaka[1], Vasilis Margaritis[1], Eirini Vazaiou[3], Valentinos Sofokleous[4]

[1]ENT resident, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece,
[2]ENT resident, First University Department of Otorhinolaryngology, University of Athens, Hippocration Hospital, Athens, Greece,
[3] Consultant, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece
[4]Director, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece,

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: This study aims to record the main causes of nasal obstruction in children under one year of age and present our experience in their diagnosis and management.

Material and Methods: We collected and analyzed data from newborns and infants treated in our department for severe nasal obstruction over the past five years. We outline our diagnostic approach, investigations, surgical techniques, and patient outcomes.

Results: A total of eleven cases were included in this analysis. The predominant diagnosis was choanal atresia, seen in six cases, followed by dacryocystoceles in four cases and congenital pyriform aperture stenosis in one case, leading to a male-to-female ratio of 3:1. Notably, three of the patients had syndromic conditions. The clinical presentation varied based on the severity of the stenosis and whether one or both nasal passages were affected, subsequently influencing the therapeutic approach. Six cases needed intervention in the neonatal period, while five were managed during infancy. Diagnosis primarily involved nasal endoscopy and craniofacial computed tomography. Management included conservative treatment for four cases and surgery for seven, all using endoscopic techniques.

Conclusions: Nasal obstruction in newborns and young infants is a potentially life-threatening condition. Bilateral obstruction presents with severe respiratory distress and paradoxical cyanosis within the first hours of life, necessitating immediate surgical intervention. Surgical correction may also be required in cases of unilateral obstruction if there is significant narrowing of the other side or due to associated comorbidities. Timely diagnosis and targeted intervention are crucial for ensuring respiratory function and optimizing outcomes.



3915

Surgical treatment of superolateral orbital abscess in children: can we avoid external incision?

Mislav Knežević, Marko Velimir Grgić
Departmenf of ENT and Head and Neck Surgery

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Background: Orbital abscess as a well-known complication of acute sinusitis. In pediatric population, the most common pathologic pathway it through lamina papiracea, leading to medially located subperiostal abscess. Much less common is the propagation of infection from the frontal sinus resulting in superolaterally located abscess.While there is a general agreement regarding the indication and timing of surgical intervention in patients with orbital abscess, the review of literature does not yield the answer regarding the best approach. Since superolateraly located pathology in the orbit is hardly reachable through endoscopic endonasal approach, an external incision in the upper eyelid is the alternative.

Patients and methods: We have analyzed our patients treated surgically for orbital abscess in 10 year's period and searched the literature available in PubMed.

Results: Among the pediatric patients surgically treated for sinusogenic orbital abscess, we had five cases of superolateraly located abscess. Three cases were treated with simultaneous endoscopic drainage of frontal and ethmoid sinus and external incision. Two cases have been treated only by endoscopic drainage of frontal and ethmoid sinus with the idea that the abscess would drain through it's original pathway of development. All patients had complete resolution of abscess verified radiologically.

Conclusion: In selected cases, the indirect drainage of endoscopically non-reachable orbital abscess by draining the frontal sinus can be adequate thus avoiding external incision.



3946

Chronic rhinosinusitis with nasal polyp: comparative analysis of clinical-tomographic parameters in patients with and without cystic fibrosis

Fabiana C P Valera[1], Inae M Compagnoni[1], Andrea A Cetlin[2], Ricardo L L Dolci[3], Marcel M Miyake[3], Denny M Garcia[1], Adriana A B Murashima[1], Marina Z Fantucci[4], Carolina S Miura[4], Andrea B Biagiotti[4], Edwin Tamashiro[4], Wilma T Anselmo-Lima[4]

[1]Division of Otorhinolaryngology, Department of Ophthalmology, Otorhinolaryngology and Head and Neck Surgery, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP), Ribeirão Preto – São Paulo State, Brazil., *[2]Division of Pneumology, Clinics Department, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP), Ribeirão Preto – São Paulo State, Brazil.*, *[3]Division of Otorhinolaryngology, Santa Casa de São Paulo School of Medical Sciences – São Paulo, Brazil.*, *[4]Division of Otorhinolaryngology, Department of Ophthalmology, Otorhinolaryngology and Head and Neck Surgery, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP), Ribeirão Preto*

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Patients with Cystic Fibrosis (CF) often present with extensive chronic rhinosinusitis with nasal polyps (CRSwNP). However, they appear to be relatively asymptomatic.

Methods: This case-control study compared 24 patients with CF-related CRSwNP (G1) to 50 patients with eosinophilic, non-CF CRSwNP (G2). The Lund- Kennedy and Lund-Mackay scores, CCCRC olfactory test and SNOT-22 were assessed in both groups. To control for potential bias due to age differences, ANCOVA test was used for analysis.

Results: mean age of group 1 was of 23.9 (± 11.9) years, compared to 40.9 (±13.1) years in group 2 ($p<0.001$). CF-CRSwNP patients exhibited similar Lund-Kennedy scores, and slightly higher Lund-Mackay score (G1: mean 15.8, IC95% 13.9-17.7; vs. G2: mean 15.8, IC95% 14.1-17.1; $p<0.05$). Despite this, patients in G1 had lower SNOT-22 scores (G1: mean 27.1, IC95% 17.5-36.7; vs. G2: mean 50.2, IC95% 42.9-57.5; $p<0.05$) and demonstrated better olfaction perception (85% of anosmic patients and 66% of individuals with severe hyposmia belonged to G2; $p<0.002$).

Conclusion: Despite having more extensive tomographic disease, CR patients reported lower SNOT-22 scores and exhibited a better olfactory performance. These findings highlight stress the need for proactive ENT evaluations in CF patients, as they tend to be minimally symptomatic despite significant disease burden. This could impact not only in sinonasal health but also in pulmonary prognosis.



4234

Early Life Tracheotomy In Children – Does It Affect Olfactory Function?

Cláudia Geraldes[1], Beatriz Nicolau[2], Ana Rolim[2], Marta Mariano[1], Tiago Velada[1], Joana Nascimento[1], Susana Pereira[1], Herédio Sousa[1]

[1]Unidade Local de Saúde de São José, [2]Unidade de Saúde Local de São José

Paediatric Rhinology 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

INTRODUCTION: Smell is a sensory system that plays a role in nutrition, emotions, human interactions and risk perception. Deprivation of olfactory stimuli in early life may impair the formation of olfactory memories. However, it appears that a strict critical period for the development of the olfactory pathway does not exist, as the system exhibits continuous plasticity. Children undergoing tracheotomy at an early age do not receive adequate olfactory nerve stimulation due to reduced nasal airflow. If this critical period was to exist, persistent olfactory dysfunction after tracheotomy closure would be expected. This study aims to evaluate the olfactory function of post-tracheotomy children.

MATERIALS & METHODS: We conducted a case-control study involving pediatric patients who had undergone tracheotomy at a Pediatric Tertiary Center and currently had no tracheocutaneous fistula. Age-matched healthy children were used as control. The U-Sniff Children Smell Test was applied to all participants, with scores ranging from 0 to 12 points. An independent samples T-test was performed.

RESULTS: A total of 5 post-tracheotomy children were compared with 15 healthy children. The mean age at tracheotomy and its duration were 116.2 days and 1463 days, respectively. The mean olfactory score was 9.0 ± 1.87 in the post-tracheotomy group and 10.33 ± 1.45 in the control group. No statistically significant difference was found (p=0.198).

CONCLUSION: This study did not show long-term olfactory dysfunction in children with a history of early life tracheotomy following the restoration of nasal airflow. This finding may be attributed to the plasticity of the olfactory system.



3660

A study of the correlation between carrying PCD gene mutations and the development of CRSwNP in children

Xiaoxu Chen[1], Yang Han[1], Wentong Ge[1]

[1]*Department of Otolaryngology, Head and Neck Surgery, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, China, 100045*

Best Abstract Presentation | SYMPOSIUM 14 | ROOM 7 – G4 + G5 - Level +1| Monday June23, 2025

Introduction: This research aimed to investigate how primary ciliary dyskinesia (PCD) gene mutations affect the susceptibility to chronic rhinosinusitis with nasal polyps (CRSwNP) in children and to identify key genes involved in its pathophysiology.

Methods: Whole Exome Sequencing (WES) was performed on the peripheral blood of 48 CRSwNP and 104 controls to identify PCD gene mutations and compare them with population databases. RNA sequencing (RNA-seq) was performed on 38 nasal polyp and 5 mucosa to identify differential expressed genes (DEGs). A comprehensive analysis integrating WES and RNA-seq data was conducted to identify the PCD-related hub genes in CRSwNP.

Results: In the control, 37 individuals (35.57%) carried PCD gene mutations, while 41 individuals (85.42%) in the CRSwNP had PCD mutations, a significantly higher proportion (P<0.0001, OR=10.61). In CRSwNP, 120 mutation sites were identified in 37 PCD mutant genes. In descending order of percentage, the top five genes are DNAH9, DNAH11, STK36, HYDIN, and DNAH5. Detection rates of 52 sites were higher than those of the population database (MAF <0.05, CADD>). DNAH9, DNAI2, and ODAD4 showed significantly higher detection rates and were risk factors for CRSwNP than controls (P<0.05, OR>2). RNA-seq enrichment analysis indicated significant enrichment of cilia-related biological processes, molecular functions, and cellular components. Joint research identified DNAH9, DNAI2, and ODAD4 as differential expressed at gene and transcript levels.

Conclusions: Carrying PCD gene mutations may increase children's susceptibility to CRSwNP. Cilia abnormalities play a key role in CRSwNP development in children, with DNAH9, DNAI2, and ODAD4 as the hub genes.



4328

TAS2R38 genotype and CRS severity in children with cystic fibrosis

Elena Cantone[2], Teodoro Aragona[4], Tosco Antonella[1], Paolo Pezzella[2], Mario Brandon Russo[5], Angela Sepe[1]

[1]Paediatric Unit, Department of Maternal and Child Health, Cystic Fibrosis Regional Reference Center, A.O.U. Federico II, Naples, Italy., *[2]1Department of Neuroscience, Reproductive and Dentistry Science, ENT section, "Federico II University of Naples", Naples, Italy.*, *[3]Department of Neuroscience, Reproductive and Dentistry Science, ENT section, "Federico II University of Naples", Naples, Italy.*, *[4]Casa Sollievo della Sofferenza San Giovanni Rotondo*, *[5]4Department of Engineering, University of Campania "Luigi Vanvitelli", Aversa, Italy.*

Best Abstract Presentation | ROUND TABLE 21 | ROOM 7 (G4+G5) - Level +1 | Tuesday, June 24, 2025

Background: Cystic fibrosis is a heterogeneous disease whose severity and symptoms largely depend on the functional impact of mutations in the cystic fibrosis transmembrane conductance regulator gene. Other genes may also modulate the clinical manifestations and complications associated with cystic fibrosis. Genetic variants of the bitter taste receptor TAS2R38 have been shown to contribute to the susceptibility and severity of chronic rhinosinusitis. This study aims to elucidate the role of TAS2R38 as a novel modifier gene influencing sinonasal disease severity and pulmonary Pseudomonas Aeruginosa colonization in children with cystic fibrosis**.**

Methods: This retrospective observational case-control study evaluated sinus clinical features, quality of life, and the occurrence of Pseudomonas Aeruginosa pulmonary colonization in 69 children with cystic fibrosis. Propylthiouracil testing and TAS2R38 genotyping were performed to characterize patients based on receptor functionality.

Results: The non-taster genetic variant of bitter taste receptor TAS2R38 was associated with greater severity of chronic rhinosinusitis, as measured by endoscopic and radiological scores, compared to the taster variant (p=0.031 and p=0.03, respectively). Furthermore, an inverse correlation was observed between the age at first Pseudomonas Aeruginosa infection and chronic rhinosinusitis severity assessed by endoscopic score (r=-0.3388, p = 0.0302).

Conclusions: The findings highlight the role of TAS2R38 as a potential genetic modifier influencing the severity of chronic rhinosinusitis in children with cystic fibrosis. The clinical implications include the potential development of T2R38-targeted topical therapies and the use of taste testing or genotyping to predict susceptibility to infection. In addition, these results may pave the way for novel, tailored therapeutic approaches in the era of precision medicine. @font-face {font-family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font-family:roman; mso-font-pitch:variable; mso-font-signature:-536870145 1107305727 0 0 415 0;}@font-face {font-family:Calibri; panose-1:2 15 5 2 2 2 4 3 2 4; mso-font-charset:0; mso-generic-font-family:swiss; mso-font-pitch:variable; mso-font-signature:-536859905 -1073732485 9 0 511 0;}p.MsoNormal, li.MsoNormal, div.MsoNormal {mso-style-unhide:no; mso-style-qformat:yes; mso-style-parent:""; margin:0cm; mso-pagination:widow-orphan; font-size:12.0pt; font-family:"Times New Roman",serif; mso-fareast-font-family:"Times New Roman";}span.highlight {mso-style-name:highlight; mso-style-unhide:no;}.MsoChpDefault {mso-style-type:export-only; mso-default-props:yes; font-family:"Calibri",sans-serif; mso-ascii-font-family:Calibri; mso-ascii-theme-font:minor-latin; mso-fareast-font-family:Calibri; mso-fareast-theme-font:minor-latin; mso-hansi-font-family:Calibri; mso-hansi-theme-font:minor-latin; mso-bidi-font-family:"Times New Roman"; mso-bidi-theme-font:minor-bidi; mso-font-kerning:0pt; mso-ligatures:none; mso-fareast-language:EN-US;}div.WordSection1 {page:WordSection1;}



CRS -Medical Management 1

4093

Comparison of the performance of ChatGPT and ENT physicians in the management of chronic diffuse rhinosinusitis

Romane Gozlan[1], Margaux Legre[1], Charlotte Sain Oulhen[1], Jean-Baptiste Lecanu[1]
[1]*Service d'ORL-Chirurgie Cervico-faciale, Institut Arthur Vernes, 36 rue d'Assas 75006 Paris*

CRS – Medical Management 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: The management of diffuse chronic rhinosinusitis (CRS) has evolved with the introduction of biologics targeting inflammatory cytokines, leading to a better understanding of its pathophysiology and the adoption of phenotype and endotype-based classifications. Due to the high cost of biologics, prescriptions are limited to carefully selected patients, following strict guidelines. ChatGPT, an AI-based language model, has shown potential in various fields, including healthcare. This study aimed to evaluate the performance of junior and senior ENT physicians, alongside ChatGPT, in managing patients with diffuse CRS eligible for biotherapy.

Materials and Methods:Thirty CRS patient phenotypes were presented to groups of eight junior and eight senior ENT physicians, as well as to ChatGPT. The junior participants were ENT residents from three different departments, while the senior participants were general ENT practitioners from two different departments. For each patient, a single-choice questionnaire covering diagnosis, endotype, and both medical and surgical management was completed by both physician groups and ChatGPT. The percentage of correct responses, based on EPOS guidelines, was assessed.

Results: The correlation with correct management according to EPOS guidelines was 74% for senior ENT physicians, 76% for junior ENT physicians, and 80% for ChatGPT. ChatGPT demonstrated significantly better performance compared to senior ENT physicians (p=0.003), with no significant difference observed when compared to junior physicians (p=0.06)

Conclusion: Our study suggests that chatbots such as ChatGPT, based on Large Language Models, are promising tools for the management of diffuse chronic rhinosinusitis.



4284

Budesonide, A Novel Intrapolyp Injection Agent.

Ibrahim Gehad[1]
[1]*Faculty of Medicine Kafr elshikh University*

CRS – Medical Management 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Objectives: To assess the efficacy and safety of budesonide as an intrapolyp injection in chronic rhinosinusitis with nasal polyps (CRSwNP) in comparison to control and systemic steroids.

Method: In a prospective double-blinded controlled randomized clinical trial, 150 patients with CRSwNP were divided into 3 groups in a ratio 1:1:1 where group (A) was given oral prednisolone 1 mg/kg tapered daily for 2 weeks, group (B) was given budesonide intrapolyp injection weekly for 5 consecutive weeks, and group (C) was given intrapolyp injection with saline as the control group. Patients were assessed upon Sinonasal Outcome Test (SNOT-22) score, Total Nasal Polyp score (TNPS), Serum IgE, absolute eosinophilic count, and morning cortisol level before treatment, 1 week and 6 months after completing their treatment protocol.

Results: SNOT 22 score improved significantly in all groups compared to those at baseline. Reduction in the oral and injection groups was much greater than the control group ($P2 < 0.001$), ($P3 < 0.001$), and the same trend concerning TNPS score ($P2 < 0.001$), ($P3 < 0.001$) but with no significant change in the control group.

Conclusion: Intrapolyp steroid injection is considered a safe and effective method in nasal polyposis with limited side effects in comparison to systemic steroids. Using Budesonide as an agent for intrapolyp injection appears to be promising. It's advisable in patients with multiple relapses or high-risk patients to avoid repeated courses of oral steroids.



3701

Effectiveness of ASA therapy after ASA desensitization on adult N-ERD and CRSwNP patients

Sanna Toppila-Salmi[1], Alma Helevä[2], Annina Lyly[3], Viljami Salmi[2], Paula Kauppi[3], Johanna Sahlman[4], Lena Hafren[3], Mikko Nuutinen[5]

[1]University of Helsinki and Eastern Finland, [2]University of Helsinki, [3]Helsinki University Hospital and University of Helsinki , [4]Kuopio University Hospital, Kuopio, Finland, [5]University of Helsinki

CRS – Medical Management 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: ASA therapy after ASA desensitization (ATAD) has been used as a treatment of patients with chronic rhinosinusitis with nasal polyps (CRSwNP) and NSAID-exacerbated respiratory disease (N-ERD). There is limited evidence base knowledge of the effect of ATAD on CRSwNP and ATAD has shown to cause side effects. The aim of this randomized double-blinded controlled trial was to study the effect of ATAD in adult patients with N-ERD, CRSwNP and asthma.

Method: A total of 40 N-ERD patients with asthma and uncontrolled CRSwNP were recruited at Helsinki University Hospital. Thirty-one patients met the inclusion criteria and 27 completed a 4-day ASA desensitization and started ASA tablet 125 mg 1x1 or placebo at home. At 5 months, the dose was doubled and the treatment lasted a total of 11 months. The patients clinical examination and filled a questionnaire at 1, 5, 11 months after the start of medication and 1 month after stop of medication.

Results: The reduction in endoscopic nasal polyp score was greater in ASA treatment group as compared with the placebo group 11 months post-treatment. SNOT-22 symptoms score and the proportion of controlled-partly controlled and uncontrolled patients did not differ statistically significantly between the treatment arms. Adverse events were observed in about 60% of the patients in the ASA arm and 30% of the patients in the placebo arm, most commonly regarding worsening of asthma, exacerbations, GI symptoms, and increased bleeding tendency.

Conclusion: Although some patients benefit slightly from ATAD in nasal polyp size, the challenge is that several patients gets side effects of ATAD some CRSwNP patients with NERD, but overall the benefit of this treatment seems questionable with its disadvantages and side effects taken into account.



4016

Management of patients with Chronic Rhinosinusitis with nasal polyps in clinical practice: French Society of Oto-Rhino-Laryngology Head and Neck Surgery (SFORL) consensus guidelines

Jean Francois Papon[1], Guillaume de Bonnecaze[3], Justin Michel[4], Cecile Rumeau[5], Mihaela Alexandru[6], Sophie Bartier[7], Florent Carsuzaa[8], Lea Fath[9], Valentin Favier[10], Maxime Fieux[11]

[1]Assistance Publique-Hôpitaux de Paris, Université Paris-Saclay, Hôpital Bicêtre, Service d'ORL, Le Kremlin-Bicêtre, France. Faculté de Médecine, Université Paris-Saclay, Le Kremlin-Bicêtre, France., *[2]Assistance Publique-Hôpitaux de Paris, Université Paris-Saclay, Hôpital Bicêtre, Service d'ORL, Le Kremlin-Bicêtre, France.Faculté de Médecine, Université Paris-Saclay, Le Kremlin-Bicêtre, France.*, *[3]Service d'ORL et Chirurgie Cervico-Faciale, Pôle Clinique des Voies Respiratoires, Hôpital Larrey, F-31059 Toulouse, France. Université Paul Sabatier Toulouse III, F-31062 Toulouse, France. Université Paul Sabatier Toulouse III, Laboratoire Center for Anthropobiology and Genomics of Toulouse, F-31059 Toulouse, France*, *[4]Department of Oto-Rhino-Laryngology Head and Neck Surgery, La Conception University Hospital, Aix-Marseille Univesity, F-13005 Marseille, France. Aix Marseille University, APHM, CNRS, IUSTI, F-13005 Marseille, France*, *[5]Université de Lorraine, CHRU-Nancy, Service ORL, F-54000 Nancy, France. Université de Lorraine, DevAH, F-54000 Nancy, France*, *[6]Université Paris-Saclay, F-91190 Paris, France. Assistance Publique-Hôpitaux de Paris (AP-HP), Hôpital Bicêtre, Service d'ORL, F-94270 Paris, France. 7INSERM, UMR-S933 Genetic Diseases of Pediatric Expression, Sorbonne University, 75005 Paris, France.*, *[7]Service d'ORL et de Chirurgie Cervico Faciale, Hôpital Henri Mondor, Assistance Publique des Hôpitaux de Paris, F-94010 Créteil, France. Univ Paris Est Creteil, INSERM, IMRB, F-94010 Créteil, France. CNRS EMR 7000, F-94010 Créteil, France.*, *[8]Service d'ORL, de Chirurgie Cervico-Faciale et d'Audiophonologie, Centre Hospitalier Universitaire de Poitiers, F-86000 Poitiers, France. LITEC UR15560, Université de Poitiers, F-86000 Poitiers, France*, *[9]Department of ENT-Head and Neck Surgery, University Hospital of Hautepierre, HUS, 67200 Strasbourg, France.*, *[10]of Montpellier (LIRMM), Univ. Montpellier, French National Centre forOtorhinolaryngology, Head and neck Department, Gui de Chauliac Hospital, CHU Montpellier, France. Research-team ICAR, Laboratory of Computer Science, Robotics and Microelectronics Scientific Research (CNRS), Montpellier, France*, *[11]Department of Otolaryngology, Head and Neck Surgery, Stanford University School of MediciHospices Civils de Lyon, Centre Hospitalier Lyon Sud, Service d'ORL, d'Otoneurochirurgie et de Chirurgie Cervico-Faciale, Pierre Bénite Cedex, France. Université de Lyon, Université Lyon 1, Lyon, France.*

CRS – Medical Management 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Background: chronic rhinosinusitis with nasal polyps (CRSwNP) is an inflammatory condition that affects 2-3% of adult people in France. While European guidelines on CRSwNP management have been published, no guidelines compliant with the French clinical practices were available.

Methods: We set up an expert panel of 37 ENT specialists to develop consensus guidelines of CRSwNP management for clinical practice. We reviewed the literature and used a modified Delphi approach with three electronic surveys.

Results: Guidelines contain 31 recommendations. Evidence-based recommendations were possible for only two domains: systemic corticosteroids (SCS) and biologics use. It is recommended to evaluate severity of CRSwNP based on : 1/ two symptoms (olfactory impairment, nasal congestion), 2/ impact on sleep, 3/ specific quality of life questionnaires and 4/ asthma control (if any). Endoscopic and imaging scores were not recommended to be used in isolation. Background therapy includes high volume nasal irrigation associated with nasal corticosteroids. A maximal annual cumulated SCS dose of one gram is recommended. Non controlled CRSwNP after simple polypectomy is not considered as surgically non-controlled CRSwNP. Before the initiation of biologics, it is recommended to look for type 2 markers and to screen for secondary CRSwNP.

Conclusion: These guidelines might offer a useful tool for French ENTs in their clinical practice. They will probably adapt to follow the evolution of CRSwNP management, particularly the new biologics available in the future.



4036

Antimicrobial activity of Simvastatin against chronic rhinosinusitis-related Staphylococcus aureus: an in vitro study

Simon Goldie[1], Andrew Walls[2], Rami Salib[1], Laurie lau[3], Philip harries[1], Huw Jones[1]

[1]Department of Otorhinolaryngology / Head & Neck Surgery, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom, [2]School of Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton, Southampton, United Kingdom, [3]1. School of Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton, Southampton, United Kingdom

CRS – Medical Management 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: Staphylococcus aureus (S. aureus) in chronic rhinosinusitis (CRS), particularly when localised intracellularly, is linked to disease recalcitrance and poor post-surgical outcomes. Antibiotics frequently fail to penetrate the mammalian cell membrane, resulting in an inability to address the intracellular component of S. aureus. This contributes to treatment failure and development of antimicrobial resistance. We investigated the antimicrobial effects of simvastatin, a widely used, inexpensive medication with extracellular and intracellular antimicrobial properties, against CRS-related S. aureus.

Methods: Simvastatin's antimicrobial activity, in prodrug and hydroxylated forms, was assessed against S. aureus using the broth dilution method to determine the minimal inhibitory concentration (MIC). Intracellular activity was evaluated using LAD2 mast cell co-cultures by colony forming unit (CFU) enumeration and confocal microscopy. Cell viability was assessed using lactate dehydrogenase (LDH) assays.

Results: Simvastatin exhibited an extracellular MIC of 40 mmol/l against S. aureus (P≤0.0001). Intracellularly, it significantly reduced the bacterial burden by 46-fold in a dose-dependent manner between concentrations of 0.1-100 mmol/l (P≤0.05). Toxicity to LAD2 cells was observed at 100 µmol/l (P≤0.0001). Confocal microscopy revealed a lower percentage of infected cells in the group pretreated with 30 µmol/l simvastatin (15.3%; 95% CI 26.6-39.1%) compared to untreated cells (32.8%; 95% CI 5.4-25.2%; P≤0.01). Hydroxylated simvastatin demonstrated no antimicrobial activity against S. aureus.

Conclusions: Simvastatin demonstrates antimicrobial activity in vitro against CRS-related S. aureus with the potential for repurposing as a novel antibiotic-sparing topical agent for the treatment of refractory CRS. This could improve surgical outcomes and reduce the risk of antimicrobial resistance.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3665

Comparing Efficacy of Steroid Irrigation + Steroid-eluting Sinus Stent vs. Steroid Irrigation Alone for Maintaining Frontal Sinus Patency After Sinus Surgery : A Randomized Controlled Trial

Maxime Fieux[1], Julia Noel[2], Pooya Roozdar[2], Caio Athayde Neves[2], Carol H. Yan[3], Matt Tyler[2], Aakanksha Rathor[2], Michael T Chang[2], Jayakar Nayak[2], Peter Hwang[2], Zara Patel[2]

[1]Hospices Civils de Lyon, Université Claude Bernard Lyon 1, [2]Stanford University School of Medicine, [3]University of California, San Diego School of Medicine

Best Abstract Presentation | ROUND TABLE 15 | ROOM 1 - (F1-F2-F3) - Ground Floor | Tuesday, June 24, 2025

Background: Steroid rinses and steroid-eluting stents are both options for preventing postoperative stenosis after frontal sinus surgery. This study aimed to assess whether steroid-eluting stents offer added benefit over steroid rinses alone in postoperative healing and long-term frontal sinus patency.

Methods: A randomized controlled trial enrolled patients with CRSwNP who underwent surgery for bilateral and equal frontal sinusitis after failing prior medical therapy. Each patient served as their own control, with each patient randomized to stent placement in either right or left frontal sinuses. Exclusion criteria included unequal frontal sinusitis, AERD, CF, PCD and immunocompromise. All patients used steroid rinses postoperatively. Scarring, edema, patency, and the need for additional treatments were assessed at 1-, 3-, 12- and 24 weeks postoperatively. Univariate and multivariate analyses were performed.

Results: 62 patients were enrolled. Postoperatively, scarring, edema, patency, and the need for further treatment were similar in both groups at 24 weeks (p=0.878; p=0.688; p=0.817; p=1.00 and p=1.00 respectively). Multivariable regression analysis identified time as an independent risk factor for scarring (OR=1.32, [1.03-1.71]) and patency (OR=1.39, [1.10-1.82]), while it was an independent protective factor for edema (OR=0.40, [0.32-0.49]). The steroid-eluting stent did not significantly affect this.

Conclusion: For CRSwNP, with or without asthma, without other underlying systemic disease factors, steroid-eluting stents may not add benefit over steroid rinses in reducing postoperative scarring and edema, improving long-term frontal sinus patency, or reducing the need for additional treatments, as long as patients continue topical therapy and know how to rinse effectively.



3950

The Role Of Virtual Reality In Nasal Procedures: A Randomized Controlled Trial

Norah Alshareef[1], Naif Alotaibi[1], Lama Alshenaifi[1], Raghad Alkhashan[1]
[1]*King Faisal Specialist Hospital and Research Centre, Saudi Arabia*

Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

Background and aim: Patients undergoing routine office-based otorhinolaryngology procedures, such as nasal endoscopy, often experience distress, pain, and anxiety. Virtual Reality (VR) offers a potential solution by providing an immersive experience that reduces discomfort. This study evaluates the impact of VR on pain management, anxiety reduction, and patient satisfaction during otolaryngology procedures to improve quality of care.

Patients and methods: This randomized controlled trial was conducted on 64 patients (aged 18–65) at King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia, from September to December 2024. Data on patient demographics were collected, and pain and anxiety levels were assessed using the Numerical Rating Scale (NRS-11) and Subjective Units of Distress Scale (SUDS), respectively. Additionally, patient satisfaction and willingness to use VR again were assessed using a validated 5-point Likert scale.

Results and conclusion: Pain scores in the VR group significantly decreased, from an average of 3.81 out of 10 in past procedures without VR to 1.78 out of 10 in procedures with VR. The VR group also reported lower pain scores than the control group (2.56 out of 10). Anxiety levels showed a trend toward improvement, with the VR group reporting an average score of 15 out of 100 on SUDS, compared to 18.125 in the control group. Patient satisfaction was higher in the VR group (4.91 vs. 4.69), with 93% rating their experience as “Very Satisfied.” Additionally, 73% were “Very Willing” to use VR for future procedures. These findings highlight VR’s potential to improve the quality of care in otolaryngology office-based procedures.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3993

Italian Multicenter Study on Mometasone Furoate Resorbable Stent (Propel®) in Frontal Sinus Surgery: Analysis of 62 Cases.

Bogdan Iulian Nacu[1], Mario Turri Zanoni[2], Carlotta Pipolo[3], Vittorio Rampinelli[4], Davide Mattavelli[4], Marco Ferrari[5], Alberto Schreiber[4], Gianluca Dalfino[6], Giovanni Tomacelli[7], Giovanni Felisati[3], Paolo Battaglia[2], Maurizio Bignami[6], Fabio Pagella[1]

[1]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, University of Pavia, Pavia, Italy, *[2]Department of Otorhinolaryngology, ASST Lariana, Ospedale Sant'Anna, University of Insubria, Como, Italy*, *[3]Department of Otorhinolaryngology, ASST Santi Paolo e Carlo, University of Milan, Milan, Italy*, *[4]Department of Otorhinolaryngology, ASST Spedali Civili, University of Brescia, Brescia Italy*, *[5]Section of Otorhinolaryngology, Department of Neuroscience (DNS), University of Padova, Padova, Italy*, *[6]Department of Otorhinolaryngology, ASST Sette Laghi, University of Insubria, Varese, Italy*, *[7]Department of Otorhinolaryngology, Ospedale Vito Fazzi, Lecce, Italy*

Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

Introduction: Surgical treatment of frontal sinus inflammatory diseases, such as chronic rhinosinusitis (CRS) with or without nasal polyps and frontal mucoceles, remains challenging, primarily due to the risk of scarring in the frontal recess. This multicenter study examines the efficacy and safety of the Mometasone Furoate-eluting Resorbable Stent (Propel®) in 62 patients undergoing functional endoscopic sinus surgery.

Materials and Methods: Data from 62 patients (61.3% males, 38.7% females; mean age: 54.8 years) were collected from seven centers. Among them, 33.9% had symptomatic frontal mucoceles, 17.7% CRS with nasal polyps, and 11.3% postoperative scar-related stenosis of the frontal recess. Surgical procedures included Draf IIa (32%), IIb (37%), IIc (2%) and III (29%). Most patients (64.5%) had undergone prior frontal sinus surgeries.

Results: Complete symptoms resolution was achieved in 85.5% of patients ($p < 0.001$). Frontal sinus patency rates were 98.4% at 48 hours, demonstrating immediate surgical effectiveness. Among 47 patients completing the six-month follow-up, 14.9% presented edematous frontal recesses, 10.6% developed stenosis and only 8.5% experienced complete obstruction. Granulomas occurred in 8.1% of cases, significantly associated with surgical extent ($p < 0.01$). Infection rates were 22.6%, all asymptomatic at the implant site and with no stent dislocations reported.

Conclusions: The Propel® implant ensures high patency rates and effective symptoms resolution, avoiding the need for removal due to its bioabsorbable nature. Its steroid-releasing properties significantly enhance healing, although minor complications such as asymptomatic infections and granulomas may arise. Further research is essential to confirm its long-term benefits and clarify its specific indications.



4139

Detection of Circulating Tumor Cells and EBV DNA in Nasopharyngeal Carcinoma Using a Novel SiNWs/MPs Platform

Ming Ying Lan[1], Sheng-Wei Lee[2]

[1]Taipei Veterans General Hospital, Taipei, Taiwan, [2]National Central University, Taiwan

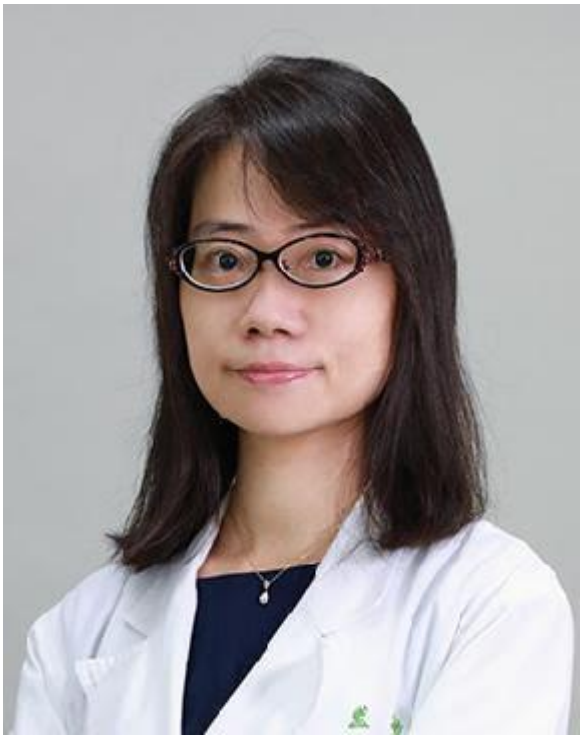
Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

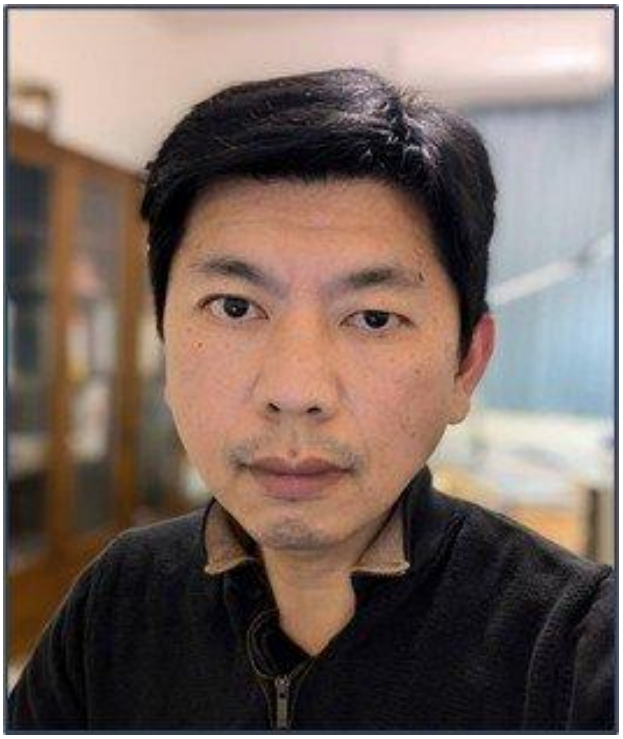
Introduction: Nasopharyngeal carcinoma (NPC) is strongly associated with the Epstein–Barr virus (EBV) and is prevalent in southern Asia, particularly Taiwan. While most cases respond to radiotherapy, local recurrence, and distant metastasis remain major challenges. Circulating tumor cells (CTCs) have emerged as potential prognostic markers in various cancers, but their role in NPC remains underexplored.

Method: We conducted a prospective analysis of sequential blood samples from NPC patients at pre-treatment, during-treatment, and post-treatment stages. CTCs were captured using our Si nanowires/microscale pyramids (SiNWs/MPs) substrate and detected via immunofluorescence. Additionally, EBV DNA was analyzed using Raman spectroscopy on the same platform.

Results: A total of 83 NPC patients were enrolled, with 62 providing both pre- and post-treatment data. The median age was 52, and 72.6% were male. Disease stage distribution included 1 patient at stage I, 5 at stage II, 31 at stage III, and 25 at stage IV. Advanced-stage patients had higher pre-treatment CTC counts, which generally declined post-treatment. Similarly, Raman spectroscopy revealed reduced EBV DNA signals after treatment.

Conclusion: Our SiNWs/MPs substrate demonstrates strong potential for capturing and detecting CTCs in NPC patients. To validate its utility as a prognostic and disease-monitoring tool, further studies with larger cohorts and long-term follow-up are necessary.







4367

What is the future of minimally invasive rhinosurgery: 3D-surgical planner/navigation, augmented reality in the operating room, marker-based VR-simulation with touch free surgeon's commands, or the AI-supported contactless-CAS as a

Ivica Klapan[1]
[1]*Klapan Medical Group*

Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

AI define the concept of personalized medicine and thereby inevitably determine the future of surgery/rhinosurgery/medicine in its overall form with enormous potential for transforming diagnostic/terapeutic procedures into the best possible solutions.Our team developed the foundational principles of contactless surgery/CS, focusing on its core elements such as 3D volumetric rendering/real time visualization/gesture based manipulation only in 3D-virtual world „that doesn't exist in reality“. By eliminating the need for constant translation between 2D-3D representations, CS offers a promising solution to the cognitive biases induced by traditional surgical visualization methods.Our CS-concept (from 2017-2025; “EU-EIT Health-RIS-Innovation-2020-Grant”), is focused: a) “In the air” human/computer interaction during surgery in the clinical environment, b) completely new original framework for hand and motion detection based on augmented reality, c) we developed a contactless interface for a surgeon to control the visualization options in our DICOM-viewer platform, that uses a stereo camera as a sensor device input that controls hand/finger motions in contactless anatomy), d) implementation of motion tracking using stereo cameras with depth resolution and precise shutter sensors for depth streaming. Our newest CS-approach represents an important step towards the strategy of enhancing surgeons’ capacities and increasing their overall satisfaction and precision since we enable the integration of real and virtual objects in the surgical field, which enables better surgeon’s experience, more precise surgery, real-time feedback, depth motion tracking, and contactless control of visualization, which gives freedom to the surgeon during the surgery.



4535

The First Large-Scale UK ENT Registry on PuraBond: Insights from 600 Cases at UHB

Asiya Zaidi[1], Tabitha Mohanarajah[1], Shahz Ahmed[1]
[1]*Queen Elizabeth hospital Birmingham*

Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

Objective: Achieving effective intraoperative haemostasis is crucial in Ear, Nose, and Throat (ENT) surgeries due to the proximity of vital neurovascular structures. This study presents the first large-scale UK ENT registry of PuraBond® (RADA16) use, evaluating its safety and efficacy across 600 cases at University Hospitals Birmingham (UHB).

Methods: A single-site, two-cycle observational study was conducted, comprising a retrospective audit (September 2019–October 2023) and a prospective audit (October 2023–July 2024). Data were collected on patient demographics, comorbidities, anticoagulant use, surgical details, PuraBond application, haemostatic effectiveness, complications, and adverse events. Statistical analysis was descriptive, given the heterogeneity of procedures and absence of a control group.

Results: Patients ranged from 17–92 years, with a 1.2:1 female-to-male ratio. Common comorbidities included hypertension (26.5%) and diabetes (15.2%). Anticoagulant use was documented in 8% of cases, with 4 patients continuing therapy perioperatively. Effective haemostasis was achieved in 99.8% of cases, with one patient requiring additional intervention. The overall complication rate was 3%, with immediate haemostasis-related complications observed in 0.2%. Secondary bleeding rates in tonsillectomy (5.4%) and thyroidectomy-related seromas (1.5%) were within or below reported literature ranges. PuraBond demonstrated particular utility in skull base, orbital, and robotic surgeries due to its non-expanding and transparent properties.

Conclusion: PuraBond proved highly effective and safe across various ENT procedures, with low complication rates and promising haemostatic outcomes. This registry supports its potential for wider adoption and future controlled studies to validate its efficacy.



4475

AI in Postoperative Sinus Care: A Comparative Study of ChatGPT-4, DeepSeek and Google Gemini in Patient Education and Support

Ali Alsudays[1]

[1]*Otolaryngology Head and neck surgery, king Saud University Hospital*

Technological Advances | ROOM 12 – G11 - Level +1| Monday June23, 2025

Background and Objective: The integration of artificial intelligence (AI) into postoperative care has shown promise in enhancing patient education and support. Tools like ChatGPT-4, Google Gemini, and DeepSeek have provided timely and personalized responses to patient queries, supplementing traditional care methods. Studies indicated that ChatGPT-4 performed well in delivering understandable and accurate medical guidance, particularly in surgical contexts like Functional Endoscopic Sinus Surgery (FESS). However, the comparative effectiveness of different AI chatbots in postoperative sinus care had not been extensively studied. This study aimed to compare the performance of ChatGPT-4, Google Gemini, and DeepSeek in addressing postoperative sinus care questions. The focus was to evaluate their responses in terms of accuracy, completeness, and readability to determine their utility in patient education and support following FESS.

Methodology: Ten postoperative sinus care questions were selected and posed to ChatGPT-4, Google Gemini, and DeepSeek. Their responses were independently evaluated by two trained rhinologists based on medical accuracy, completeness, and readability. The findings provided insights into the effectiveness of AI chatbots in assisting postoperative sinus care and their potential role in improving patient outcomes.

Results: All three AI chatbots—ChatGPT-4, Google Gemini, and DeepSeek—demonstrated good performance in addressing postoperative sinus care questions. Their responses were generally accurate, complete, and readable, making them useful supplementary tools for patient education and support.

Conclusion: AI chatbots have the potential to enhance postoperative care by providing patients with reliable and comprehensible information. ChatGPT-4, Google Gemini, and DeepSeek all showed effectiveness in addressing common postoperative sinus care questions. While they should not replace direct medical consultation, they can serve as valuable adjuncts to traditional care, improving patient education and support following FESS.



Rhinology – Miscellaneous 1

3820

Is routine cocaine testing justified in patients with septal perforation?

Razan Algazlan[1], Soares TIago[1], Ross Talisa[1], Rennie Catherine[1]
[1]*Otolaryngology, Imperial College Healthcare NHS London, United Kingdom.*

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Background: Cocaine use is a well-recognised risk factor for septal perforation, with urine drug testing costing approximately £120. This study aims to establish whether routine cocaine testing is justified in patients with septal perforation.

Methodology/Principal: 58 patients with septal perforation at our tertiary rhinology centre who had undergone drug of abuse screening between January 2021 to July 2024 were identified and clinical data was collected including results of toxicology results, vasculitis screening and management. Urine testing was conducted on the same day as patient presentation to clinic, minimising the production of false negative results.

Results: Our study demonstrated 79.3% of patients with septal perforation admitted to cocaine use and 50% tested positive on urinalysis. 20.7% of those who tested positive have initially denied use.

Conclusions: The high rate of discordance between self-reported cocaine use and positive urine testing in patients with septal perforation emphasises the importance of routine testing for all patients. This study suggests that incorporating drug abuse screening as a routine investigation in patients with septal perforation is invaluable prior to considering management and repair options.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3733

Successful Closure of Symptomatic Septal Perforations Using Polydioxanone Plates and Temporoparietal Fascia: A Case Series

Catarina Martins Pinto[1], Ricardo Matos[1], Gonçalo Caetano Oliveira[1], Mariana Santos[1], Duarte Morgado[1], Francisco M Silva[1]
[1]Hospital Senhora da Oliveira Guimarães

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Introduction: Septal perforation presents a surgical challenge, prompting the development of innovative techniques to improve closure rates. These perforations may range from being asymptomatic to causing significant morbidity, such as disturbed nasal airflow, nasal obstruction, and recurrent epistaxis. Numerous techniques have been described for managing septal perforations, including mucosal flaps based on the ethmoid arteries and rotation of inferior turbinate mucosa to achieve closure intraoperatively. However, achieving consistent success remains complex.

Objective: This study aims to describe the diagnostic process, treatment strategies, and surgical outcomes of patients undergoing repair for symptomatic septal perforations. The results are supported by photographic follow-ups and compared with data from existing literature to evaluate the efficacy of the adopted approach.Materials and Methods: Three patients underwent surgical repair for septal perforations using a closed approach. The technique involved a right hemitransfixion incision and the use of 0.25mm polydioxanone (PDS) plates combined with temporoparietal fascia grafts.

Results: All three cases demonstrated successful closure of septal perforations, with resolution of symptoms. Postoperative photographic follow-ups confirmed the integrity of the repair, with no evidence of recurrence.

Conclusion: The combination of polydioxanone plates and temporoparietal fascia represents a highly effective technique for managing symptomatic septal perforations.The favorable outcomes observed in this series highlight the potential for broader application of this method in clinical practice. Further studies with larger cohorts are encouraged to validate these findings and optimize the technique.





Imagem 1 e 2 Demarcação da incisão cirúrgica para colheita da fáscia temporoparietal

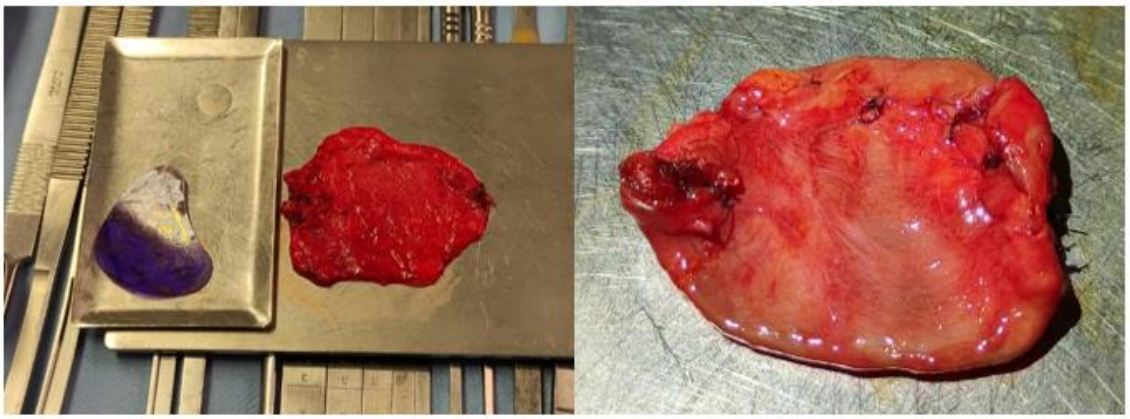


Imagem 3 e 4 Placa de PDS junto a fáscia temporoparietal, retalho composto PDS+ FTP

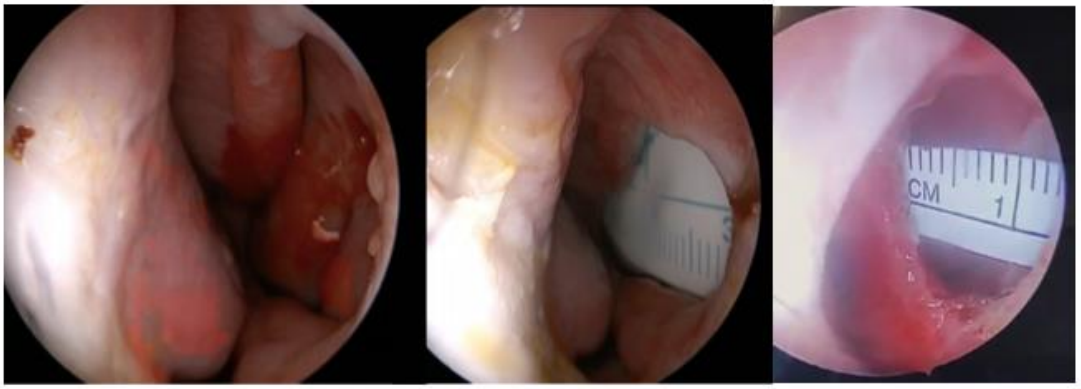


Imagem 5, 6 e 7 Observação das perfurações septais intraoperatoriamente. Vista da cavidade nasal direita e sua medição. Imagem 5 e 6 - doente 1; imagem 7 - doente 2.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3798

Risk Factors For Late Clinic Cancellation in a Tertiary Otolaryngology Practice

Christopher Roxbury[1], Stella Cho[2], Sharanya Thodupunoori[2]

[1]Cleveland Clinic Foundation, [2]University of Chicago

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Introduction: Same-day cancellations (SDC) are associated with decreased quality and access to care, lost revenue and productivity, and inconvenience to both patients and healthcare practitioners. This study sought to identify predictors of SDC by retrospectively analyzing same-day cancellations at one tertiary academic otolaryngology practice.

Methods: A query was conducted for all SDC data from July 2023-April 2024 for 24 providers from 7 otolaryngology subspecialties. Case details including cancellation reason, provider subspecialty, patient demographics, socioeconomic factors, visit type, and appointment time were extracted. Univariable and multivariable logistic regression models were used (significance set at ≤ 0.05).

Results: Of 19,007 appointments, the SDC rate was 10.3% (n=1957). The most common reason for cancellation was patient cancellation (n=723, 36.9%). Multivariable logistic regression revealed that public insurance (OR 1.33, p<0.01), Black race (OR 2.23, p<0.01), afternoon appointments (OR 1.54, p<0.01), increased state area deprivation index (OR 1.15, p=0.002), and rhinology subspecialty (OR 1.64, p=0.003) were associated with higher risk of SDC. Post-op visits (OR 0.61, p=0.01) were associated with lower risk of SDC.

Conclusions: Our study showed that rhinology visits are at higher risk of SDC, and that black patients and those with higher social deprivation are more likely to miss clinic appointments. Understanding which appointments are more likely to be canceled can help identify quality improvement efforts to reduce the number of SDCs and improve access to care.



3958

Beyond Anatomy in Chronic Nasal Obstruction: The Role of Chemosensory and Psychological Factors

Simona Negoias[1], Daniel Miller[1], Flavia Costa-Varela[1], Antje Welge-Luessen[1]

[1]Department of Otorhinolaryngology, Head and Neck-Surgery, University Hospital Basel, *[2]Department of Otorhinolaryngology, Head and Neck-Surgery, University Hospital Basel*

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Introduction: Chronic nasal obstruction (CNO) affects up to one-third of the population, with symptoms often inconsistent with anatomical findings or objective measurements. Literature suggests that trigeminal sensitivity, contributing to nasal airflow perception, and psychological factors like anxiety and depression significantly impact symptom perception and post-surgical outcomes in CNO. This study aimed to investigate the role of chemosensory function and psychological factors such as depression, anxiety, and stress in CNO.

Material and Methods: A prospective case-control study was conducted at a tertiary rhinology clinic with 115 participants (86 patients with CNO and 29 controls; M:F = 64:51; mean age 36.34 ± 12.7 years). Subjective nasal obstruction was assessed using NOSE and NO-VAS scales, while objective measurements included peak nasal inspiratory flow and anterior rhinomanometry. Chemosensory tests comprised trigeminal sensitivity (lateralization test) and olfactory function (Sniffin' Sticks), alongside psychological evaluations via the Patients Health Questionnaire.

Results: Results revealed no significant differences in objective nasal obstruction measurements or trigeminal sensitivity between groups. However, patients with CNO displayed significantly lower olfactory function and higher levels of depression and stress compared to controls. Subjective nasal obstruction strongly correlated with psychological factors, but not with objective measurements or trigeminal sensitivity.

Conclusion: These findings suggest that CNO is multifactorial, with psychological variables playing a key role in perceived symptoms. The study highlights the importance of considering psychological factors in CNO management and suggests further investigation into anatomical and chemosensory contributions.



3703

Optimising departmental preparedness for iatrogenic retrobulbar haematoma

Timothy Davies[1], Matthew Zammit[1], Matthew Ryan[1], Stephen Williams[2]

[1]Liverpool University Hospitals NHS foundation Trust, [2]Liverpool University Hospitals NHS Foundation Trust, UK

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Background: Iatrogenic retrobulbar haematoma (RH) is a rare but severe sight-threatening complication of endoscopic sinus surgery (ESS), occurring in approximately 0.1% of procedures. Due to both this rarity and the significant associated morbidity, departments must be prepared to assess and manage patients presenting with this condition.Aims1) To evaluate departmental preparedness for RH at a large tertiary centre in the UK 2) To develop a regional guideline for the assessment and initial management of RH, including intraocular pressure monitoring to guide care.

Methods: A departmental questionnaire was circulated between May and September 2024 to all clinicians performing ESS as a component of their regular practice.

Results: Fifteen clinicians responded to the questionnaire. While 100% of respondents identified the signs and symptoms of RH and the operative steps of lateral canthotomy and cantholysis, only 50% were familiar with the initial medical management of RH. None knew the location of the necessary medications or the timeframe for initiating medical management. Additionally, no respondents knew where the iCARE tonometer was located or how to assemble and use it.

Discussion: The questionnaire identified critical gaps in departmental preparedness for RH. Two outcomes were achieved. Departmental teaching on the assembly and use of the iCARE tonometer for RH assessment, delivered by the ophthalmology team. Development of a guideline for the initial assessment and management of RH, including the doses and locations of medical adjuncts (see attached image).



3884

Minerals added to Xylitol solution enhances aquaporin-3 expression in physiological conditions and downregulates inflammatory response in in vitro nasal epithelium

Edwin Tamashiro[1], Michelle Sabrina, Flávia Cardoso Males, Douglas Costa Morais, Rodrigo Scabello, Mariana Rodrigues Pinto, Fábio Ikedo

[1]*Ribeirao Preto School of Medicine. University of São Paulo, Brazil*,

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Introduction: The nasal epithelium is a pseudostratified tissue that plays an important role in filtering inhaled air and is the first line of defense against foreign agents. Oligoelements play key roles in the physiology of the respiratory epithelium. This study aimed to evaluate the effect of a mineral-rich solution with 1% xylitol (MSX) in biological parameters associated with improved water transport and hydration, in addition to the regulation of the inflammatory response.

Material & Methods: Nasal septum cells were cultured on air-liquid interface (ALI) and differentiated onto respiratory epithelium. The ALI cultures were apically treated for 4 consecutive days in triplicate (30 µL/cm²) with the MSX (NaCl 0.9%, ZnCl2 0.002 mg/mL, MgCl2 1.500 mg/mL, KCl 0.060 mg/mL, and xylitol 10 mg/L) and respective controls. After treatment, the synthesis of aquaporin 3, interleukin 8 (IL-8), adenine triphosphate (ATP), transepithelial electrical resistance (TEER), lactate dehydrogenase (LDH) and IL-1α were measured.

Results: The treatment with MSX promotes an increase up to 64% of AQP-3 ($p<0.001$) and 40% of ATP synthesis, and a decrease of 31% of IL-8 production. Additionally, no statistical differences were observed in IL-1α, TEER and LDH, demonstrating compatibility of the solution with the nasal epithelium.

Conclusion: The MSX increased the synthesis of AQP-3, ATP, and decreased IL-8 following irritative stimulation. These findings suggest that the product promotes epithelial hydration and has potential anti-inflammatory effects.



3901

Endoscopic Surgical Management of Unilateral Choanal Atresia in Adults: An International Case Series

Louis Luke[1], Paresh P Naik[2], Ainhoa García Lliberós de Miguel[3]

[1]Northampton General Hospital, UK, *[2]Jaslok Hospital and Research Centre, Mumbai, India*, *[3]Valencia General University Hospital, Spain*

Rhinology Miscellaneous 1 | ROOM 13 – G15 - Level +1| Monday June23, 2025

Introduction: Choanal atresia (CA) is a congenital condition resulting in choanal obstruction. Bilateral CA is less common and causes severe neonatal airway obstruction, requiring urgent surgical intervention. In contrast, unilateral CA may remain undetected throughout childhood and manifest as unilateral nasal obstruction in adulthood. These cases can be misdiagnosed as chronic rhinosinusitis. This case series aims to outline the assessment and investigation of unilateral CA and specifically detail its surgical repair using Castelnuovo's flap technique.

Case Study: Eight adult patients with unilateral CA (five female, median age at diagnosis: 44 years) were managed in two separate otolaryngology hospitals. Their clinical presentation, investigations, and operative management are detailed.

Results: All patients presented with unilateral nasal obstruction and rhinorrhoea. A CT scan confirmed that 75% had a mixed type of CA. All underwent primary surgical management using Castelnuovo's flap technique without stenting. The mean follow-up period was 9.25 months (range: 2–24 months), with no cases of re-stenosis. Various surgical techniques have been described, ranging from simple puncture and dilatation to more extensive posterior septectomy and use of vascularised flaps to prevent re-stenosis. Adjuncts such as airway splints and mitomycin C injection may help maintain patency.

Conclusion: A high index of clinical suspicion for unilateral CA is required in adults presenting with unilateral nasal obstruction and rhinorrhoea. A comprehensive clinical evaluation, including history, endoscopic examination, and cross-sectional imaging, is essential. Endoscopic surgical management using periosteal pedicled vascularized flaps is key to the successful treatment of unilateral CA and the improvement of patient symptoms.







4154

Efficacy and Safety of Twice-Yearly Depemokimab in Patients With Chronic Rhinosinusitis With Nasal Polyps (CRSwNP): The Phase III Randomized, Double-Blind, Placebo-Controlled Replicate ANCHOR-1/2 Trials

Marjolein Cornet[1], Joseph K. Han[2], Joaquim Mullol[3], Eugenio De Corso[4], Nesil Keles Turel[5], Martin Desrosiers[6], Jorge Maspero[7], Shigeharu Fujieda[8], Luo Zhang[9], Ana R. Sousa[10], Samantha J. Woods[11], Angela M. Davis[11], Stein Schalkwijk[12], Dawn Edwards[13], Prerna Ranganathan[13], Richard Follows[11], Carolynne Marshall[14], Philippe Gevaert[15]

[1]Department of Otorhinolaryngology, Alrijne Hospital, [2]Department of Otolaryngology Head and Neck Surgery, Eastern Virginia Medical School, [3]Rhinology Unit & Smell Clinic, Department of Otorhinolaryngology, Hospital Clínic Barcelona, FRCB-IDIBAPS, Universitat de Barcelona, CIBERES, [4]Unit of Otorhinolaryngology and Head-Neck Surgery, A. Gemelli Hospital Foundation IRCCS, [5]Istanbul Faculty of Medicine, Department of Otorhinolaryngology, Division of Head and Neck Surgery, Istanbul University, [6]University of Montreal Hospital Center and Research Center Surgery, Université de Montréal, [7]Clinical Investigation, Allergy and Respiratory Research Unit, Fundacion CIDEA, [8]Department of Otorhinolaryngology – Head & Neck Surgery, University of Fukui, [9]Department of Otorhinolaryngology—Head and Neck Surgery, Beijing Tongren Hospital, Capital Medical University, [10]Clinical Sciences, Respiratory & Immunology Unit (RIRU), GSK, [11]Clinical Sciences, Respiratory & Immunology Unit, GSK, [12]Clinical Pharmacology Modelling and Simulation, GSK, [13]Biostatistics, Respiratory & Immunology Unit, GSK, [14]Medicine Development Leaders, Respiratory & Immunology Unit, GSK, [15]Upper Airways Research Laboratory, Department of Head and Skin, Ghent University

Rhinology Miscellaneous 1 | ROOM 3 – F6 - Level 0| Tuesday June 24, 2025

Introduction: Depemokimab is the first ultra-long-acting biologic engineered with enhanced interleukin-5 binding affinity, high potency, and an extended half-life, enabling twice-yearly dosing. Replicate ANCHOR-1/2 studies assessed the efficacy and safety of depemokimab.

Material & Methods: Adults with inadequately controlled CRSwNP were randomized 1:1 to receive depemokimab 100 mg subcutaneously or placebo, plus standard of care, once every 26 weeks, over 52 weeks. Coprimary endpoints were change from baseline in total endoscopic NPS at Week 52 (range: 0–8) and mean nasal obstruction score (verbal response scale [VRS]; range: 0–3) over Weeks 49–52; lower scores indicate better outcomes. On- and post-treatment adverse events (AEs) and serious AEs (SAEs) were monitored.

Results: Overall, 272 patients received depemokimab (ANCHOR-1/ANCHOR-2: N=143/N=129) and 256 received placebo (ANCHOR-1/ANCHOR-2: N=128/N=128). Depemokimab demonstrated significant improvements versus placebo in total endoscopic NPS at Week 52 (treatment difference [95% confidence interval {CI}]: ANCHOR-1, -0.7 [-1.1,-0.3], p<0.001; ANCHOR-2, -0.6 [-1.0,-0.2], p=0.004; integrated, -0.7 [-0.9,-0.4]), and mean nasal obstruction VRS over Weeks 49–52 (treatment difference [95% CI]: ANCHOR-1, -0.23 [-0.46,0.00], p=0.047; ANCHOR-2, -0.25 [-0.46,-0.03], p=0.025; integrated, -0.24 [-0.39,-0.08]). Similar proportions of depemokimab-treated patients experienced AEs/SAEs versus placebo (AEs: ANCHOR-1, 74% vs 79%; ANCHOR-2, 76% vs 80%; SAEs: ANCHOR-1, 3% vs 5%; ANCHOR-2, 5% vs 8%).

Conclusions: The efficacy of twice-yearly depemokimab in significantly improving clinically relevant coprimary endpoints was demonstrated in ANCHOR-1/2, while exhibiting a well-tolerated safety profile.Funding: GSK (217095/218079; NCT05281523/NCT05274750). Abstract previously presented at American Academy of Allergy, Asthma and Immunology (AAAAI) 2025 congress (#L46).



ABSTRACT SESSION 13 – Best Junior Abstracts

4057

Can sinonasal computed tomography predict chronic rhinossinusitis?

Eduardo Franco[1], Beatriz Castanheira[1], José Pais[1], Beatriz Lança[2], Filipe Correia[1], Luís Castelhano[3], Maria Caçador[1], Diogo Oliveira e Carmo[1], Nuno Manso[4], Sofia Freitas[4]

[1]ENT department, Hospital CUF Tejo, [2]ENT department, Hospital CUF Cascais, [3]ENT department, Hospital CUF Descobertas, [4]Radiology department, Hospital CUF Tejo

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: A complete understanding of the ethmoido-frontal anatomy is essential in endoscopic sinus surgery to prevent iatrogenic injuries, but studies that prooved a strong correlation between sinonasal (SN) anatomy on computed tomography (CT) scan and chronic rhinossinusitis (CRS) are scarce. The aim of this study is to analyse the association between CRS and SN CT variations.

Materials and Methods: A retrospective case-control study was conducted. CT scans and nasal symptoms of 120 adults were analysed, including 60 with CRS. Each side was evaluated independently for CT variations including pneumatization types, total and type of ethmoid cells. A statistical analysis was performed to look for patterns associated with CRS.

Results: Our population included 38.3% male patients and a mean age of 44 years. Agger nasi was present in 84,2% on the left and 83.3% on the right. We reported 61% frontal cells in CRS patients. A complex frontal anatomy (frontal septal, supra bulla frontal, supra agger frontal and supraorbital cells) was associated with CRS patients ($p<0.05$). A larger number of ethmoidal cells was predictive of CRS ($p<0.05$). CRS patients had a higher degree of pneumatization of both sphenoid sinuses in the sagittal plane ($p<0.05$).

Conclusions: EC that extend into the frontal sinus, a higher number of EC and higher sphenoid pneumatization seem to be associated with CRS. Overly pneumatized sinuses might have longer drainage pathways. An higher number of EC increase the overall mucosa surface area, and EC extending into the frontal sinus contribute to outflow obstruction leading to chronic inflammation.



3648

The Prelacrimal Approach to the Maxillary Sinus – Usefullness with Clinical Cases

Andre Machado[1], Hans Briner[2], Francisco Alvarez[3], Daniel Simmen[2]

[1]ULSTMAD; FCS-UBI, *[2]ORL-Zentrum*, *[3]CHUCB; FCS-UBI*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: The Prelacrimal Window Approach (PLWA) represents a minimally invasive surgical technique for accessing the maxillary sinus and adjacent structures, including the alveolar recess, anterior and medial walls of the maxillary sinus, and the pterygopalatine fossa. This technique evolved from traditional external and more invasive methods to advanced endoscopic procedures, with significant contributions since the 20th century.

Methods: A comprehensive review of the PLWA was conducted, covering its historical evolution, anatomical considerations, surgical steps, clinical applications, and associated complications. Particular focus was given to the anatomical landmarks of the prelacrimal recess and nasolacrimal duct, emphasizing the importance of preserving functional anatomy. Preoperative imaging and meticulous surgical planning were highlighted as essential for optimizing outcomes. We present several cases surgical managed with this technique.

Results: The PLWA offers enhanced access to critical anatomical regions while preserving key structures, such as the nasolacrimal duct and inferior turbinate. Clinical applications range from managing sinonasal and skull base pathologies to incorporating modifications in medial maxillectomy for improved visualization. Complications, though infrequent, include facial numbness, epiphora, and rare orbital injuries, underscoring the importance of technical precision.

Conclusion: The PLWA marks a significant advancement in maxillary sinus surgery, balancing improved surgical access with reduced morbidity and faster recovery. Its versatility and focus on functional preservation translate to better patient outcomes, affirming its role in modern otolaryngological practice. This abstract summarizes the surgical approach and its implications, reflecting advancements in otolaryngology through minimally invasive techniques.



4343

A closed loop audit evaluating the Endoscopic Sinus Surgery Service in a UK Sinus Centre

Timoleon Siempis[1], Andreas Espehana[1], Jeremy Wong[2], Louis Luke[4], Carl Philpott[5]

[1]James Paget University Hospitals , [2]Dudley NHS University Hospitals , [3]Dudley Group NHS Foundation Trust , [4]Royal Berkshire NHS Foundation Trust, [6]James Paget and Norfolk & Norwich University Hospitals/ Norwich Medical School

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Endoscopic sinus surgery (ESS) is a commonly performed operation with significant practice variation. Our aim was to audit the introduction of a surgical checklist to improve peri-operative care of patients with CRS.

Methods: In 2021, an audit of 72 consecutive patients undergoing ESS demonstrated not all patients were meeting the recommendations set out in EPOS2020. An ESS checklist was introduced indicating the necessary pre-operative documentation and work up required prior to listing a patient for surgery. A re-audit was completed in December 2024, retrospectively looking at 63 consecutive patients that underwent ESS. Septoplasties, oroantral fistulas repairs and sinonasal tumours excisions were excluded from the study.

Results: The proportion of patients that had a CT scan prior to consent being taken increased from 96% to 100%. The rate of same-day discharge increased from 88.2% to 98.4%. The proportion of patients with Chronic Rhinosinusitis with Nasal Polyposis (CRSwNP) that received pre-operative oral corticosteroids (OCS) increased from 46% to 90.3% ($p<0.001$). Post-operatively 100% of patients continued intranasal corticosteroids in 2024 compared to 73.7% in 2021. Baseline SNOT-22 score documentation increased from 42% to 87.5%. ($p<0.001$). In 95.2% of cases, all sinuses involved in the preoperative CT scan findings were addressed surgically compared to 73.6% in the baseline audit ($p=0.0008$).

Conclusion: The introduction of the ESS checklist resulted in standardisation of pre-operative OCS administration, increase in SNOT-22 scores documentation and resulted in higher rates of FESS procedures that matched the pre-operative CT scan findings. Work is underway to introduce electronic PROMs to improve data collection.



4537

Beyond the Horizon: A Pioneering Endoscopic Transorbital Technique for Lateral Sphenoid CSF Leak Repair

Asiya zaidi[1], Shahz Ahmed[2]

[1]Queen Elizabeth hospital, *[2]University Hospitals Birmingham*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Background: Cerebrospinal fluid (CSF) leaks from lateral sphenoid defects present unique challenges due to their deep and difficult-to-reach anatomical location. Traditional approaches, such as transcranial, expanded endonasal, and transpterygoid methods, often involve significant morbidity, including brain retraction, muscle disruption, and facial or nasal complications. This report introduces a novel, minimally invasive solution: the endoscopic transorbital superior eyelid approach (ETSEA) for repairing lateral sphenoid CSF leaks.

Case Presentation: A 32-year-old female presented with persistent left-sided clear rhinorrhea lasting over a year. Imaging revealed a lateral sphenoid defect lateral to V2 (V2 being maxillary nerve passing via the foramen rotundum). Using patient-specific radiological data and 3D printing at UHB, a precise skull base model was created for surgical planning. The surgical approach involved an incision along the superior eyelid, through which the orbit roof and sphenoid defect were accessed. After identifying and isolating the meningo-orbital band, a graft was placed over the defect and sealed with tissue glue. A 70-degree endoscope was used endonasally for final inspection, ensuring a perfect seal without any leakage.

Discussion: The ETSEA offers a direct, minimally invasive route to lateral sphenoid CSF leaks, bypassing the need for brain retraction and avoiding the high morbidity associated with traditional approaches. This technique is particularly effective for lesions located lateral to V2 and further from the nasal midline, where endonasal access is limited. The success of this method highlights the increasing potential of endoscopic transorbital approaches in treating complex skull base pathologies with reduced postoperative complications.

Conclusion: The endoscopic transorbital superior eyelid approach presents a promising, patient-specific technique for repairing lateral sphenoid CSF leaks. Offering reduced morbidity and direct access, it is an invaluable addition to the skull base surgeon's repertoire, particularly for defects inaccessible by traditional methods.



4489

Sinonasal Malignancies in the West of Scotland: Insights from a Decade-Long Retrospective Cohort Study

Yinan Zhu[1], Hammaad Khan[1], Peter McManus[1], Natalie McIntyre[1], Alison Lim[1], Saleh Okhovat[1]
[1]*Department of Otolaryngology, NHS Greater Glasgow and Clyde, Glasgow, Scotland*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Background & Aim: Sinonasal malignancies are rare with high recurrence rates and limited guidance on management and surveillance. This study aims to analyze the demographics, clinical presentation, histological subtypes, treatment intent and modalities, recurrence patterns and survival outcomes for sinonasal malignancies diagnosed in the West of Scotland.Material &

Methods: A retrospective cohort study was conducted on all sinonasal cancer cases discussed at the multidisciplinary meeting in the largest tertiary referral centre in Scotland over a 10-year period. Scottish Index of Multiple Deprivation (SIMD) postcode analysis was performed. Kaplan-Meier estimation was used to analyze survival outcomes.

Results: 117 patients were included, with no significant gender predominance. Mean age at diagnosis was 63.8 years. No geographical correlation with postcode was observed. Squamous cell carcinoma (SCC) was the most common histological subtype (52.9%). Nasal cavity was the most common site of origin (48.7%). At presentation, only 67.5% of patients were suitable for curative treatment. Overall 5-year survival was 54.0%. 21 recurrences and 2 re-recurrences were observed. Of these, 33.3% were asymptomatic at re-presentation. Average time to recurrence was 43 months, with 52.4% receiving curative-intent treatment.

Conclusions: This study provides contemporary insights into the epidemiology, recurrence and survival outcomes of sinonasal malignancies in the UK. The findings highlight the importance of standardised national guidelines and pathways in multidisciplinary treatment approaches. Our results are comparable to published literature. Given the high recurrence rate and asymptomatic presentations, improved surveillance protocols may be warranted to enhance early detection and optimize patient management.



3984

Olfactory Function Outcomes in Patient after Endoscopic Pituitary Surgery by using Taiwan Smell Identification Test (TIBSIT) : A Prospective Cohort Study

Huang Po-Han[1], Lin Yi-Tsen[1]
[1]*National Taiwan University Hospital*

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Olfactory dysfunction is common complication of endoscopic pituitary surgery. However, it's clinical change and predictive factors are still unclear. This study aims to evaluate postoperative olfactory function outcomes and find out the predictive factors affecting olfactory change.

Methods: We prospectively enrolled 269 patients after endoscopic pituitary surgery, performing by collaboration between neurosurgeon and ENT specialists in a tertiary medical center from December 2021. Preoperative and 3-month postoperative olfactory function was assessed by using the Taiwan Smell Identification Test (TIBSIT). Subgroup analyses were performed based on surgery method (such as middle turbinate or nasoseptal flap harvest), intraoperative CSF leak, preoperative sinusitis, functional or non-functional pituitary adenoma, tumor origin, and presence of apoplexy, acromegaly, Cushing disease.

Results: Among 249 patients (mean age: 53 years), preoperative olfactory function was normal (53.8%), hyposmia (43.4%), and anosmia (2.8%). The distribution was strongly associated with sinusitis ($p < 0.001$). Postoperatively, 72.6% had unchanged olfactory function, 11.1% improved, and 16.3% worsened. Preoperative hyposmia was significantly associated with better olfactory outcomes ($p < 0.001$), while post-op scarring correlated with worsened outcomes ($p = 0.002$). Neither intraoperative CSF leak nor tumor type significantly impacted outcomes.

Conclusion: Postoperative olfactory function remains stable in most patients, but a subgroup improves or worsens. Preoperative hyposmia is a strong predictor of olfactory improvement. Future research should explore postoperative interventions to regain olfactory function.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3899

Exploring Patient Experiences and Treatment Challenges with Olfactory Dysfunction in Chronic Rhinosinusitis with Nasal Polyposis: An International Survey

Louis Luke[1], Liam Lee[1], Shyam Gokani[1], Duncan Boak[3], Jim Boardman[3], Carl Philpott[2]

[1]James Paget University Hospital, UK, [2]Norwich Medical School, University of East Anglia, UK, [3]Fifth Sense

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

Introduction: Chronic rhinosinusitis with nasal polyposis (CRSwNP) significantly affects patients' quality of life, particularly through smell and taste disturbances. This study aims to assess patient experiences with CRSwNP, perceptions of clinician interactions, and the symptom management particularly, olfactory dysfunction.

Methods: An international, anonymised online survey was distributed via a UK-based charity (Fifth Sense), a UK otolaryngology clinic, and online patient support groups between December 2022 and February 2023. The survey collected qualitative and quantitative data on patient demographics, symptom burden, treatment effectiveness, and healthcare satisfaction.

Results: A total of 124 individuals participated, with 107 reporting a CRSwNP diagnosis. Most participants (66%) were female and aged between 41 and 70 years. The majority (74.2%) were from the UK, with others from North America, Europe, and Asia. Rhinologists and general ENT specialists received the highest satisfaction scores, while general practitioners ranked lowest. Overall, satisfaction with olfactory dysfunction management was lower than general symptom management. Hyposmia/anosmia was identified as the most debilitating symptom, significantly impacting daily life, including food enjoyment, safety and mental health. Surgery and oral steroids were considered the most effective treatments, but 62% of respondents reported symptom relief lasting less than six months.

Conclusions: CRSwNP patients experience substantial olfactory and gustatory dysfunction, which is often underestimated by clinicians. There is a need for improved treatment options, enhanced clinician education, and better patient support to manage smell and taste disturbances effectively. Future research should focus on optimising long-term management strategies, including the role of biologics in CRSwNP care.



3722

The Liverpool NoseBleed App: Symptom severity lead patient initiated follow up in hereditary haemorrhagic telangiectasia

Timothy Davies[1], Roshan Ratnayaka[1], Chee Samuel Leong[2]

[1]Liverpool University Hospitals NHS foundation Trust, [2]Aintree University Hospital

Best Junior Abstracts | ROOM 8 – G3 - Level +1| Monday June23, 2025

BACKGROUND: Hereditary Haemorrhagic Telangiectasia (HHT) is a rare genetic condition presenting to rhinologists with recurrent epistaxis. The severity of symptoms in patients with HHT is often a significant deciding factor in the decision making around indication for operative management. Patients with HHT are at risk of attending multiple clinic appointments without change to management, if their symptoms are stable.

AIMS/OBJECTIVES: Here aim to develop a prototype of our novel application to facilitate symptom severity lead patient initiated follow up in patients with epistaxis secondary to HHT.

Results: We utilised Unityä and Visual studioä to formulate an iPhone and Android compatible application to allow patients with HHT to track their epistaxis severity score in the community. Patient are prompted to complete an epistaxis severity score on a weekly basis using notifications on their device. High epistaxis severity score (ESS) triggers a correspondence with the HHT Multi-disciplinary team (MDT) coordinator who is able to review the trend in epistaxis severity score. Rising ESS can trigger direct access to theatre list for haemostatic intervention, saving patients multiple clinic attendances without any change to management.

Discussion: Here we report the novel utility of patient reported symptom severity scores as a means for patient initiated follow up. The prototype for our application provides an easy-to-use interface to allow patients to track the severity of their symptoms and provides direct access to MDT lead specialist input and intervention.



Sinonasal Malignancy 2

4479

Sinonasal malignancy: A ten-year review of clinical outcomes from a large tertiary unit in the North West of England.

Bronagh Lang[1], Samuel C Leong[1], Konstantinos Choulakis[2], Owais Khattak[1]

[1]Liverpool Head and Neck Unit, Liverpool University Hospitals NHS Foundation Trust, *[2]Liverpool Head and Neck Unit , Liverpool University Hospitals NHS Foundation Trust*

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Aim to review the clinical outcomes of patients diagnosed with sinonasal malignancy presenting to a regional cancer unit in the North West of England.

Materials & Methods: This was a retrospective review of case notes between 1 January 2014 and 31 December 2023. Patients were identified from the databases of the Head and Neck Oncology and Skull Base Multi-Disciplinary Team (MDT) which was cross-matched with a list of patients with the ICD-10 codes C30 (Malignant neoplasm of nasal cavity and middle ear) and C31 (Malignant neoplasm of the accessory sinuses) provided by the Business Intelligence of our hospital. All patients managed by the MDT were eligible for inclusion into this study, as were patients who had recurrent sinonasal malignancy diagnosed within the review period. Patients diagnosed with nasopharyngeal carcinoma (C11 Malignant neoplasm of nasopharynx) were excluded.

Results: One hundred and eighty patients (107 male: 73 female) were identified. The most common histological malignancies were squamous cell carcinoma (54%), malignant melanoma (10%), adenocarcinoma (8%) and adenoid cystic carcinoma (6%). The majority (87%) of patients had treatment with a curative intent. Primary surgery was the most common treatment modality in 84% of patients. Overall survival was 52%.

Conclusion: This is the largest case series in the United Kingdom to be reported in the last 20 years. Squamous cell carcinoma is the most common sinonasal malignancy and patients typically present with advanced disease. Radical surgery and reconstruction followed by post-operative radiotherapy remains the treatment of choice.



4272

Single-cell RNA sequencing of Olfactory Neuroblastoma and Olfactory Carcinoma Reveals Distinct Cellular Origins and Transcriptional Profiles

Jonathan Zou[1], Vu Kenny[1], Tanavde Ved[2], Xinping Yang[1], Yinxiu Zhan, Federico Comiglio, Lisa Rooper[2], Gary Gallia[2], Nyall London

[1]*National Institutes of Health*, [2]*Johns Hopkins*

Best Abstract Presentation | SYMPOSIUM 15 | ROOM 1 - (F1-F2-F3) - Ground Floor | Tuesday June 24, 2025

Olfactory neuroblastoma (ONB) and olfactory carcinoma (OC) are rare, distinct sinonasal tumors arising from the olfactory neuroepithelium that pose diagnostic and therapeutic challenges due to overlapping histopathological features. Here, we present the first integrated single-cell transcriptomic atlas of ONB and OC to investigate their respective tumor compositions, cell-or-origin, and potential pathological transcriptional processes.

We performed 10X 5'-gene expression single-cell RNA-sequencing on tumors from 10 pathology-confirmed ONB and 2 OC samples. Previous unsupervised clustering of ONB suggested three possible basal, neural and mesenchymal subgroups of ONB. Using these transcriptional profiles, we observed little intra-tumor heterogeneity, with the 10 ONB samples predominantly composed of the neural subtype and the two OC samples primarily characterized by basal subtype with minimal mesenchymal representation overall. Projection of malignant profiles onto previously sequenced normal olfactory mucosa reference through dimensionality reduction analyses demonstrated that ONB cells most closely resemble globose basal cells, whereas OC cells align with a specialized horizontal basal cell subpopulation. Differential gene expression analysis between ONB and OC suggests enrichment of metal ion response and ribosomal protein expression ($p_{adj} < 0.05$) driven changes in OC. Comparing primary ONB and recurrent and metastatic ONB showed similar enrichment in ribosomal transcriptional profiles among the more aggressive ONB tumors. Comparing specific immune cell differences between ONB and OC and normal olfactory mucosa shows a greater CD8 T-cell exhausted composition, and shared decreased levels of pre-dendritic cell features.

Our study delineates distinct cellular origins and transcriptional signatures in ONB and OC, revealing potential diagnostic markers and therapeutic targets.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3768

Management of Biohynotipic Sinonasal Sarcoma: Case-series from Single Territory Center

Aiman Elmograbi[1], Ethan Soudry[1], Nimrod Amitai[1], Nir Tsur[1]
[1]*Rabin Medical Center*

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Background: Biphenotypic sinonasal sarcoma (BSNS) is rare and locally aggressive tumor of the paranasal sinuses. The aim of the study to describe the clinical behavior, management and the survival outcome of this neoplasm.

Methods: A retrospective case series chart review of all patients who diagnosed and treated for BSNS at our tertiary referral center between 2014-2024 were analyzed.

Results: Six patients were included. Of them, 5 were female. The anterior ethmoid sinus was the most common primary site. Four patients had orbital involvement, while two of them had also intracranial extension. Endoscopic trans nasal resection was feasible in four patients, while in two patients a combined endoscopic with trans orbital or trans cranial approach was necessary for complete tumor resection. Adjuvant radiation therapy was delivered in 4 patients due to advanced stage disease(III-IV). None of the patients had recurrence during mean follow up time of 60 months (5-125).

Conclusion: Low grade BSNS is rare and locally aggressive tumor of the para nasal sinuses. Tumor resection with free margins is the mainstay treatment in most of the cases. Adjuvant radiation should be considered in advanced stage when there is orbital or intra cranial extension.



4209

Tumor Tissue Slices – A powerful tool for studying and optimizing therapy in sinonasal cancer (SNC)

Anna Sophie Hoffmann[1], **Henrike Zech**[1], **Henrike Barbara Zech**[1], Christian Betz[1], Thorsten Rieckmann[1], Arne Böttcher[1], Lukas Wittig[1]

[1]*Department of Otorhinolaryngology*

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: SNC is a rare and heterogenous tumor entity. Surgery and radiotherapy are the mainstays of curative therapy. Individual susceptibility to radiation is mainly unexplored, but could help to precise treatment concepts. Patient-derived tumor slices offer the opportunity to study individual patient responses to (targeted) (radio-)therapy.

Methods: Fresh patient-derived SNC samples were sectioned into 400 mm slices and cultured on cell culture inserts. The slice cultures were then irradiated, either alone or in combination with inhibitors (=potential radiosensitizer). After 2 and 24 hours, the samples were fixed and frozen. DNA double strand breaks (DSBs) were analyzed by quantifying 53BP1 foci in nuclei co-stained with the SCC marker p63 using immunofluorescence microscopy. Radiation induced DNA damage was correlated with patient's clinical outcome to radiation therapy, if possible.

Results: Tumor slices from over 25 SNC patients were successfully cultivated (success rate>%, stable oxygenation and proliferation> hours). DNA damage repair capacity was compared to those of other head and neck cancer entities. Results: SNC samples exhibited variable residual DSBs, which largely did not correlate with histological subtypes. DNA damage repair capacity appears more efficient in SNC than in EBV-positive nasopharyngeal cancer. In sinonasal squamous cell carcinoma (n=17) DNA damage repair capacity correlated with smoking status and p16/HPV status. Higher residual DSBs ex vivo corresponded with favorable clinical radiotherapy response. WEE1/PARP and FGFR inhibition significantly increased residual DNA in a subset of SNSCC, indicating selective radiosensitization potential.

Conclusions: Ex vivo tumor slices serve as a promising model for investigating SNC radiobiology and refining radiotherapy approaches in this difficult-to-treat-entity. Dual WEE1/PARP and FGFR-inhibition may enhance radiosensitivity in a subset of patients, warranting further investigation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4507

Sinonasal Tumors with orbital invasion: Insights on Orbital Preservation and Exenteration

Mariana Caetano[1], Cláudia Rosa[1], Rita Peça[1], Maria José Santos[1], David Farinha[1], Mariana Calha[1], César Silva[1], Vitor Oliveira[1], Diogo Tomé[1], Leonel Luís[1]
[1]Unidade Local de Saúde Santa Maria

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: Sinonasal tumors with orbital involvement present significant challenges, with criteria for orbital preservation lacking consensus. Recent years have seen a shift toward adopting orbital-sparing strategies.

Methods: Retrospective cohort study of patients undergoing surgery for sinonasal tumors with orbital involvement at a tertiary referral center from January 2015 to December 2024. Preoperative MRI findings were classified based on criteria by Iannetti et al. and modified by Turri-Zanoni et al. Imaging diagnostic performance was assessed using Cohen's κ.

Results: A total of 18 patients were identified, including 12 males (66.7%), with a median age of 54.6 ± 16.0 years. Most had non-salivary carcinomas (61.1%), predominantly squamous cell carcinoma (63.6%). Most patients were classified as radiological grade 3 for orbital invasion (extrinsic ocular muscles, optic nerve, or ocular bulb). The agreement with pathologic assessment across all radiological grades was 88.89% (Cohen's κ = 0.822), with the best correspondence in Grades 3 and 4 (misclassification rates of 20.0% and 0%, respectively). Six patients underwent orbital exenteration, while others employed an orbital-sparing strategy. Overall survival was 14.15 months for the Orbital Preservation group and 24.5 months for the Orbital Exenteration group (p = 0.584). Recurrence rates were 33.3% for both groups.

Conclusions: Conservative management of sinonasal tumors with orbital involvement demonstrated comparable survival and recurrence rates, despite a poor prognosis. MRI is crucial for preoperative evaluation, though it has limitations in low-grade involvement. Given the risks of morbidity and recurrence with orbital exenteration, candid discussions about postoperative survival and quality of life are vital.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4528

Tumor Relapse in Sinonasal Malignancies: Insights from a Long-Term Unicenter Retrospective Analysis of 154 Patients and the Need for Specialized Follow-Up Strategies

Henrike Zech[1], Daniela Drabek[1], Christian Betz[1]
[1]*Department of Otorhinolaryngology*

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: Sinonasal malignancies are rare and challenging to treat. Post-treatment follow-up is not standardized and often follows protocols of other head and neck cancer subsites. Optimizing surveillance strategies is crucial ro improve outcomes.

Materials and Methods: This retrospective study analyzed data from 154 patients with sinonasal malignancies, focusing on locoregional recurrences and distant metastases. The median follow-up was 110 months (range: 52–179 months). Time from initial diagnosis to relapse, recurrence sites, treatment modalities, and remission rates were assessed using electronic patient records.

Results: Locoregional recurrence occurred in 39.0% (n = 60) of patients, with 23.3% (n = 14) experiencing a second recurrence. The median time to locoregional recurrence was 25.04 months (range: 1–199 months), with 13.4% diagnosed more than five years post-treatment. Treatments included surgery (41.38%), surgery with adjuvant radiotherapy (19.97%), and systemic therapy (32.76%). Remission rates were highest in the surgical group. Distant metastases were diagnosed in 21.4% (n = 33), with a median onset of 33.56 months (range: 0–199 months). The most common metastatic sites were the lungs (61.9%), brain (42.86%), liver (23.81%), and bones (19.05%). Treatment included best supportive care (30.3%), chemotherapy (54.5%), and immunotherapy (15.2%). One patient achieved durable complete response with immunotherapy.

Conclusions: Locoregional recurrence is frequent, with over 10% occurring after five years, highlighting the need for long-term surveillance. Given the high incidence of brain metastases, routine MRI should be considered. Immunotherapy may offer promising benefits for selected patients

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4531

Endonasal Endoscopic Approach For The Resection of Clival Chordomas: A Retrospective Analysis of Outcomes and Complications

Cláudia Rosa[1], Mariana Caetano[1], Maria José Santos[1], David Farinha[1], Bernardo Baptista[1], Rodrigo Serra-Franco[1], Mariana Calha[1], César Silva[1], Vitor Oliveira[1], Tiago Eça[1], Leonel Luís[1]
[1]Unidade Local de Saúde Santa Maria

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: Chordomas of the skull base are rare locally invasive tumors that present significant surgical challenges due to their proximity to critical neurovascular structures and high recurrence rate. The primary treatment is maximal surgical resection. However, complete removal is not always feasible, making multidisciplinary management crucial.

Methods: A retrospective review was conducted on patients who underwent surgery for clival chordomas at a tertiary hospital between 2019 and 2024.

Results: The study included four patients, with a mean age of 54 years. All patients were primarily treated by endonasal endoscopic transsphenoidal (EET) approach. All patients received adjuvant radiotherapy. Postoperative complications included one CSF leak, which was promptly treated surgically, and one case of persistent diabetes insipidus. One patient underwent 3 revision surgeries, with an average interval of 13,5 months between procedures. At follow-up, two patients show small recurrence of the lesions (mean time: 11 months post-surgery), while two remain disease-free (mean follow-up: 16 months).

Conclusion: EET surgery provides a minimally invasive alternative for the management of expansive skull base lesions, offering reduced morbidity and comparable outcomes to traditional surgical techniques, namely a high recurrence rate.



4420

Yo-IFOS Modified Frontal Sinus Inverted Papilloma classification : The quest answered.

Paresh Pramod Naik[1], Maxime Fieux[2], Valentin Favier[4], Andre Sousa Machado[5], Florent Carsuzaa[6], Caroline Giroudon[7]

[1]Consultant, Jaslok Hospital & Research Centre, Mumbai, India, [2]Hospices Civils de Lyon, Centre Hospitalier Lyon Sud, Service d'ORL, d'otoneurochirurgie et de chirurgie cervico-faciale, France, Pierre Bénite cedex F-69495 ; Université de Lyon, Université Lyon 1, F-69003, Lyon, France , [3]Consultant, Jaslok Hospital and Research Centre. Mumbai, India, [4]Département d'ORL, chirurgie cervico faciale et maxillo-faciale, Hôpital Gui de Chauliac, CHU de Montpellier, Montpellier, France ; Research-team ICAR, Laboratory of Computer Science, Robotics and Microelectronics of Montpellier (LIRMM), Univ. Montpellier, French National Centre for Scientific Research (CNRS), Montpellier, France;, [5]Spain, [6]x Service ORL, Chirurgie Cervico-Maxillo-Faciale et Audiophonologie, Centre Hospitalier Universitaire de Poitiers, 86000 Poitiers, France ; Laboratoire Inflammation Tissus Epithéliaux et Cytokines (LITEC), UR15560, Université de Poitiers, 86000 Poitiers, France ;, [7]Hospices Civils de Lyon, Service de la Documentation Centrale, Lyon cedex F-69424, France;

Sinonasal Malignancy 2 | ROOM 9 – G6 - Level +1| Monday June23, 2025

Introduction: Sinonasal Inverted Papilloma (IP) is a rare benign neoplasm, accounting for 0.5–4% of sinonasal tumors. Despite its benign nature, it has a significant recurrence rate (15–30%) and potential for malignant transformation (7–9%). The accurate classification of IP is essential for optimal surgical planning and prognosis. The Krouse Classification, while widely utilized, has limitations in detailing anatomical extensions, particularly for frontal sinus IP, which comprises only 2.5–5% of cases but presents higher recurrence risks. To address these challenges, we propose the Yo-IFOS modification, incorporating precise anatomical descriptors to improve classification and surgical strategies.

Material and Method: A systematic review of studies from 1960 to 2024 was conducted according to PRISMA guidelines. Studies focusing on surgical outcomes and recurrence rates of frontal sinus IP were analyzed. The proposed Yo-IFOS modification integrates detailed anatomical descriptors, including tumor attachment sites and lateral extensions, verified using imaging modalities such as CT and MRI. The modified classification aims to enhance preoperative planning, especially for cases requiring endoscopic transnasal or combined surgical approaches.

Results: Analysis demonstrated that a detailed anatomical classification will significantly influence surgical decision-making, recurrence prevention, and overall patient outcomes.

Discussion: The Krouse Classification, though effective, lacks specificity in anatomical detailing. The Yo-IFOS modification bridges these gaps by offering a comprehensive framework that enhances clinical decision-making, particularly in complex cases involving the frontal sinus.ConclusionThe proposed Yo-IFOS modification refines the classification of sinonasal IP, improving surgical planning and reducing recurrence. Its integration into clinical practice can enhance surgical planning and outcomes significantly.



CRS – Outcome Assessment 2

3695

Long-Term Success in Primary Diffuse CRSwNP: a Real-World Study on Optimized Surgery and Medication Adherence

Wendong Liu[1], Chen Fenghong[2], Yan Min[3], Lin Haoran[4], Ming Lai[5], Guo Xialin[5], Wang Deyun[6], Shi Jianbo[1]

[1]The First Affiliated Hospital, Sun Yat-sen University, *[2]The Second Affiliated Hospital of Guangzhou Medical University*, *[3]Shenzhen People's Hospital*, *[4]The Affiliated Hospital of Jinan University, The Second People's Hospital of Shunde*, *[5]Guangdong Clifford Hospital*, *[6]National University of Singapore*

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a challenging condition characterized by severe symptoms, difficulty in management, and high recurrence rates. Postoperative outcomes vary widely across studies, with recurrence rates reported from 40% at 18 months to 78.9% over 12 years. This study aims to investigate the overall control status of CRSwNP patients one to seven years after endoscopic sinus surgery (ESS) and identify the real-world factors influencing these outcomes.

Methods: The study included 427 adult patients diagnosed with primary diffuse CRSwNP who underwent bilateral ESS performed by a senior,well-trained surgeon between 2017 and 2022. Among them, 315 patients completed follow-ups for at least one year post-ESS. Data collected included demographic information, comorbidities, symptom questionnaires (VAS, TNSS, SNOT-22), blood test results, and Lund-Mackay CT scores. The clinical control status was assessed postoperatively using EPOS 2020 criteria, evaluating VAS for symptoms, nasal endoscopic performance, and the need for rescue treatment.

Results: In Southern China, CRSwNP predominantly presents with type 2 inflammation and significant disease severity. The most pronounced symptom is a decline in olfactory function, followed by nasal obstruction. Postoperative outcomes showed that 54.6% of patients achieved controlled status, 30.2% were partly controlled, and 15.2% remained uncontrolled. A high blood eosinophil ratio, worse smell VAS scores, and higher Lund-Mackay CT scores were associated with poorer control status, whereas medication adherence significantly improved postoperative outcomes.

Conclusion: Proper surgical techniques combined with good medication adherence play a crucial role in improving postoperative outcomes for CRSwNP patients, including those with type 2 inflammation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3707

Improvement of quality of life for patients with rhinosinusitis combined with allergic rhinitis after FESS

Chih-Jaan Tai[1], Liang-Chun Shih[3], Teik-Ying Ng[4], Yu-Ting Li[4]

[1]1. Division Head of Rhinology, Dept. of Otolaryngology, China Medical University Hospital, Taichung, Taiwan. 2. Joint appointment of Department of Health Services Administration & School of Medicine, China Medical University, Taichung, Taiwan, [2]1. Division Head of Rhinology, Dept. of Otolaryngology, China Medical University Hospital, Taichung, Taiwan, [3]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University hospital, Taichung, Taiwan(R.O.C), [4]Division Head of Rhinology, Dept. of Otolaryngology, China Medical University Hospital, Taichung, Taiwan, [5]1. Division Head of Rhinology, Dept. of Otolaryngology, China Medical University Hospital, Taichung, Taiwan. 2. Professor, joint appointment of Department of Health Services Administration & School of Medicine, China Medical University, Taichung, Taiwan

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: The prevalence rate of rhinosinusitis in Taiwan is about 3-6.4%. Endoscopic Sinus Surgery (ESS) is currently one of the ways to treat chronic rhinosinusitis or acute sinusitis complications; allergic rhinitis (AR) is a common nasal disease among Taiwanese people, with a prevalence of 25-30% and increases year by year. This study distinguishes the presence or absence of (AR) to explore the symptoms and quality of life of patients with rhinosinusitis and AR after ESS.

Material & Methods: Patients who underwent ESS in one hospital from 2008 to 2024 were retrospectively analyzed based on the presence or absence of AR. They were analyzed before and after surgery (two weeks, one& three months) SNOT-22 questionnaire was used to investigate and analyze the improvement of symptoms before and after surgery.

Results: A total of 1058 patients were collected in this study, 333 patients were in the AR group (31.47%)). The average age was 43.2 years old. Before surgery, the average SNOT-22 score was 39.0315 in the group with AR and 30.6918 in the group without AR. Two weeks (-14.6955 vs. -9.4968, p value 0.0036) and one month after surgery (-20.0725 vs. -14.9928, p Value 0.0012), and the average score improvement in three months (-22.5915 vs. -16.8818, p value 0.0055) all reached statistically significant differences.

Conclusions: This study found that patients with sinusitis used SNOT-22 as a survey of objective symptoms and quality of life before and after surgical treatment. It was found that patients with ARs had significant improvements after surgical treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3926

Sustained efficacy and low toxicity of dupilumab in type-2 CRSwNP over 48 months

Pietro Orlando[1], Giandomenico Maggiore[1]
[1]*Department of otorhinolaryngology, Careggi University Hospital, Florence (Italy)*

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Dupilumab is a fully humanized monoclonal antibody that interferes with the inflammatory cascade in type-2 Chronic Rhinosinusitis with Nasal Polyps (CRSwNP). Studies evaluating its safety and efficacy in the long term are still few. Our study analyzed outcomes and adverse events after 1, 3, 6, 12, 24, 36, and 48 months of dupilumab administration in patients affected by CRSwNP.

Materials and Methods: A monocentric, retrospective study assessing blood eosinophil (BEC) and total IgE count, Sinonasal Outcome Test-22 (SNOT-22), Nasal Polyps Score (NPS), sniffin' sticks identification test (SSIT-16), and Lund-Mackay score (LMS) in patients receiving subcutaneous Dupilumab 300 mg/2 weeks for at least 1 year and up to 4 years.

Results: 70 patients were enrolled and completed at least 1 year follow-up period. In detail, 38, 25, and 12 completed a 24-, 36-, and 48-month follow-up period, respectively. Patients showed a very rapid and long-lasting statistically significant improvement in their SNOT-22, NPS, and SSIT after one month and this trend was kept in the following 48 months. The total IgE count has been constantly reducing over the study period. BEC increased in the first 6 months and then gradually decreased over time reaching an even smaller value than baseline at 36 and 48 months. Four patients (5.7%) complained of a severe side effect within 6 months, with two interrupting treatment due to hypereosinophilia.

Conclusion: Dupilumab was safe and effective in extinguishing the symptomatologic burden of CRSwNP as early as 1 month and up to 48 months with few side events that were limited to the first 6 months of administration.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3670

Treatment Approaches For Non-Type 2 Chronic Rhinosinusitis – A Systematic Review and Meta-Analysis

Bryan Leow[1], Claire Tan Jing-wen[1], Andy Chua Jian Kai[2], Tze Choong Charn[3]

[1]Singapore General Hospital, Ministry of Health Holdings Singapore , [2]Consultant, Department of Otolaryngology - Head and Neck Surgery, Sengkang General Hospital, [3]Senior Consultant, Head of Department of Otolaryngology - Head and Neck Surgery, Sengkang General Hospital

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Abstract Background: Non-type 2 chronic rhinosinusitis (CRS) is a complex and challenging-to-treat disease, with no universally accepted optimal treatment algorithm. This study is a systematic review with meta-analysis aiming to investigate the outcomes of various treatment approaches for non-type 2 CRS.

Methods: Two blinded reviewers searched PubMed, Embase, and Cochrane Library from inception until 6 July 2024 for observational studies and randomized controlled trials reporting outcomes following treatment approaches for individuals with non-type 2 CRS. We extracted data, evaluated study bias using the Newcastle-Ottawa scale and Cochrane risk of bias tool, following Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines and a PROSPERO-registered protocol. We used random-effects inverse variance meta-analyses to pool the endoscopic and quality-of-life (QOL) outcomes following endoscopic sinus surgery (ESS) in non-type 2 CRS. Descriptive analysis was performed for all other outcomes.

Results: We included 10 cohort studies and five randomized controlled trials. Descriptive analyses found that while the role of oral steroids in non-type 2 CRS is equivocal, the use of long-term macrolides and doxycycline may improve QOL and endoscopic scores. This same group of patients may also benefit from ESS with greater improvement in Sino-nasal Outcome Test scores (pooled standardized mean difference (SMD)=1.44, 95%CI=0.93-1.94) compared to type 2 CRS patients (pooled SMD=1.83, 95%CI=0.87-2.79), and better post-operative endoscopic scores (pooled SMD=0.72, 95%CI=-0.63-2.07).

Conclusion: Our findings suggest patients with non-type 2 CRS may benefit from ESS and long-term antibiotic therapy. More large-scale, robust studies are required to further evaluate the treatment outcomes for different CRS endotypes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3693

The predictive value of histopathological analysis in remission chronic rhinosinusitis with nasal polyps under biological treatment

María Sandra Domínguez Sosa[1], María Soledad Cabrera Ramírez[1], Miriam del Carmen Marrero Ramos[1], Carlos Cabrera López[1], Alejandra Sanchez[1], Jesús Javier Benitez del Rosario[1]

[1]Hospital Universitario de Gran Canaria Doctor Negrín

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Remission may be defined as control of objective and symptomatic markers of disease.

Methods: Study of CRSwNP patients treated with biologics for at least one year. In the endoscopic examination, we evaluated whether the presence of mucosal inflammation or polypoid tissue impacted patient's clinical condition and whether they met criteria for remission. Serum eosinophilia and neutrophilia, and histopathological analysis in polypoid tissue. Based on the new update of EPOS2020/EUFOREA, we correlated the presence of nasal mucosal disease with patient's subjective perception of control. We determined characteristics of the eosinophilic population. Tissue eosinophil subtypes, including "resident eosinophils" (rEOS) present in normal tissues and "inflammatory eosinophils" (iEOS) participating in inflammatory responses.

Results: 22 CRSwNP and comorbid asthma patients. Biologics (16 mepolizumab/6 dupilumab). Subanalysis of eosinophilic population: modifications in rEOS and iEOS in blood with respect to reduction of rEOS and elevated iEOS in polyps. Mepolizumab reduces blood iEOs and increases rEOS. Mepolizumab patients have significantly different percentages of eosinophilic subpopulations in polyps ($p<0.05$). Uncontrolled patients on dupilumab present a reduction in rEOS in polyps ($p<0.05$). Correlation between iEOS levels in blood, VAS overall symptom score, and SNOT-22 ($p = 0.01$). Association between iEOS levels in polyps and SNOT-22 ($p=0.003$) in Mepolizumab group.

Conclusions: Defining remission is challenging when it involves control maintained for at least 1 year and no active disease. Is the presence of endoscopic small polyps in controlled patients a sign of active disease? There is a need for further research into these eosinophilic subpopulations in residual polypoid tissue.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3780

Consensus definition of sinonasal and otologic exacerbation in patients with primary ciliary dyskinesia

Jean Francois Papon[1], Myrofora Goutaki[2], Yin Ting Lam[2], Andreas Anagiotos[3], Miguel Armengot[4], Andrea Burgess[5], Raewyn Campbell[6], Mathilde Carlier[7], Nathalie Caversaccio[8], Neil K. Chadha[9], Berat Demir[10], Sinan Dheyauldeen[11], Onder Gunaydın[12], Amanda Harris[13], Isolde Hayn[14], Deniz Inal-Ince[15], Eric Levi[16], Trini Lopez Fernandez[17], Jane S. Lucas[18], Bernard Maitre[19], Anne-Lise ML Poirrier[20], Lynne Schofield[21], Kazuhiko Takeuchi[22], Christine van Gogh[23], Nikolaus E. Wolter[24]

[1]Assistance Publique-Hôpitaux de Paris (AP-HP), Université Paris-Saclay, Hôpital Bicêtre, Service d'ORL, Le Kremlin-Bicêtre, France. Faculté de Médecine, Université Paris-Saclay, Le Kremlin-Bicêtre, France, [2]Institute of Social and Preventive Medicine, University of Bern, Switzerland, [3]Department of Otorhinolaryngology, Nicosia General Hospital, Nicosia, Cyprus, [4]Department of Otorhinolaryngology, and Primary Ciliary Dyskinesia Unit, La Fe University and Polytechnic Hospital, Valencia, Spain, Medical School, Valencia University, Valencia, Spain., Molecular, Cellular and Genomic Biomedicine Group, IIS La Fe, Valencia, Spain, [5]7. Primary Ciliary Dyskinesia Centre, Southampton Children's Hospital, Southampton NHS Foundation Trust, Southampton, UK, [6]Department of Otolaryngology, Royal Prince Alfred Hospital, Sydney, New South Wales, Australia, [7]Association ADCP, 42218 Saint-Étienne, France, [8]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital of Bern, University of Bern, Switzerland, [9]Division of Pediatric Otolaryngology-Head and Neck Surgery, Department of Surgery, B.C. Children's Hospital, University of British Columbia, Vancouver, British Columbia, Canada, [10]Department of Otorhinolaryngology-Head and Neck Surgery, Pendik Training and Research Hospital, Marmara University Medical Faculty, Istanbul, Turkey, [11]Oslo University Hospital, [12]Department of Otorhinolaryngology, Hacettepe University, School of Medicine, Ankara, Turkey, [13]Southampton Children's Hospital, University of Southampton, Southampton, UK. Primary Ciliary Dyskinesia Centre, NIHR Respiratory Biomedical Research Centre, University of Southampton, Southampton, UK, [14]Department of Otorhinolaryngology, Head and Neck Surgery, Charité-Universitätsmedizin Berlin, Berlin, Germany, [15]Faculty of Physical Therapy and Rehabilitation, Hacettepe University, Ankara, Turkey, [16]Department of Otolaryngology, The Royal Children's Hospital Melbourne, Australia, [17]Asociación Española de Pacientes con Discinesia Ciliar Primaria, Spain, [18]Southampton Children's Hospital, University of Southampton, Southampton, UK. 17. Primary Ciliary Dyskinesia Centre, NIHR Respiratory Biomedical Research Centre, University of Southampton, Southampton, UK, [19]Service de Pneumologie, Centre hospitalier intercommunal de Créteil, Unité de Pneumologie, GH Mondor, IMRB U 955, Equipe 8, Université Paris Est Créteil, Créteil, France., [20]Department of Otorhinolaryngology, University Hospital Liège, Liège, Belgium, [21]School of medicine and population health, University of Sheffield, Sheffield, UK. Paediatric Physiotherapy, Leeds Teaching Hospitals NHS Trust, Leeds, UK, [22]Department of Otorhinolaryngology-Head and Neck Surgery, Mie University Graduate School of Medicine, Tsu, Mie, Japan, [23]Department of Otorhinolaryngology- Head and Neck Surgery, Amsterdam UMC, Amsterdam, The Netherlands, [24]Department of Otolaryngology-Head and Neck Surgery Hospital for Sick Children, University of Toronto, Toronto Ontario, Canada

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Background: Recurrent infections of the nose, sinuses, and ears are common problems of people with primary ciliary dyskinesia (PCD). While pulmonary exacerbations in PCD are defined, there is no definition for Ear-Nose-Throat (ENT) exacerbations, a potential outcome for research and clinical trials.

Methods: We set up an expert panel of 24 ENT specialists, patients, respiratory physicians, and other healthcare professionals, to develop consensus definitions of sinonasal and otologic exacerbations in children and adults with PCD for research settings. We reviewed the literature and used a modified Delphi approach with 4 electronic surveys.

Results: Both definitions are based on a combination of major and minor criteria, requiring 3 major or 2 major and at least 2 minor criteria each. Major criteria for a sinonasal exacerbation are: 1) reported acute increase in nasal discharge or change in colour; 2) reported acute pain/sensitivity in the sinus regions; 3) mucopurulent discharge on examination. Minor criteria include: reported symptoms; examination signs; doctor´s decision to treat; improvement after at least 14-days. Major criteria for the otologic exacerbation are: 1) reported acute ear pain/sensitivity, 2) reported acute ear discharge, 3) ear discharge on examination, 4) signs of otitis media in otoscopy. Minor criteria are: reported acute hearing problems; signs of acute complication; doctor´s decision to treat.

Conclusion: These definitions might offer a useful outcome measure for PCD research in different settings. They should be validated in future studies and trials together with other potential outcomes, to assess their usability.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3821

Surgical Outcomes of Eosinophilic Chronic Rhinosinusitis with Central Compartment Atopic Disease in Taiwan: A Retrospective Study

Wan-Ling Yi[1], Chih-Jaan Tai[1], Liang-Chun Shih[1]
[1]*China Medical University Hospital*

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Objective: To investigate the overlap of features between eosinophilic chronic rhinosinusitis (eCRS) and central compartment atopic disease (CCAD) in patients diagnosed with eCRS. We aim to analyze symptom severity and surgical improvement benefits based on postoperative pathological slides and imaging characteristics.

Methods: We retrospectively reviewed cases diagnosed with CRS undergoing surgery (Sep 2015 to Sep 2020). Patients meeting eCRS criteria were categorized into eCRS with CCAD and eCRS with non-CCAD based on imaging. We analyzed eosinophil counts and Sinonasal Outcome Test (SNOT-22) scores.

Results: Among 442 patients, 166 met eCRS criteria, with 35 in the eCRS with CCAD group and 131 in the eCRS with non-CCAD group. The eCRS with CCAD group showed higher eosinophil counts (77.87 vs 42.23, *p=0.003) and preoperative SNOT-22 scores (48.9 vs 38.2, *p=0.04). Postoperative SNOT-22 scores showed no significant difference, but the eCRS with CCAD group showed a more significant improvement (33.7 vs 22.3, *p=0.011).

Conclusion: Patients with eCRS and overlapping CCAD features exhibit greater symptom severity and surgical benefits, emphasizing the need for individualized management.



3927

Clinical outcomes in patients with cystic fibrosis-related chronic rhinosinusitis treated with intranasal corticosteroids, functional endoscopic sinus surgery, or triple highly effective modulator therapy: a monocentric retrospective experience.

Pietro Orlando[1], Giandomenico Maggiore[1]
[1]*Department of otorhinolaryngology, Careggi University Hospital, Florence (Italy)*

CRS – Outcome Assessment 2 | ROOM 10 – G7 - Level +1| Monday June23, 2025

Introduction: Cystic Fibrosis (CF) is an autosomal recessive inherited disease caused by mutations of the CF-transmembrane conductance regulator (CFTR). Mutant CFTR channels severely impair chloride ion trafficking, leading to thickened secretions and chronic rhinosinusitis (CF-CRS). CF-CRS has been historically managed with intranasal corticosteroids (INCS) and functional endoscopic sinus surgery (FESS). However, the recent introduction of the triple highly effective modulator therapy, (elexacaftor-tezacaftor-ivacaftor, ETI), showed promising results in improving CF-CRS.

Materials and Methods: A monocentric, retrospective study comparing Sinonasal Outcome Test-22 (SNOT-22), Nasal Polyps Score (NPS), sniffin' sticks identification test (SSIT-16), and Lund-Mackay score (LMS) in patients affected by CF-CRS and treated with INCS or FESS or ETI. ETI patients were further subdivided based on previous surgery.

Results: 81 patients were enrolled of whom 11 were treated with INCS, 21 FESS, and 49 ETI (specifically, 12 surgically naive and 37 post-FESS patients). Patients undergoing FESS and those receiving ETI experienced statistically significant improvements in SNOT-22, SSIT, and LMS with no differences between groups and regardless of anamnestic, genetic, or demographic characteristics. Conversely, patients taking INCS alone showed a worsening of their SNOT-22. Moreover, patients under ETI showed a significant improvement in BMI, FEV1, FVC, Tiffenau index, and P.aeruginosa colonization at the bronchoalveolar lavage.

Conclusion: ETI and FESS were safe and effective in reducing the symptomatologic burden of CF-CRS. Even in the ETI epoch, surgery may still play a crucial role in managing CF-CRS, particularly in patients not eligible for ETI or experiencing severe diseases not adequately controlled with medical therapy alone.



Granulomatous Diseases of the Nose 1

3832

Improving Olfactory Function and Sinonasal manifestations in patients with Granulomatosis with polyangiitis (GPA) – A Prospective Intervention Study

Kasper Aanaes[1], Oliver Skjødt Jørgensen[1], Vitus Bugge Rønnestad[1], Bo Baslund[2], Magne Bech[1], Ditte Gertz Mogensen[1]
[1]Department of Otorhinolaryngology, Head & Neck Surgery and Audiology, Rigshospitalet and Faculty of Health and Medical Sciences, University of Copenhagen, [2]Department of Rheumatology, Rigshospitalet and Copenhagen Lupus and Vasculitis clinic

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Background: No guidelines exist and very few papers are written suggesting how to treat secondary chronic rhinosinusitis (CRS) in GPA patients. Therefore, we conducted this prospective non-randomized intervention study to define the disease burden in GPA and to optimize the CRS treatment attempting to alleviate the symptoms with a special focus on whether the sense of smell could be improved.

Methods: GPA patients were included. At the first and second out-patient visits, separated by a six-month intervention period, the following data were collected: patients scored their CRS symptoms using a visual analog scale (VAS), Sino-nasal-outcome-test 22 (SNOT-22), Kennedy-Lund endoscopic score, an olfactory threshold, discrimination, and identification test (TDI), otomicroscopy, and a tympanometry. During the six months of intervention, patients underwent olfactory training therapy combined with nasal corticosteroids twice a day. Regarding the analysis of the TDI scores, patients were subdivided into two groups based on their level of nasal crusting and their compliance to the smell training therapy and nasal corticosteroids use.

Results: We included 30 participants with GPA, aged 29 – 83 years, 14 men and 16 women We found that patients with fewer crusts and high compliance improved their olfactory function significantly. The patients significantly improved their SNOT-22 score and the Facial pain subdomain. No significant improvements were made regarding the VAS score.

Conclusion: This study identified that GPA patients' CRS symptoms can be alleviated, using nasal corticosteroids and smell training therapy. Nevertheless, patients with GPA still have a high CRS-disease burden.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4502

Phenotypic distinctions between sinonasal and laryngeal manifestations of GPA

William Flynn[1], Deniz Koku[1], Guy Benshetrit[1], Hesham Saleh, Jeremy Levy[1], Romana Kuchai, Stephen McAdoo
[1]*Imperial*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

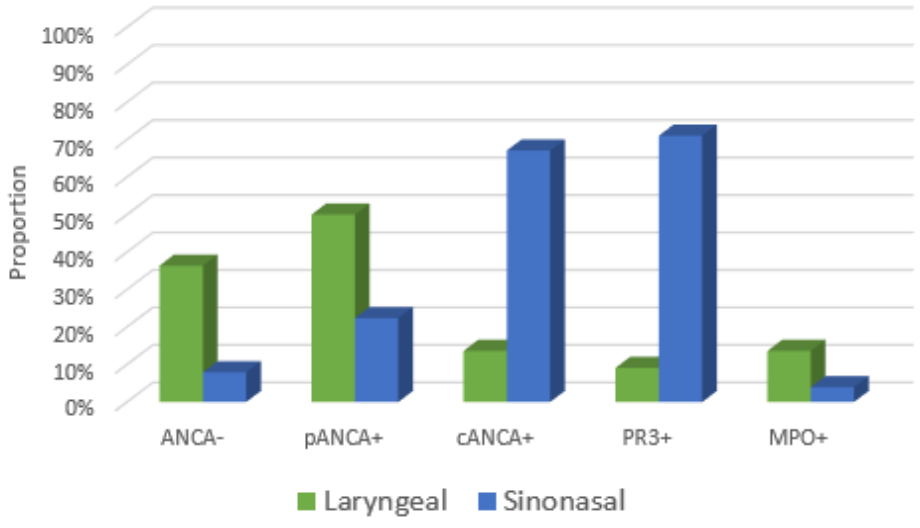
Introduction: Common ENT manifestations of GPA include subglottic stenosis (SGS) and sinonasal destruction. It is unknown why such varying clinical presentations arise, or how they relate to multi-organ GPA. We aimed to compare predictive clinical and serological (ANCA) factors in development of sinonasal and laryngeal presentations (SGS) and their risk in developing multi-organ GPA.

Methods: This monocentric retrospective cohort study investigated 127 GPA patients in a quaternary ENT vasculitis clinic over 5-years. After excluding cocaine use (21), we identified 22 GPA patients with SGS and 76 with sinonasal disease. Binomial logistic regression investigated predictive factors for development of laryngeal, sinonasal and multiorgan involvement.

Results: Cohort demographics were similar. Serology found classical PR3+/c-ANCA+ expression in 62% of sinonasal disease. Contrastingly, p-ANCA positivity predicted development of SGS ($p<0.05$, OR 4.1, 95%CI 1.3-12.7), who were typically PR3/MPO-ve (77.3%). Whilst not statistically significant, GORD trended towards higher prevalence in SGS (22% vs 10%).Most SGS patients developed only ENT manifestations (73%) in contrast to sinonasal disease which was a significant risk factor for multisystem involvement ($p<0.001$, OR 11.7, 95%CI 3.4-41), even whilst controlling for ANCA status.

Conclusion: Patients developing SGS variant GPA typically have ENT-limited disease without developing multisystem involvement. ANCA are thought to play a pathological role in the development of GPA, and the most common pattern of MPO(-) p-ANCA(+) in this group suggests differing autoantibody profiles, which may help explain this different phenotype of GPA. Recognising distinct pathology in this cohort may have implications for decisions regarding systemic therapy and prognosis.

Fig 1. ANCA serology



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4523

ANCA: A predictor of sinonasal destruction in GPA

William Flynn[1], Deniz Koku[1], Hesham Saleh[1], Jeremy Levy[1], Stephen McAdooo[1], Romana Kuchai[1]
[1]*Imperial*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

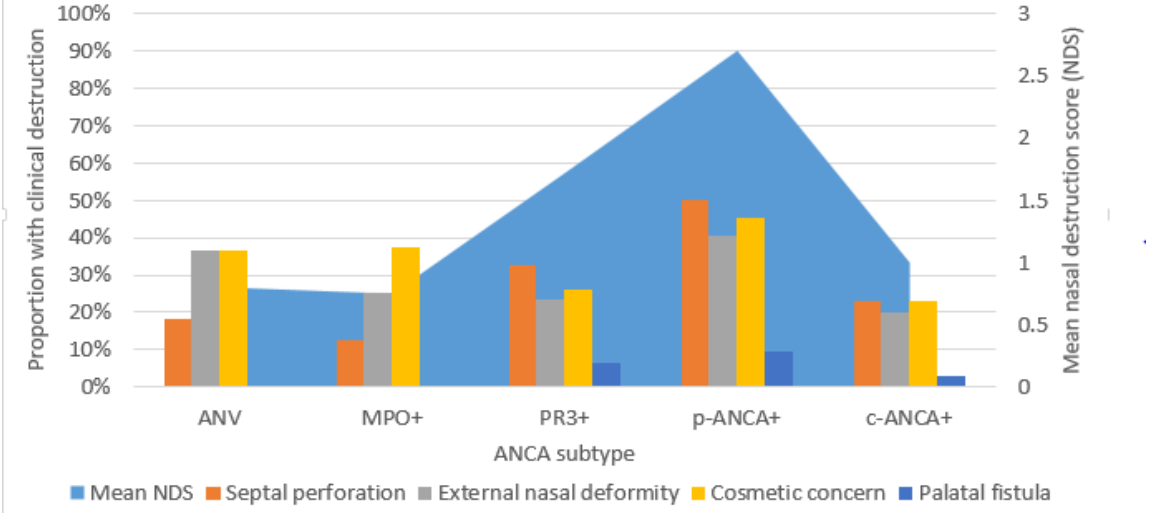
Introduction: Granulomatosis with polyangiitis (GPA) is an ANCA-associated vasculitis. Antineutrophil cytoplasmic antibodies (ANCA) are implicated in the pathogenesis of GPA which is usually associated with PR3/cANCA positivity, but can demonstrate alternative antibodies or none. We evaluated ANCA expression as a prognostic tool of clinically and radiologically assessed sinonasal destruction in GPA.

Methods: This monocentric retrospective cohort study investigated 127 GPA patients in a quaternary ENT vasculitis clinic over 5-years. Patients were stratified by ANCA serology (PR3/MPO/cANCA/pANCA). The primary outcome measure was nasal destruction score (NDS) calculated from computed tomography. Secondary outcome measures included presence of patient cosmetic concern, external deformity (saddle nose/alar collapse) and septal perforation. Logistic regression assessed ANCA status as a predictive factor for extent of destruction whilst controlling for gender, smoking and cocaine exposure.

Results: Ordinal logistic regression found odds of higher NDS on CT were significantly raised in patients with PR3 positivity (OR 4.5, 95%CI 1.2-16.6, p<0.05), or p-ANCA immunofluorescence (IF) (OR 8.4, 95%CI 2.5-28, p<0.001). Binomial logistic regression found p-ANCA IF predictive of patients' cosmetic concerns (OR 4.5, 95%CI 1.3-16, p<0.05), external deformity on examination (OR 4.1, 95%CI 1.2-14.6, p<0.05) and septal perforation (OR 15.5, 95%CI 2.8- 85.3, p<0.01) (Fig1.).

Conclusion: GPA patients with p-ANCA+ IF have greater odds of developing destructive sinonasal disease as assessed clinically and on cross-sectional imaging. PR3+ AAV also demonstrates greater sinonasal destruction on CT. Risk stratification by ANCA status may better inform treatment decisions with regards to systemic immunosuppression, especially in ENT-limited disease with limited other markers of disease.

Fig 1. Sinonasal destruction by ANCA serology





4526

Sensitivity of sinonasal and laryngeal biopsies in GPA

William Flynn[1], Deniz Koku, Hesham Saleh, Jeremy Levy, Stephen McAdoo[1], Romana Kuchai[1]
[1]*Imperial*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: As a rare condition, with insidious and variable presentation, patients with developing Granulomatosis with polyangiitis (GPA) can prove a diagnostic dilemma when first presenting to ENT clinicians or with ENT-limited disease. Screening appropriate cases with ANCA ELIZAs has improved detection however up to 15% of GPA cases are ANCA negative. We aimed to determine the sensitivity of ENT biopsies in diagnosing GPA.

Methods: This monocentric retrospective cohort study investigated 127 GPA patients seen in a quaternary ENT vasculitis clinic over a 5-year period, identifying 10 patients who underwent sinonasal biopsy and 14 who underwent laryngeal/subglottic biopsy. The primary outcome measure was histopathological changes specific of vasculitis.

Results: Of 10 patients undergoing sinonasal biopsy, only one found features specific to granulomatous inflammation of vasculitis. Others found chronic inflammation with lymphoplasmacytic (4/9) or eosinophilic (5/10) infiltrate, metaplastic squamous epithelium (2/9), microabcess formation/fibrinoid necrosis (1/9) and nasal polyposis (1/9). Of 14 patients undergoing laryngeal biopsies, one subglottic biopsy was specific for granulomatous inflammation. Other biopsies found chronic inflammation (11/13), metaplastic squamous epithelium (2/13), lymphoplasmacytic infiltrate (1/13) and hyperkeratosis (1/13).

Conclusion: Nasal (10%) and laryngeal (7%) biopsies have a poor sensitivity for diagnosing GPA. Onward referral to a vasculitis MDT should not be delayed in the absence of positive biopsies if there are suspicions of GPA. Sinonasal biopsies have been suggested to be useful in ENT localised or ANCA negative disease. In this cohort, of 42 patients diagnosed with ENT-limited GPA and 36 treated with systemic immunosuppression, only one had specific histopathology.



4530

Chronic rhinosinusitis with nasal polyps in eosinophilic granulomatosis with polyangiitis (EGPA)

Alexandra Cortés Arciniegas[1],, Natalia Jaramillo Ángel[1], Javier Cabrera Guijo[1], Alfonso García Piñero[1], Miguel Armengot Carceller[1]

[1]*Hospital Universitari i Politècnic La Fe (Valencia, Spain)*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: Eosinophilic granulomatosis with polyangiitis (EGPA), formerly known as Churg-Strauss syndrome, is a necrotizing systemic antineutrophil cytoplasmic antibody (ANCA)–associated vasculitis affecting small and medium-sized blood vessels. Chronic rhinosinusitis with nasal polyps (CRSwNP) is a common finding in these patients and is often refractory to medical and surgical management. This study aims to review CRSwNP in patients with EGPA.

Material and methods: Observational retrospective study in patients with EGPA and sinonasal involvement. Clinical, biological and imaging characteristics were reviewed and a complete rhinologic evaluation was performed, including nasal polyp score (NPS), nasal citology and patient-reported outcomes measures (PROMs) such as sinonasal outcome test 22 (SNOT22) and visual analogue scale (VAS) of nasal symptoms.

Results: 9 patients were included with a mean age of 69 years (56% female, 44% male). Asthma and aspirin exacerbated respiratory disease (AERD) were present in 100% and 22% of patients, respectively. 67% were in treatment with Mepolizumab, with no reported complications. 44% of patients had underwent endoscopic sinus surgery, with just one of them requiring revision surgery. Mean endoscopic nasal polyp score was 2, SNOT-22 was 26 and nasal obstruction VAS was 3. All of them had findings of bilateral sinonasal inflammatory disease in computed tomography (CT).

Conclusions: EGPA is a rare condition that should always be considered in patients with asthma and eosinophilia who develop sinonasal involvement.



3743

ANCA-negative granulomatosis with polyangiitis mimicking sinusitis: a case report

Sergey Gorbunov[1], Georgiy Polev[2]

[1]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia, [2]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: Granulomatosis with polyangiitis (GPA) is a systemic vasculitis affecting small and medium vessels, commonly associated with anti-neutrophil cytoplasmic antibodies (ANCA). Approximately 10% of GPA cases are ANCA-negative, which can result in underdiagnosis.

Case study: A 64-year-old woman presented with acute rhinosinusitis, initially treated with penicillins. One month later, facial pain recurred, and she was diagnosed with odontogenic maxillary sinusitis, leading to the extraction of teeth and treatment with cephalosporins. The oroantral communication was slow to heal. Three months later, sinusitis symptoms and facial pain recurred. CT revealed inflammation in the maxillary and frontal sinuses. Endoscopic maxillary sinusotomy and Draf IIa frontotomy were performed, and histology confirmed inflammation. Bacteriological culture identified Staphylococcus lugdunensis, and fluoroquinolones were prescribed. Over the next four months, examination revealed purulent plaque in the sinuses, nasal congestion, and purulent nasal discharge. The patient was treated with sulfamethoxazole and trimethoprim, linezolid, clindamycin, doxycycline, and fluconazole, but with little improvement. MRSA was identified in three nasal swabs. Follow-up CT scan showed diffuse mucosal thickening of the sinuses. At this stage, GPA was considered, but ANCA anti-PR3 levels were within the reference range. A chest CT scan showed no abnormalities. Immunohistochemical study of biopsy material showed rhinoscleroma. Linezolid and rifampicin were prescribed for one month. In one-week period keratouveitis, exophthalmos, macrohematuria, and a saddle nose deformity developed. GPA was diagnosed, and treatment with prednisolone, immunosuppressants, and rituximab was initiated, leading to significant improvement.

Conclusions: Clinicians should be aware of GPA cases that are not confirmed by typical laboratory tests. A negative ANCA result does not rule out the diagnosis of GPA.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3996

Development of the Preston Nasoendoscopic Vasculitis (PNV) Score : a new clinical classification for sinonasal vasculitis

Ding Yang[1], Gabrielle Thompson[1], Adam Morris[1], John De Carpentier[1], Rajeev Advani[1]
[1]*Royal Preston Hospital, UK*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: The prevalence of nasal vasculitis is increasing in the UK, particularly due to the rise cocaine use. Studies have shown that the SNOT22 (sinonasal outcome test) can be used to correlate patients symptoms, risk of relapse and potentially disease activity better than current global vasculitis scores. This study aimed to pilot a new endoscopic classification system and to see whether this correlated with severity of symptoms.

Methods: 31 patients with new and previously diagnosed vasculitis were invited to participate in our pilot study. Endoscopic findings were documented and graded according to our classification system, the Preston Nasoendoscopic Vasculitis (PNV) score. Patients were graded 1-4 based on clinical findings on anatomical evaluation and whether there was active disease. Patient reported outcomes measures (PROMs) were assessed at the time of endoscopic examination (nasal obstruction severity evaluation, sinoasal outcome test and hospital anxiety and depression score). Statistical analysis was undertaken to assess whether PROMs correlated with PNVS.

Results: 31 patients were identified and recruited to the study. Patients with higher PNV score had worse SNOT22 scores. We found that disease activity correlated with symptom severity.

Conclusions: We have piloted a new classification system for grading sinonasal vasculitis and have show that it correlates with symptoms severity. This could be used to standardise description of sinonasal vasculitis and aid future research. We hope to conduct larger multi centre studies to externally validating our classification system which we hope to present at ERS 2025.



4245

Hidden in the Crack: Cocaine Associated Vasculitis is Phenotypically Distinct

William Flynn[1], **Hesham Saleh**[1], **Romana Kuchai**[1], Deniz Koku[1], Steve McAdoo[1], Jeremy Levy[1]
[1]*Imperial*

Granulomatous Diseases of the Nose 1 | ROOM 11 – G10 - Level +1| Monday June23, 2025

Introduction: In addition to cocaine-induced sinonasal midline destructive lesions (CIMDL), cocaine and/or its adulterants may mimick or potentiate systemic granulomatosis with polyangiitis (GPA) (1). We aimed to determine whether GPA patients with any cocaine exposure (GPAc+) have a distinct phenotype by comparing sinonasal disease severity, organ involvement and ANCA serology.

Methods: This monocentric retrospective cohort study of 127 GPA patients seen over a 5-year period compared 106 GPA, 21 GPAc+ and 12 CIMDL patients. The primary outcome measure was nasal destruction score (NDS)(2) calculated from computed tomography. Secondary outcome measures included clinically assessed sinonasal destruction, organ involvement, and ANCA serology. Kruskal-Wallis and Chi-Squared tests compared ordinal and binomial variables respectively.

Results: GPAc+ and CIMDL patients have more extensive sinonasal destruction than GPA ($p<0.05$) on imaging (Fig.1) and examination (Fig.2). In contrast to GPA, GPAc+ had no renal ($p<0.001$) and rare otological involvement ($p<0.05$). GPAc+ patients had similar levels of sinonasal, ocular and respiratory involvement (Fig.3). All groups were predominantly PR3+ but GPAc+ patients were more commonly (52%) p-ANCA+ ($p<0.05$), in contrast to the typical (57%) c-ANCA pattern seen in GPA.

Conclusions: GPAc+ patients have a distinct phenotype with the pattern of organ involvement suggesting dose-dependent effect from direct exposure to cocaine or its adulterants. An atypical pattern of PR3+/pANCA expression, also seen in CIMDL hints at distinct pathogenesis. GPA patients with cocaine exposure are common (17%) and there may be important implications for systemic therapies response.



Smell and taste 1

3630

Prevalence and recovery of persistent olfactory dysfunction in COVID-19 fluctuates over time: The COVORTS study

Digna Kamalski[1], Birgit Van Dijk[2], Wilbert Boek[3], Sanne Boesveldt[2], Elbrich Postma[2]

[1]University Medical Center Utrecht , [2]Wageningen University & Research, [3]Hospital Gelderse Vallei

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Background: Olfactory dysfunction is a well-recognized symptom of COVID-19 infection. However, prevalence and recovery rate of persistent symptoms differ across reports. Here, we report prevalence and recovery rate of (1) psychophysically measured quantitative olfactory dysfunction, (2) qualitative complaints, and (3) subjective olfactory functioning up to 15 months after infection.

Methodology: The COVORTS cohort included 76 patients between 18-60 years with recent (< 3 months) COVID-19 infection and persistent (> 1 month) olfactory dysfunction. The (extended) Sniffin' Sticks test was performed at baseline (T1), and 3 months (T4), 6 months (T7), 9 months (T10), and 12 months (T13) later. Monthly online questionnaires were completed on self-reported overall olfactory functioning and qualitative complaints.

Results: Prevalence of quantitative olfactory dysfunction was 89.5% at baseline, and 69.1% at T13. Clinically relevant recovery was achieved by 29.4% of individual patients at T13. Prevalence of parosmia remained around 50% for the duration of the study, and phantosmia slowly decreased from 43.4% to 23.5%. Subjective olfactory functioning slowly improved over time before levelling out around 55%. At T13, 37.9% of patients reported an improvement of at least 80% of pre-COVID function. Large fluctuations were observed between individuals and timepoints for all three measurements.

Conclusions: Large fluctuations were observed between timepoints, indicating that recovery is not stable. Irrespective of measurement method, prevalence of olfactory dysfunction remains high up to 15 months after infection, and recovery rate is low. Acknowledgement of symptoms, knowledge of fluctuations, and longer follow-up to evaluate further recovery are crucial to improve patient management.



3631

Smell loss after skull base and mastoid fractures.

Digna Kamalski[1], Leonard Hak[1]
[1]*University Medical Center Utrecht, Utrecht, The Netherlands.*

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: ENT-related findings are common in patients with skull base fractures. However, olfactory disfunction is often overlooked. Studies show prevalence of olfactory dysfunction in post-traumatic brain injury (TBI) population between 12.8 and 67%, compared to 5-15% in general population.

Methods: We conducted a retrospective case series study in a single Dutch tertiary referral center and level 1 trauma center. Medical records of patients diagnosed with skull base fracture were reviewed. Patients were contacted if data was missing. Data was collected and analysed through Chi-squared analysis regarding patient demographics, trauma characteristics and radiographic findings, olfactory function and other ENT-related outcomes.

Results: Of 44 included patients aged between 18 and 75, 19 patients (43.2%) experienced olfactory dysfunction. In the majority of these cases the diagnosis was missed in the initial visits. Other ENT findings: 30 patients(68.2%) experienced subjective hearing loss at admission, persisting in 18 patients (40.9%) at end of follow up. Vertigo and tinnitus symptoms were present in respectively 10 patients(22.7%) and 18 patients(40.9%). In 6 cases, ossicle luxation was seen. No significant distribution of outcomes on severity of trauma or olfactory function was found.

Conclusion: Olfactory loss is common after skull base and mastoid fractures and should be part of the follow up after these traumas. Furthermore, prospective longitudinal studies are needed to fully investigate prevalence, treatment and recovery of olfactory dysfunction after TBI.



3640

Artificial intelligence-assisted prediction of olfactory disorders in patients with chronic rhinosinusitis

Jingyuan Chen[1]

[1]The Second Affiliated Hospital, Guangzhou Medical University

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Aim To analyze the influencing factors and perform the prediction of olfactory disorders in patients with chronic rhinosinusitis (CRS) based on artificial intelligence.

Methods: The data of 75 patients with CRS who underwent nasal endoscopic surgery were analyzed retrospectively. The CRS intelligent microscope interpretation system was used to calculate the proportion of area glands and blood vessels occupy in the pathological sections of each patient, and the absolute value and proportion of eosinophils, lymphocytes, plasma cells and neutrophils. The patients were grouped according to the results of the Sniffin' Sticks smell test. Statistical analysis was performed using SPSS 25.0 software.

Results: Among the 75 CRS patients, 25 cases (33.3%) had normal olfaction and 50 cases (66.7%) had olfactory disorders. Multivariate Logistic regression analysis showed that tissue eosinophils percentage (OR= 1.032, 95%CI: 1.002~1.064, P = 0.036), Questionnaire of olfactory disorders- Negative statement (QOD-NS) (OR= 1.079, 95%CI: 1.004~1.160, P=0.040) and Anterior olfactory cleft score (AOCS) (OR= 2.672, 95%CI: 1.480~4.827, P=0.001) were independent risk factors for olfactory disorders in CRS patients. Further research found that the area under the ROC curve (AUC) of the combined prediction model established by the tissue eosinophil percentage, QOD-NS and AOCS was 0.836, which is better than the above single factor prediction model in predicting olfactory disorders in CRS.

Conclusion: Based on pathological artificial intelligence, tissue eosinophil percentage, QOD-NS and AOCS are independent risk factors for olfactory disorders in CRS patients, and the combination of the three factors has a good predictive effect on CRS olfactory disorders.



3767

The 4 item Concise Aging adults Smell Test (4CAST) to screen for olfactory-related comorbidities

Zachary Soler[1], Mathew Gregoski[1], Mark Eckert[1], Andreana Benitez[1], Rodney Schlosser[1]
[1]*Medical University of South Carolina*

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Background: Olfactory dysfunction (OD) is associated with numerous comorbidities, including cognitive decline and depression. Age-related OD is one of the most common causes of smell loss, but it is often underrecognized. In previous research the 4 item Concise Aging adults Smell Test (4CAST) screening instrument accurately predicted psychophysical olfactory function in over 80% of older adults. This study examined the relationship of 4CAST to olfactory-related comorbidities.

Methods: A community-based cohort of adults over 50 years of age completed the 4CAST. Its association with olfactory-related comorbidities was assessed using: 1) National Institutes of Health Toolbox -Cognition Battery; 2) Questionnaire for Olfactory Disorders-Negative Statements (QOD-NS); 3) Patient Health Questionnaire 9 (PHQ9); 4) DeJong Giervald (DJG) social isolation scale; and 5) Mini-Nutritional Assessment (MNA).

Results: Participants (N=188) who failed the 4CAST had significantly worse median scores for all measures of fluid cognition, QOD-NS, and PHQ9 ($p<0.05$ for all). Of participants who failed the 4CAST, 24-39% had cognition scores suggestive of possible cognitive impairment. Participant's 4CAST results did not differ in crystallized cognition (Picture Vocabulary Test), total DJG and MNA scores.

Conclusion: The 4CAST is a quick screening instrument that may indicate psychophysical OD in older adults and identify olfactory-related comorbidities (i.e. cognitive decline, depression) that may merit further in-depth assessments.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4079

Improved olfactory function following vagal nerve stimulation in post-COVID-19 patients with olfactory dysfunction

Susanne Weise[1], Maria Oravcova[2], Pauline Hanslik[1], Coralie Mignot[2], Yusuf Ozgur Cakmak[3], Thomas Hummel[1]

[1]Smell & Taste Clinic, Department of Otorhinolaryngology, University Hospital Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany.,
[2]Smell & Taste Clinic, Department of Otorhinolaryngology, University Hospital Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany.,
[3] Point-of-Care Technologies Theme, Centre for Bioengineering and Nanotechnology, Dunedin, New Zealand; Interventional Technologies Theme, Medical Technologies Centre of Research Excellence, Auckland, New Zealand; Department of Anatomy, School of Biomedical Sciences, University of Otago, Dunedin, New Zealand.

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: Previous studies in healthy individuals showed that high-frequency non-invasive vagal nerve stimulation improves olfactory function. This study investigates the potential benefits of transcutaneous auricular vagal nerve stimulation (TA-VNS) in post-COVID-19 patients with olfactory dysfunction (OD).

Methods: Post-COVID-19 patients with OD (n=10) and normosmic individuals (n=30) underwent olfactory (Sniffin' Sticks) and trigeminal (lateralization) testing, attentional assessment (d2 test), and odor intensity/pleasantness ratings for PEA, eucalyptol, and fish sauce before and after 10 minutes of TA-VNS. Patients with OD received only TA-VNS, while normosmic subjects underwent TA-VNS, placebo stimulation TA-VNS, and active control (transcutaneous forearm stimulation) in randomized order.

Results: In OD patients, intensity ratings for fish (p=0.012), pleasantness ratings for eucalyptol (p=0.032), and olfactory discrimination (p=0.017) improved, while olfactory threshold remained unchanged. Both groups showed enhanced d2 test results. In normosmic individuals, olfactory discrimination and threshold did not differ between stimulation modalities.

Discussion: These results underline the potential functional connection of the afferent vagal network with the olfactory system in OD patients. A ceiling effect in normosmic individuals may explain the lack of improvement. Further large-scale, placebo-controlled trials are needed to explore TA-VNS as a therapeutic option.



4030

Persistent Post-COVID Olfactory Dysfunction: UK Survey on Management with Recommendations

Darren Rom[1]

[1]*Royal National ENT, University College London Hospitals NHS Foundation Trust*

Smell and taste 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: COVID-19 related olfactory dysfunction (C19OD) is a prevalent condition following SARS-CoV-2 infection, with up to 5% of patients having persistent symptoms at 4 years. Currently, there is no consensus on how best to manage the cohort of patients who fail to improve spontaneously or have persistent symptoms despite treatment. We conducted the first nation-wide survey on the management practices of persistent C19OD, and provide recommendations to standardise practice in this challenging group of patients.

Materials and Methods: An online, self-reported questionnaire was developed, focusing exclusively on the management of persistent C19OD. The survey included questions on patient assessment including objective testing, investigations performed and management approaches. Follow-up duration, discharge criteria, innovative treatments, and research strategies were explored. The collected data were analysed to identify similarities and variations in practice across tertiary centres.

Results: Preliminary findings indicated that only a small proportion of centres (20%) have a dedicated olfactory clinic with a clinical nurse specialist, while the majority (80%) do not perform objective smell testing. Smell retraining was consistently recommended, but its duration varied widely, as did the medical therapies prescribed. Over half of the centres do not schedule formal follow-up after the initial visit, and fewer than 25% of patients showed significant symptom improvement by the time of discharge.

Conclusion: This survey highlights significant gaps in the management of patients with persistent C19OD. Upon completion of the final analysis, recommendations will be disseminated to guide a standardised management pathway, incorporating evidence-based and innovative approaches.



CRS – Biologics 1

4103

Sequence Of Improvements in Objective and Patient-Reported Outcomes with Dupilumab Treatment in Patients with CRSwNP

Eugenio De Corso[1], Wytske J. Fokkens[2], Phillipe Gevaert[3], Stella E. Lee[4], Shigeharu Fujieda[5], Amy Praestgaard[6], Scott Nash[7], Mark Corbett[8], Amr Radwan[9], Juby A. Jacob-Nara[8]

[1]Otorhinolaryngology – Head and Neck Surgery, A. Gemelli Hospital Foundation IRCCS, Rome, Italy, [2]Department of Otorhinolaryngology, Amsterdam University Medical Centres, Location AMC, Amsterdam, The Netherlands, [3]Ear, Nose and Throat Department, Ghent University Hospital, Ghent, Belgium, [4]Division of Otolaryngology – Head & Neck Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [5]Department of Otorhinolaryngology, Head and Neck Surgery, University of Fukui, Fukui, Japan, [6]Sanofi, Cambridge, MA, USA, [7]Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA, [8]Sanofi, Bridgewater, NJ, USA, [9]Regeneron Pharmaceuticals Inc., Uxbridge, UK

CRS - Biologics 1 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Dupilumab demonstrated rapid and sustained improvement in objective and patient-reported signs and symptoms of chronic rhinosinusitis with nasal polyps (CRSwNP) in the SINUS-24/-52 studies (NCT02912468/NCT02898454). However, the sequence of clinically relevant improvements is unclear, and understanding these aspects may support treatment-related decision-making. This post hoc analysis assessed the relative sequence of improvement in objective and patient-reported outcomes (PROs) in patients receiving dupilumab every 2 weeks (q2w) for 52 weeks in SINUS-52.

Methods: The proportion of patients achieving minimum clinically important difference (MCID) improvement was determined at the first common assessment timepoint (Week 4) for nasal polyp score (NPS; MCID ≥1) (objective outcome), nasal congestion/obstruction (NC; MCID ≥1), loss of smell (LoS; MCID ≥1), total symptom score (TSS; MCID ≥3), rhinosinusitis visual analogue scale (VAS; MCID ≥2), and 22-item Sino-Nasal Outcome Test (SNOT-22; MCID ≥8.9) (PROs).

Results: 150 patients were randomized to dupilumab 300 mg q2w for 52 weeks. The proportion of patients with MCID improvement at Week 4 was 64.0% for SNOT-22, 63.3% for VAS, 54.0% for NPS, 17.3% for NC, 14.0% for LoS, and 10.0% for TSS. Most patients experiencing any MCID improvement achieved their first improvement by Week 4. Overall, 40.8% achieved MCID PRO improvement before, and 47.7% at the same time as, MCID improvement in the objective outcome. All outcomes continued to improve through Week 52.

Conclusions: By Week 4, dupilumab treatment resulted in MCID improvements in PROs and the objective outcome (NPS), with improvements continuing through







4189

Monitoring microvascular regression using Narrow Band Imaging (NBI) - optical biopsy - in the biological therapy of chronic rhinosinusitis with nasal polyposis (CRSwNP)

Anna Bódi[1], Csenge Zsiros[2], Ágnes Szalenkó-Tőkés[3], Mária Matúz[4], Eszter Erdélyi[5], Andor Hirschberg[6], Lili Lakatos[3], Tünde Orosz[1], Gábor Forgács[5], Vivien Vass[7], Péter Hegyi[8], Zsolt Bella[9], Balázs Liktor[10], Kristóf Ludányi[11], Bálint Liktor[1], Imre Dóka[12], Tibor Szalóki[5], Zoltán Fent[13], Helga Kraxner[14], Zsuzsanna Horváth[10], László Lujber[6], Ágnes Kiricsi[15], Balázs Sztanó[16], László Tóth[17]

[1]ENT consultant, [2]family medicine resident, [3]ENT Consultant, [4]Pharmacologist, [5]assistant lecturer, [6]ENT consultant, Ph.D. Med. Habil, [7]Register coordinator, [8] Dept. Head, [9]ENT consultant Ph.D. Med. habil, [10]ENT consultant, Department Head, [11]resident, Ph.D. student , [12] assistant lecturer, [13]assistant professor, [14] assistant professor, [15]ENT consultant Ph.D., [16] ENT consultant, Ph.D. Med. Habil, [17] ENT consultant, Ph.D. Med. Habil

CRS - Biologics 1 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Biochemical studies in 2023 have shown that in dupilumab treatment can suppress IL-36β-released VEGF-A and PlGF-induced angiogenesis. Based on these research findings, using a specific macroscopic morphological examination method to investigate the status of small vessels during CRSwNP dupilumab treatment. When white endoscopic light falls on the surface of a tissue, all colours are absorbed. NBI increases tissue contrast by specifically identifying superficial capillaries. NBI uses only blue and green light. When blue and green light reaches the tissue surface, it is largely absorbed by haemoglobin in the blood vessels.

Material and methods: NBI tests were performed with Olympus CV-170 & Olympus ENF-VH. 41 of consecutive patients with CRSwNP who are treated with dupilumab biological therapy were analyzed. All patients underwent clinical assessment prior to dupilumab administration and their data are part of the Hungarian Rhinosinusitis Registry Health Care Provider System. Endoscopic images were taken under white light and NBI at different treatment periods of the biological treatment during therapy.

Results: Abnormal small vascular lesions were detected on nasal polyps, such as caliber changes, irregular patches, meandering, dilatation, crossing symptoms and microaneurysms. The number of small vascular lesions per visual field decreased with dupilumab treatment.

Conclusion: With NBI it is possible to monitor the efficacy of biological therapy by examining small vessels in CRSwNP. Angiogenesis in nasal polyps is reduced by dupilumab during treatment. It is possible to contribute to the results of a biochemical study by in vivo morphological examination. We continue our preliminary studies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4192

Improving quality of life in chronic rhinosinusitis with nasal polyps: the impact of dupilumab and mepolizumab

Francisco Teixeira Marques[1], Joana Rebelo[1], Catarina Gomes Pinto[1], Nuno Lima[1], Sandra Reis[1], Pedro Oliveira[1]
[1]*Otorhinolaryngology Department of ULS Gaia e Espinho, Vila Nova de Gaia, Portugal*

CRS - Biologics 1 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) significantly impacts quality of life (QoL), especially in patients with type 2 inflammation-related comorbidities like asthma and nonsteroidal anti-inflammatory drug-exacerbated respiratory disease (N-ERD). While standard treatments include corticosteroids and endoscopic sinus surgery, some patients remain symptomatic. Biologics offer a promising alternative, but real-world data are needed. We aim to study the impact of Dupilumab and Mepolizumab in the QoL of CRSwNP patients, providing one more step into evidenced-based treatment.

Materials & Methods: We conducted a before-and-after study of CRSwNP patients treated with dupilumab or mepolizumab. Nasal polyp score (NPS) and olfactory function (Butanol Threshold Test [BTT], Sniffin' Sticks identification test [SnSt]) were assessed. Patient-reported outcomes (SNOT-22, asthma control test [ACT], and brief questionnaire of olfactory disorders-negative statements [bvQOD-NS]) were completed before and after treatment.

Results: Sixteen patients were included: ten on dupilumab (62.5%) and six on mepolizumab (37.5%) with a mean follow-up of 5 months. Diagnoses included CRSwNP alone (12.5%), CRSwNP + asthma (50%), and CRSwNP + asthma + N-ERD (37.5%). All dupilumab patients reported improved nasal obstruction, while one mepolizumab patient (16.7%) had persistent symptoms. Olfactory improvement was absent in 20% (dupilumab) and 33.3% (mepolizumab). Both biologics significantly improved SNOT-22, ACT, bvQOD-NS, BTT, and SnSt scores ($p<0.05$). A significant reduction in NPS was found only with Dupilumab.

Conclusions: Biologics improve symptoms and QoL in difficult-to-treat CRSwNP and associated comorbidities. In our study Dupilumab demonstrated superior efficacy in reducing nasal polyps. Further studies are needed to help guide biologic selection in the future.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4202

Assessment Of The Sense Of Smell In Patients With Chronic Rhinosinusitis With Nasal Polyps One Year Into Treatment With Mepolizumab

Waleska Schayman Dopico[1], Zainab Al Salloom[2], Marta Viñas Domingo[1], Sandra Hernandez Uceda[1], Angeles Navarro Arilla[1], Adriana Izquierdo-Dominguez[1]

[1]Hospital Universitari Consorci Sanitari de Terrassa, *[2]Unidad AlergoRino Centro Médico Teknon*

CRS - Biologics 1 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

INTRODUCTION: Chronic rhinosinusitis with nasal polyposis (CRSwNP) is a chronic inflammatory disease of the sinonasal mucosa, it's prevalent, progressive, has associated co-morbidities and specific symptoms such as olfactory dysfunction (OD) in up to 60-80% of cases, affecting patient's quality of life (QoL). There are currently advanced biological treatments for CRSwNP such as mepolizumab, which has shown effectiveness controlling the pathology. The main objective was to evaluate the characteristics of OD measured by olfactometry in patients with CRSwNP treated with mepolizumab.

MATERIAL AND METHODS: Adults with CRSwNP and OD on mepolizumab were included. OD was assessed with visual analog scale (VAS) for nasal obstruction, taste and olfactory loss; olfactometry with Barcelona Olfactory Test-8 (BOT-8) and rose threshold test. For QoL, Brief Questionnaire of Olfactory Disorders-Negative Statements (QOD-NS); for nasal symptoms related QoL the Sinonasal Outcome Test 22 (SNOT-22). Statistical analysis performed with STATA (StataCorp. TX, USA), p ≤0,05 considered statistically significant; univariate analysis for QoL predictors.

RESULTS: From 2022-2023 7 patients were included. 57% female, median age 56.7 (range 73-40), no atopy. 72% with NSAID-exacerbated respiratory disease (N-ERD), 1.7 prior surgeries on average (range 3-1); 72% anosmic and 28% with severe hyposmia at beginning of treatment. After a year, 57% anosmic, 29% mild hyposmia, 14% normosmic (p≤0,05). No differences regarding taste by VAS or gustometry (92%). QoL initial median score by SNOT-22: 57.14 scoring 38.14 after a year (19 points difference).

CONCLUSION: OD in patients with CRSwNP on mepolizumab treatment assessed by olfactometry show improvement of the olfaction and QoL parameters.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4223

Changes in olfactory ability over time in CRSwNP patients treated with dupilumab. Association with the number of sinus surgeries

Helga Kraxner[1], Kristóf Ludányi[2], Imre Dóka[1], Gábor Forgács[1], Tibor Szalóki[1], Dávid Nagy[3], Ágnes Kiricsi[4], Zsolt Bella[5], Csenge Zsíros[6], Ágnes Szalenkó-Tőkés[4], Balázs Liktor[7], Lili Lakatos[8], Zsuzsanna Horváth[9], Mária Matúz[10], Eszter Erdélyi[11], Bálint Liktor[7], Andor Hirschberg[7], Tünde Orosz[12], Vivien Vass[13], Ana Bódi[14], Péter Hegyi[13], László Tóth[15], László Lujber[16], Zoltán Fent[1]

[1]Semmelweis University Budapest Department of Otorhinolaryngology and Head and Neck Surgery , [2] Semmelweis University Budapest Department of Otorhinolaryngology and Head and Neck Surgery, [3]Center for Health Technology Assessment, [4]University of Szeged, Department of Otorhinolaryngology , [5]Bács-Kiskun County Teaching Hospital, ENT Department , [6]University of Szeged, Family Medicine Department , [7]St. John's Hospital, Department of Otorhinolaryngology and Maxillofacial Surgery, Budapest, Hungary, [8]Dept. of Otolaryngology, South Buda Center Hospital St. Imre University Teaching Hospital Budapest, Hungary , [9]Department Head Dept. of Otolaryngology, South Buda Center Hospital St. Imre University Teaching Hospital Budapest, Hungary , [10]University of Szeged, Institute of Clinical Pharmacy, Faculty of Pharmacy, Hungary , [11]University of Szeged, Department of Otorhinolaryngology, [12] St. John's Hospital, Department of Otorhinolaryngology and Maxillofacial Surgery, Budapest, Hungary , [13]Institute for Translational Medicine University Pécs Hungary , [14]Dept ENT and H&N Surg. Univ Debrecen. Hungary , [15] Dept of ENT and H&N Surg. Univ Debrecen. Hungary , [16]ENT, H&N Surg. Univ. Pécs. Hungary

CRS - Biologics 1 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Our study is a prospective, real-world analysis of the efficacy of dupilumab treatment in patients with chronic rhinosinusitis with nasal polyps (CRSwNP). Our aim was to analyse the time dependence of the change in patients' olfactory ability and possible association with the number of previous sinus surgeries (ESS).

Material and Methods: Data of 24 patients were evaluated. Smell ability was determined using the Sniffin' Sticks test and expressed in TDI scores in every six months. According to the Hungarian guideline each of our patients has undergone at least 1 ESS prior to dupilumab treatment with an average of 4 operations.

Results: 23 out of 24 patients were anosmic before biologic treatment, while 1 was slightly hyposmic. 6 months after starting dupilumab 10 patients (42%) were hyposmic, 7 normosmic (29%), 7 still anosmic (29%). Patients with 1-2 ESS before had an average increase of 17 points in TDI scores ($p=0.027$) in the first 6 months, while those who had 3 or more ESS had an increase of only 13 points ($p<0.001$). The difference between groups is not significant ($p=0.598$), due to few patients in both groups. There was a moderate correlation between olfactory improvement and the number of surgeries ($R=0.37$, $p=0.08$).

Conclusions: The number of previous surgeries might determine the expected improvement of the sense of smell after starting dupilumab treatment and, consequently, the quality of life. It is recommended to take this into account when indicating biologic agents and start treatment early enough to achieve greater improvement in olfaction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3855

Diagnosis and management of olfactory dysfunction in the United Kingdom: A multicentre prospective snapshot audit of practice

Edward Balai[1], Shyam Gokani[2], Louis Luke[3], Tharsika Myuran[4], Tanya Ta[5], Isabelle Williams[6], Ying Ki Lee[6], Andrew Williamson[7], Carl Philpott[8], INTEGRATE The UK ENT Trainee Research Network[9]

[1]Great Ormond Street Hospital, [2]University College London Hospitals NHS Foundation Trust, [3]Royal Berkshire NHS Foundation Trust, [4]East and North Hertfordshire NHS Trust, [5]University Hospitals Birmingham, [6]Guy's and St Thomas' NHS Foundation Trust, [7]The Royal Marsden Hospital, [8]James Paget University Hospitals NHS Foundation Trust, [9]INTEGRATE (The UK ENT Trainee Research Network)

Best Abstract Presentation | ROUND TABLE 5 | ROOM 5 - F8 - Ground Floor | Sunday June22, 2025

Introduction: The Position Paper on Olfactory Dysfunction 2023 introduced evidence-based recommendations for the diagnosis and management of olfactory dysfunction. However, there is a lack of standardised diagnostic and therapeutic pathways for olfactory dysfunction in the United Kingdom (UK). We aimed to assess current UK practice to understand the epidemiology and management of this condition.

Methods: A national, prospective, multicentre audit was conducted from 01/05/2024 – 31/07/2024 in secondary and tertiary care ENT clinics. New patients (≥18 years) presenting with olfactory dysfunction were included. Forty-one UK centres submitted anonymised data for 628 patients (52.4% female, mean age 48 years).

Results: Sinonasal inflammation (65.1%) was the most common suspected cause in general ENT and Rhinology clinics, while post-viral (54.7%) was most frequent in Smell and Taste clinics. Before clinic review, 56.4% had trialled nasal steroids, but 34.1% had not received any treatment. Nasendoscopy was performed in 90% of patients, while 3.7% had no examination. Subjective assessment of olfaction was conducted in just 20.2% of cases, primarily via SNOT-22 (75.6%), and psychophysical testing was uncommon (Sniffin Sticks 12.1%, UPSIT 2.5%). Imaging, predominantly CT (72.5%), was performed in 66.5% of cases. Following review, 76.1% were prescribed nasal steroids, 39.8% nasal douches, and 10% oral corticosteroids or supplements (Omega-3, Zinc, Vitamin D). Only 21.9% received smell training guidance.

Conclusions: This audit highlights variability in diagnostic and management pathways for olfactory dysfunction in the UK. The findings emphasize the need for standardised protocols and greater alignment with evidence-based guidelines to improve patient care.



Septal and turbinate surgery 1

3742

Outcomes of endoscopic repair of nasal septal perforation: a single-center experience

Sergey Gorbunov[1], Georgiy Polev[2], Valeria Muntean[3]

[1]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia, *[2]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia*, *[3]People's Friendship University*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: The anterior ethmoidal artery (AEA) flap is a widely used and reliable option for endoscopic closure of nasal septal perforations. The aim was to present the results of the Castelnuovo technique in our center.

Material & Methods: Retrospective evaluation of patients who underwent nasal septal perforation repair surgery using the AEA flap from 2022 to 2024. Demographic data, preoperative and postoperative perforation size, and risk factors were collected.

Results: A total of 30 patients were included, of which 14 (35%) were female, with a mean age of 37.1±12 years. The mean perforation size was 1.9 cm (range 0.5-3.5 cm). The most common cause was iatrogenic perforation (n=15), followed by trauma (n=8), prolonged use of intranasal medications (n=5), and idiopathic causes (n=2). Ten patients (33.3%) were smokers. Among the 5 patients with perforations larger than 3 cm, 2 had a posterior residual asymptomatic perforation up to 4 mm in diameter. Complete closure of the perforation was achieved in 28 patients (93.3%). The follow-up period was one year.

Conclusion: Our experience demonstrates that the AEA flap is a reliable option for the closure of nasal septal perforations, achieving a high success rate.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3844

Evolution of Endoscopic Septal Perforation Repair Practice: A Single Centre Experience

Alexander Collingwood[1], Ding Yang[1], Gabrielle Thompson[1], Samit Ghosh[1]
[1]*Fairfield Hospital, Northern Care Alliance Foundation Trust, UK*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: Septal perforations can present a challenge for ENT surgeons to manage. They are caused by a variety of aetiologies including trauma, previous surgery and vasculitis. Many patients undergo conservative and medical treatment; however the optimum surgical management is less clear. We present the largest UK case series from a single surgeon (S.G.). The study aims to report the outcomes of endoscopic nasal septal perforation repair performed by a single surgeon over eight years, comparing techniques, identifying factors influencing success, and assessing patient outcomes.

Methods: A retrospective case series of 99 patients who underwent nasal septal perforation repair from 2016–2024 was conducted. Data collected included demographics, perforation size, aetiology, surgical method, and success rate. Techniques compared were anterior ethmoid flaps and advancement flaps. Success was defined as perforation closure with symptom resolution at 12 weeks postoperatively.

Results: A total of 100 repairs were performed (99 patients; mean age: 42 years). Perforation sizes ranged from 0.5 cm to 3.2 cm (mean: 1.5 cm). Anterior ethmoid flaps (80 cases) achieved a success rate of 87.5%, outperforming advancement flaps (20 cases) with a 55% success rate. Success rates varied based on perforation aetiology: traumatic perforations (91%), drug use (77%), idiopathic (79%), and iatrogenic (79%).

Conclusion: Anterior ethmoid flaps are a robust and reliable technique for repairing nasal septal perforations with high success rates and minimal morbidity. Perforation aetiology and surgical experience all influence outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3877

Long-term Outcomes of Inferior Meatus Augmentation Procedure Using Autologous Dermis Fat for Empty Nose Syndrome

Hosokawa Yu[1], Sawada Masafumi[1], Kobayashi Rena[1], Ikezono Tetsuo[1]
[1]*Department of Otorhinolaryngology, Saitama Medical University Hospital*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: Empty nose syndrome (ENS) is a complication primarily arising after nasal surgeries, such as inferior turbinate reduction. It is characterized by disrupted nasal airflow due to the loss of the inferior or middle turbinate, leading to symptoms such as nasal dryness and respiratory discomfort. The inferior meatus augmentation procedure (IMAP) aims to alleviate ENS symptoms by reducing excessive nasal cavity enlargement. In 2022, we developed a novel IMAP technique using autologous dermal fat (ADF) (IMAP with ADF). This study reports the long-term outcomes of IMAP with ADF at one year postoperatively.

Methods: This study included 16 patients who underwent IMAP with ADF in 2022 or later and completed long-term follow-up. The cohort consisted of 13 males and 3 females, with a mean age of 33 years. Symptom severity was assessed using the Empty Nose Syndrome 6-Questionnaire (ENS6Q) at five time points: preoperatively and at 1 year postoperatively. Additionally, we analyzed the characteristics of patients who required revision surgery within one year postoperatively.

Results: The mean ENS6Q scores were 18 preoperatively and 8 at 1 year post operatively ($p < 0.001$). Three patients required revision surgery.

Conclusion: IMAP with ADF demonstrated relatively favorable long-term outcomes. Cases requiring revision surgery occurred primarily in the early phase of IMAP with ADF implementation, underscoring the importance of surgical expertise and appropriate graft volume. Future analyses will explore the efficacy of ADF, absorption rates, and additional surgical considerations, complemented by a review of the relevant literature.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3934

Perforation size and surgical etiology in nasal septal perforation repair

Stephen Bansberg[1], Michael Marino[1], Trenton House[1], Cullen Taylor[1], Amar Miglani[1]
[1]*Department of Otolaryngology-Head & Neck Surgery*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: Nasal septal perforation repair remains challenging, with perforation size and etiology influencing management and outcomes. This study examines the role of these factors in repair success.

Methods and Materials: Data from the authors' studies on perforation dimensions and outcomes of bilateral mucosal flap repairs were analyzed. Perforation dimensions and failure rates were compared between surgical and non-surgical etiologies.

Results: In Nasal Septal Perforation Dimensional Analysis (Bansberg et al., Otolaryngology–Head and Neck Surgery, 2024), 124 perforations were evaluated. Length exceeded height in 93% of perforations ≥5 mm. Non-surgical perforations were significantly larger than perforations of surgical etiology. In Septal Perforation (Bansberg & Miglani, Plastic and Aesthetic Research, 2024), 392 bilateral flap repairs with autologous interposition grafts were reviewed. Failure rates were comparable between surgical (5.7%) and non-surgical (4.7%) etiologies. However, failed non-surgical perforations were significantly larger ($p<0.05$), with mean length and height differences of 19.4 vs. 13.7 mm and 15.5 vs. 9.3 mm, respectively.

Conclusions: Most perforations are elliptical, with surgical perforations typically smaller than non-surgical ones. Failed repairs of smaller perforations were more likely surgical in origin. These findings improve understanding of repair prognosis and support the development of perforation size and etiology classification systems.



3968

Upper nasal airway functional patency assessment in South Indian patients undergoing Nasal Surgery using Peak Inspiratory Nasal Flowmeter and Peak Expiratory Nasal Flowmeter

Shruti Aggarwal[1], Balakrsihnan R.[2], Rohit Singh[3]

[1]Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, Manipal, [2]Professor and Head of rhinology unit, Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, Manipal, [3]Professor and Head Otorhinolaryngology, Kasturba Medical College, Manipal, [4]Professor and Head Otorhinolaryngology, Kasturba Medical College, Manipal, Director- Alumni Relations, MAHE

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: In developed nations, expensive instruments like rhinomanometry and acoustic rhinometry are used to assess patency of upper nasal airway. Due to lack of resources in a developing country, In-check Nasal inspiratory flowmeter (PNIF) can be used as a practical, affordable, fast, non-invasive, objective and reliable testing tool to measure the preoperative and postoperative upper nasal airway patency, as a substitute. Simultaneous use of Peak expiratory flowmeter (PEF) rules out lower airway causes.

Materials and Methods: A prospective longitudinal study conducted on adult patients presenting with nasal obstruction to our tertiary care hospital, with endoscopically confirmed anatomical obstruction, symptomatic SNOT-22 questionnaire assessment from June 2023 to January 2025 for nasal surgery using bilateral and unilateral mean PNIF measurement. Patients with lower airway causes, benign/ malignant tumors were excluded from the study.

Results: 120 patients were analysed with a pre and post-operative unilateral and bilateral PNIF assessment, SNOT-22 grading, nasal endoscopic assessment of septal deviation with Mladina's classification and inferior turbinate hypertrophy with Camacho classification. In grade 3/4 Camacho turbinates with grade 1-3 Mladina's septum only turbinoplasty shows equivalent PNIF results to septoturbinoplasty. While a grade 5-6 Mladina's septum shows better results with septoplasty alone.

Conclusions: PNIF should be introduced as a regular checklist assessment tool in developing nations for all patients undergoing surgery, as a predictor for extent of surgery needed for patient's symptomatic improvement.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3997

Patient-reported satisfaction and NOSE scores after septoplasty

Ola Sunnergren[1], Ylva Lilja[2]

[1]Department of Otorhinolaryngology, Sahlgrenska Academy, University of Gothenburg, Sweden, [2]Department of Otorhinolaryngology, Capio Lundby Hospital, Gothenburg, Sweden

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: The Swedish Quality Register for Septoplasty (SQRS) monitors clinical practice and outcome of septoplasty. In October 2024 the NOSE scale was introduced in the SQRS. The aim was to report NOSE scores, and patient-reported satisfaction rates after septoplasty with and without turbinate surgery.

Material & Methods: All responders (≥18 years) to the revised SQRS 12-month PROM questionnaire (data retrieval 2025-01-02) were included. The SQRS response rate was 60% in 2024. Data on age, sex, NOSE score and satisfaction with surgery was retrieved from the SQRS database.

Results: A total of 248 patients (mean age 38.5 years, 72.2% men), 109 septoplasties without and 139 with turbinate surgery, were included. The mean post-operative NOSE score was 31.8 (SD 27.1), in the septoplasty group 32.4 (SD 27.6) and in septoplasty with turbinate surgery group 31.3 (SD 26.9). The rates of satisfaction in the septoplasty vs. septoplasty with turbinate surgery group were 60.6% vs. 56.8% satisfied, 19.3% vs. 19.4% not satisfied, and 20.2% vs. 23.7% unsure. For patients reporting NOSE scores lower than the mean, the satisfaction rate was 89.5%, compared to 16.2% for patients reporting NOSE scores higher than the mean.

Conclusions: The mean post-operative NOSE score in the SQRS is in accordance with the results of the randomized controlled trials on septoplasty by van Egmond et al. and Carrie et al. (post-operative NOSE scores 32.5 and 30.7 respectively). Our data indicate that a post-operative NOSE score ≤30 greatly increases the likelihood of satisfaction with the result of septoplasty.



4001

Nasal obstruction and anxiety – is there a link?

Basile Landis[1], Julien Hsieh[1]
[1]*Rhinology-Olfactology Unit, Geneva University Hospitals (HUG), Geneva, Switzerland*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: Most patients complaining of nasal obstruction (NO) have anatomical factors such as polyps or a deviated septum, explaining the symptoms. In contrast, certain patients without any evident anatomical factor complain of NO. It is hypothesized that a dysfunctional respiratory pattern (hyperventilation) may explain part of their perceived NO.

Methods: We examined three groups of patients complaining of NO, the first on with nasale polyps (n=34), the second with obvious septal deviation (n=34) and the third without any major anatomical abnormality (n=34). We measured airflow and trigeminal function and questionnaires for nasal symptoms (NOSE) and breathing related anxiety (Nijmegen).

Results: The third group, complaining of NO without any major anatomical explanation for the symptoms had similar respiratory and trigeminal and NOSE outcomes but significantly higher anxiety scores.

Conclusion: The present data suggest, that in a subgroup of patients with NO, anxiety may play a role for the breathing complaint. This seems especially to be the case if no major anatomical or inflammatory factor explains the NO.



4026

Septal Perforation Repair Technique: Triple-Layered, Unilateral Advancement Flap and Contralateral Underlay Xenograft

Darren Rom[1]

[1]Royal National ENT, University College London Hospitals NHS Foundation Trust, *[2]The Royal National ENT, University College London Hospitals NHS Foundation Trust*

Septal and turbinate surgery 1 | ROOM 8 – G3 - Level +1| Monday June 23, 2025

Introduction: Repairing septal perforations presents certain technical challenges, with larger perforations being a risk factor for incomplete closure. We describe a triple-layer repair technique that utilises a unilateral advancement/rotational mucoperichondrial and mucoperiosteal flap with contralateral submucosal mesh xenograft, and report the outcomes of a single-centre case series over a 5 year period.

Material and Methods: The technique is approached either closed or open and incorporates a unilateral mucoperichondrial flap raised anterior to the perforation. A separate incision anterior the pyriform aperture, with extension along the nasal floor, inferior turbinate head and lateral nasal wall. The flap is rotated medially to close the perforation without tension. A xenograft mesh matrix is positioned in an underlay fashion on the contralateral side, and crushed cartilage placed between the mesh and flap. Bilateral nasal splints are left in situ for 3 weeks. A retrospective review of this technique was performed over a 5 year period and post-operative outcomes recorded.

Results: 26 patients were included, the median perforation size was 12mm and median follow up 10 months. Complete closure was achieved in 84.6% of patients, whereas partial closure (>50% initial size) recorded in the remaining cases. All patients experienced a significant improvement in their symptoms after the procedure.

Conclusion: The addition of inferior turbinate mucosa and lateral nasal wall as part of the rotation flap, together with a triple-layered closure has been successfully used to close larger septal perforations.



3619

A Comparison Between Medial Flap Turbinoplasty and Radiofrequency Coblation for the Management of Inferior Turbinate Hypertrophy: A Randomized Controlled Trial

Amani Daoud[1], Shiri Damti-Geva, Amiel Dror, Ahmad Bader, Eyal Sela, Tal Marshak

[1]Department of Otolaryngology, Head and Neck Surgery, Galilee Medical Center, Nahariya, Israel

Best Abstract Presentation | ROUND TABLE 18 | ROOM 4 - F7 - Ground Floor| Tuesday, June 24, 2025

Background: Nasal obstruction is a common complaint. Our study aims to compare the efficacy and complications of two commonly used procedures in treating inferior turbinate hypertrophy—medial-flap turbinoplasty (MFT) and coblation-assisted turbinoplasty (COBT).

Methods: In this randomized controlled trial, patients unresponsive to standard treatment were assigned to either MFT (removing lateral mucosa and bony part) or COBT (a wand along the turbinate). Assessment included VAS and NOSE scores, turbinate size, and complications, evaluated up to one year post-op.

Results: Of 41 participants, average age was comparable (p=0.94). Preoperative NOSE and VAS scores were similar (MFT 78.5 and 8.35, COBT 81.8 and 8.5- p=0.53, p=0.59 respectively). Both groups demonstrated significant reductions in NOSE (MFT 17.8, COBT 28.4) and VAS scores (MFT 1.8, COBT 2.8) at 3 weeks post-operatively. These improvements persisted significantly at 3 months, 6 months, and 1 year (MFT 18.5, COBT 34.5). While both groups improved, MFT group exhibited greater long-term improvement at 1 year (p=0.027). There were no major complications, though crusting was more frequent in the COBT group (p<0.001). Minor bleeding occurred in 6 patients, while one MFT patient required endoscopic cauterization.

Conclusions: COBT group exhibited more post-op crusting. Overall, complication rates were similar between groups. While COBT and MFT are both effective in the short term, MFT provides greater long-term improvement.



Imaging and Investigations 1

4060

Clinical characteristics and effect of dental implants on odontogenic unilateral maxillary sinusitis

Yoo Jae-Ho[1], Seung-Heon Shin[1], Ye Mi-Kyung[1], Hee-Jun Park[1], Kim Tae-Gyun[1]
[1]*Department of Otolaryngology-Head and Neck Surgery, School of Medicine, Daegu Catholic University*

Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Introduction: Unilateral maxillary sinusitis (MS) and maxillary sinus fungal ball (FB) have diverse etiologies with an increased prevalence. Odontogenic sinusitis is a common cause of maxillary sinusitis, and the incidence of dental implant-related sinusitis is continuously increase. This study aimed to investigate and compare the clinical characteristics of the implant-related and implant-unrelated maxillary sinusitis.

Materials & Methods: A total of 195 patients with odontogenic unilateral MS were included in this study. They were divided into four groups: implant-unrelated maxillary sinusitis (IUR-MS, n=66), implant-related maxillary sinusitis (IR-MS, n=31), implant-unrelated maxillary sinusitis (IUR-FB, n=57), implant-related maxillary sinusitis (IR-FB, n=41). Medical records and preoperative computed tomographic findings were evaluated to compare statistical differences.

Results: The mean age of patients in the MS groups was 58.9 ± 14.1 years with a male predominance (60.6%), while FB groups was 64.3 ± 8.8 years with a female predominance (64.3%). Foul odor and posterior nasal drip were the most common symptoms of MS, whereas 41.8% of FB patients reported non-specific or no nasal discomfort. Smoking and alcohol consumption were important risk factors for the development of MS. Periodontitis was the most significant odontogenic cause of maxillary diseases, and intramaxillary protrusion of implant material was a critical risk factor for the development of implant-related maxillary diseases.

Conclusions: Odontogenic MS and odontogenic FB exhibit different clinical characteristics. Smoking and alcohol consumption were important risk factors for odontogenic MS, while periodontitis and intramaxillary protrusion of dental implant were strongly associated with maxillary diseases.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3637

Endonasal thermal imaging in the assessment of nasal obstruction and airflow

Kachorn Seresirikachorn[1], Larry Kalish[2], Raewyn G. Campbell[2], Janet Rimmer[2], Kornkiat Snidvongs[1], Raymond Sacks[2], Richard J. Harvey[2]

[1]Department of otolaryngology, Faculty of Medicine, [2]Rhinology and Skull Base Research Group, St Vincent's Centre for Applied Medical Research, University of New South Wales, Sydney, Australia.

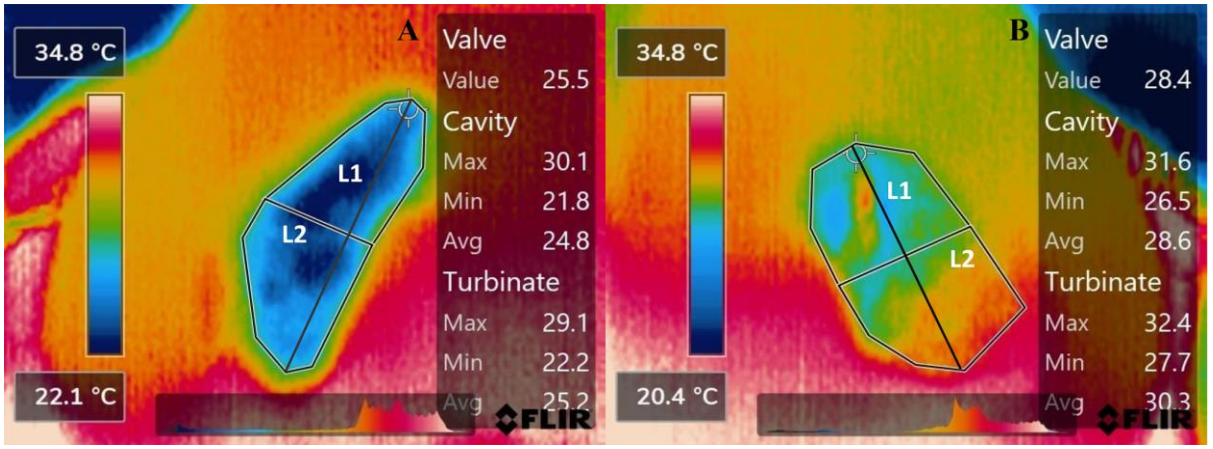
Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Introduction: Objective tests measuring nasal resistance and cross-sectional area correlate poorly with subjective nasal breathing perception. Mucosal temperature changes are likely to drive airflow perception due to radiant cooling rather than direct airflow sensation. This study develops the endonasal thermal image of the nasal passage to assess intranasal mucosal temperature and its association with subjective nasal breathing perception and objective airflow measurements.

Material & Methods: A cross-sectional study included adults with primary nasal obstruction. Mucosal temperatures were extracted from the endonasal thermal image generated from the infrared thermal camera (FILR VS290). Mid-expiration (Ext) and mid-inspiration temperatures (InT) (internal nasal valve, nasal cavity, inferior turbinate, and overall airway areas) were compared with patient-reported outcomes (visual analog scale (VAS), Nasal Obstruction Symptom Evaluation scale (NOSE) and nasal airway resistance (NAR) pre-and post-decongestion.

Results: 33 patients (age 33.94±11.65 years, 39.4 % female, 66 nasal cavities) were included. NOSE, VAS, and NAR were 59.85±26.65, 57.03±28.35, and 0.67±0.62 Pa/cm3/s, respectively. VAS improved pre-post decongestion (57.03±28.35 v 33.30±24.16, p<0.001). ExT of all areas was higher than InT in pre- and post-decongestion. ExT post-decongestion of three areas and overall airway were lower than ExT pre-decongestion. No significant correlations were found between mucosal temperature, subjective nasal breathing perception, and objective measurement of nasal airflow.

Conclusions: Endonasal thermal imaging accurately measures intranasal mucosal temperature in nasal obstruction patients. Lower mucosal temperatures during inspiration and expiration reflect mucosal cooling, essential for nasal breathing perception. However, more precise imaging and data acquisition are required before mucosal temperature can be clinically utilized to measure nasal obstruction.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3947

Are we ready to accept artificial intelligence in rhinology imaging?

Mihai Dumitru[1], Iulian Alexandru Taciuc[2], Adrian Costache[3], Andrees Marinescu[4], Daniela Vrinceanu[1]

[1]ENT Department, Carol Davila University of Medicined and Pharmacy, Bucharest, Romania, [2]Nuclear Medicine Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, [3]Pathology Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, [4]Imaging Department, Carol Davila University of Medicined and Pharmacy, Bucharest, Romania

Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Abstract Introduction: Artificial intelligence is becoming a reality of current medical daily practice in many disciplines. Imaging is at the forefront of including AI powered software in triage. Rhinology could benefit from the use of such imaging technologies for preoperative planning.

Material and Methods: We queried PubMed database for the key words:" AI" and "Nasal" and "Imaging". Subsequently we followed the steps of performing a scoping review according to PRISMA guidelines.

Results: Initially resulted 344 prospective titles in the subject. We further refined the research to free full text manuscripts resulting in 212 articles. Of these 174 manuscripts were included also in MEDLINE. Limiting the research to English language the number reduced to 169 articles. 133 manuscripts included human subjects. Adults aged more than 18 years were included in 65 articles. Only 49 articles were published in the last 10 years. Further manual check excluded 23 articles. The final database analyzed comprised 27 manuscripts.

Conclusions: Research on AI in rhinology imaging focused mainly on: maxillary sinus segmentation on cone beam CT; nasal septum deviation detection; facial soft tissue rhinoplasty profiles; categorizing radiologic inflammation in chronic sinusitis. These 4 fields of activity gathered data with statistical significance of the reliability of AI in screening for such pathology. However, this scoping review revealed that there are still missing wide populational studies regarding the efficiency of using AI in the management of nasal tumors. Finally, a proof of concept is proposed for such research between the interaction of AI and nasal tumors imaging modalities.



4007

Paranasal fungal sinusitis: elemental analysis of CT-scan hyperdensities

Simona Polášková[1], Petr Matoušek[1], Michaela Mladoňová[1], Jakub Lubojacký[1], Lenka Čábalová[1]
[1]*Klinika otorinolarygologie a chirurgie hlavy a krku, Fakultní nemocnice Ostrava*

Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Introduction: Paranasal sinus fungus ball is a chronic, noninvasive form of mycotic sinusitis usually caused by Aspergillus sp. The maxillary sinus is the most commonly affected, followed by the sphenoid sinus. The diagnosis of a fungus ball is based on the patient‘s symptoms and a CT scan of the paranasal sinuses. The typical presentation is hyperdensity. In this study, we want to discover which elements and compounds are typical for hyperdensities.

Materials & Methods: This study investigated which elements and compounds cause hyperdensities in CT scans. It was a single-centre prospective study. Patient treated with fungus ball and CT scan hyperdensities became part of the study. During the surgery, 4 samples of mycotic material and mucosa of paranasal sinuses were taken. Samples underwent histopathological examinations, fungal cultures, and elemental analysis (electron microscope, spectroscopy). Study results Forty-two patients were considered in this study, all undergoing endoscopic sinus surgery. Four samples of mycotic material and paranasal sinuses' mucosa were taken during the surgery. Histopathological examination, fungal culture, and elemental analysis were performed. Elemental analysis confirmed that the most common compounds in fungus balls are calcium phosphate, magnesium phosphate, barium sulfate, and calcium carbonate. In some cases, metal elements like iron or chrome were present.

Conclusion: Our findings confirmed that a mixture of elements and compounds usually causes CT-scan hyperdensities. The most common were calcium compounds produced in the necrotic center of fungus balls.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3720

The Sinus Surgery Completeness Score: a radiological assessment of the extent of endoscopic sinus surgery

Alison Emily Lim[1], Keshav Kumar Gupta[2], Saleh Okhovat[1], Rishi Sharma[3], Thomas Beech[2], Lisha McClelland[2], Arif Janjua[4], Karan Jolly[2]

[1]Queen Elizabeth University Hospital Glasgow, [2]University Hospitals Birmingham NHS Trust, [3]Addenbrookes Hospital Cambridge, [4]Vancouver General Hospital

Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Introduction: Chronic rhinosinusitis (CRS) is often treated with endoscopic sinus surgery (ESS), but the reported surgical revision rate is high. The introduction of biologics offers an alternative treatment, but patient criteria are ambiguous, particularly regarding the definition of "previous ESS." This study aims to introduce the Sinus Surgery Completeness Score (SSCS) and assess its reliability in evaluating the extent of ESS.

Material and methods: The SSCS was developed by expert rhinologists and anterior skull base surgeons and applied to computed tomography (CT) sinus scans of 41 CRS patients who underwent previous ESS. Inter-rater reliability was assessed, and statistical analysis was performed to correlate SSCS with Lund-Mackay (LM) and Sinonasal Outcome Test-22 (SNOT-22) scores.

Results: The SSCS demonstrated strong inter-rater reliability (Fleiss Kappa score 0.857). The mean time to complete the SCSS was 2.7 minutes. Most patients had incomplete surgery with a mean SCSS of 7.40 (total 24) with no patient achieving a maximum score. The maxillary sinus was the most dissected subunit, with frontal and sphenoid sinuses being the least. Weak negative correlations were observed between the SSCS and LM and SNOT-22 scores (Figure 1).

Conclusions: The SSCS is a useful tool for assessing the completeness of sinus surgery, offering a standardized approach to evaluating surgical outcomes. While further research is needed to elucidate the relationship between surgical completeness and patient outcomes, the SSCS holds promise in guiding patient management including informing decisions regarding eligibility for biologic therapy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4059

Relationship between morphology and severity of septal deformity and the degree of nasal obstruction

Minh Hoang[1], Thi Khanh Trinh Phan[1], Huu Ngoc Minh Phan[1]
[1]*Department of Otolaryngology, Hue University of Medicine and Pharmacy, Hue University, Hue, Vietnam*

Imaging and Investigations 1 | ROOM 9 – G6 - Level +1| Monday June 23, 2025

Aim: The correlation between type and severity of septal deviation and degree of nasal obstruction remains unclear. We aimed to evaluate this relationship using three patient-reported tools for assessing obstructed nasal airway alongside peak nasal inspiratory flow (PNIF).

Methods: 212 subjects from a general ENT clinic were included. Patients self-reported their nasal obstruction using the Nasal Obstruction Symptom Evaluation (NOSE) scale, a Visual Analogue Scale (VAS), and a 6-point Likert scale. PNIF was collected along with the clinical examination to determine the type and severity of deviated septum.

Results: The mean scores of NOSE, VAS, 6-point Likert and PNIF were 28.61, 5.26, 2.32 and 96.82 L/min, respectively. Only the NOSE score was significantly associated with both type and severity of septal deviation and PNIF. Septum with bilateral vertical deformity exhibited the highest NOSE score and the lowest PNIF value.

Conclusions: NOSE scale was a reliable patient-reported tool for evaluating nasal obstruction. Pre-operative decision-making for septoplasty should rely on a combination of clinical examination, history, and subjective and objective assessments.



CRS – Biologics 2

4149

Distinct Response Patterns to Dupilumab in Severe CRSwNP: A 12-Month Latent Class Trajectory Analysis of Nasal Polyp Scores

Robert Böscke[1], Cäcilie-Elisabeth Trumpf-Müller[1], Benjamin Becker[2], Andreas Radeloff[1], Christian S. Betz[2], Anna S. Hoffmann[2]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, Carl-von-Ossietzky University of Oldenburg, Oldenburg, Germany, *[2]Department of Otorhinolaryngology and Head and Neck Surgery, University Medical Center Hamburg-Eppendorf, Hamburg, Germany*

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday, June 23, 2025

Introduction: Dupilumab effectively reduces nasal polyp size in chronic rhinosinusitis with nasal polyps (CRSwNP). However, treatment response varies among patients. We aimed to identify distinct response trajectories using latent class trajectory modeling (LCTM).

Material and Methods: This retrospective study analyzed 145 severe CRSwNP patients receiving Dupilumab 300mg biweekly. LCTM was performed incorporating cubic time effects and using type-2 comorbidities as class membership predictors. Differences between classes were assessed by Kruskal-Wallis and post-hoc Dunn's test for blood eosinophil counts, total IgE, SNOT-22, Visual Analogue Scale (VAS) for rhinosinusitis severity and nasal congestion, and Sniffin'-Sticks-12 test (SSIT-12). Comorbidity distributions were assessed by Chi-square test. Odds ratios were calculated for EUFOREA-2023 response criteria at 6 months.

Results: A three-class LCTM solution identified distinct trajectory patterns: Class 1 ("Gradual Responders", 14.5%) improved from NPS 7.0 to 2.3, Class 2 ("Partial Responders", 14.5%) improved from NPS 6.0 to 4.4, and Class 3 ("Rapid Complete Responders", 71.0%) showed marked NPS reduction from 4.0 to 0.9. Baseline characteristics differed with Class 1 showing highest VAS for rhinosinusitis severity (8.0 vs 7.0 vs 7.0) and VAS for nasal congestion (8.0 vs 7.0 vs 6.0), Class 2 showing highest rates of asthma (61.9% vs 95.2% vs 78.6%) and allergies (52.4% vs 90.5% vs 68.9%), and Class 3 showing lowest baseline NPS (7.0 vs 6.0 vs 4.0) and highest SSIT-12 scores (1.0 vs 1.0 vs 3.0) (all $p<0.05$). At 6 months, Class 3 had significantly higher EUFOREA-2023 response rates compared to both Class 1 (OR 3.10, 95%CI 1.16-9.27, $p=0.030$) and Class 2 (OR 3.97, 95%CI 1.43-12.86, $p=0.012$).

Conclusions: LCTM identified three distinct NPS trajectory patterns in CRSwNP patients treated with Dupilumab, with most achieving rapid complete response. Asthma and allergies were associated with less favorable NPS trajectories.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4563

Switch To Dupilumab From Other Biologic Therapy In Severe CRSwNP: A Comparison With Naïve Patients

Daniela Lucidi[1], Carlotta Pipolo[2], Gianluca Fadda[3], Ignazio La Mantia[4], Veronica Seccia[5], Massimiliano Garzaro[6], Eugenio De Corso[7]

[1]Bologna University, [2]Milano University, [3]Turin University, [4]Catania University, [5]Azienda Ospedaliero Universitaria di Pisa, [6]Piemonte Orientale University , [7]Catholic University of The Sacred Hearth

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Introduction: we tried to verify the hypothesis that CRSwNP patients who switched to Dupilumab from another biologic may have different clinical outcomes compared to those who started Dupilumab as their first biologic treatment. The aim of the study was to investigate whether prior exposure to biologics affected clinical outcomes in CRSwNP patients treated with Dupilumab.

Material and Methods: this is a multicentric study including 5 centers in Italy in the context of ENT Italian Biologics research network. We included patients that were comprehensively evaluated at baseline and during the first 12 months of treatment. Clinical and laboratory parameters were investigated in two groups of patients during 12 months of follow up: Group 1 (naïve patients) and Group 2 (patients who had a switch from a previous mab).

Results: We enrolled 223 patients, 163 in Group 1 and 60 in Group 2. Group 2 included 25 patients who had been prescribed Benralizumab, 19 patients who had been prescribed Mepolizumab and 17 patients who had been prescribed Omalizumab.At baseline evaluation clinical characteristics of the patients were different; in the group 2 compared to the group 1 we observed a significant higher number of asthma patients (98% versus 72%), of patients prescribed more than 2 cycles in the previous year (78% versus 54%) and a higher percentage of patients previously subjected to more extended surgery ESS ± DRAF III (19% versus 1%). We did not observe differences in terms of baseline eosinophilia (495.0(328.3 - 700.0) in Group 1 versus 490.0(200.0 - 670.8)in Group 2). When comparing group 1 and group 2 in terms of post-treatment systemic eosinophilia no significant differences were detected at all timepoints. However, when comparing group 1 and a subgroup of patients who switched from an anti IL-5 pathways we observed a statistically significant difference in post-treatment systemic eosinophilia at 6 and 9 months (890.0 vs 853.6 and 898.0 vs. 823.3 respectively; $p<0.05$). The Median NPS scores was significantly higher at 6 months in Group 1 versus Group 2 (NPS= 2 versus 1.5 in Group 2; $p<0.05$). Higher median SNOT 22 scores were found in group Group 2 versus Group 1 at 1, 3 and 12 months post-treatment (28.5 versus 26; 25.9 versus 17.6 and 21.8 versus 13.4 respectively; $p<0.05$ for all comparisons). Similarly, Nasal Obstruction VAS scores proved higher in Group 2 versus Group 1 at 1 and 3 months evaluation (4.1 versus 3.0 and 3.0 versus 2.2 respectively; $p<0.05$). Sniffin' Sticks proved not statistically dissimilar between groups except for the 1 month post-treatment assessment, with higher score obtained in Group 1 versus Group 2 (9.4 versus 7.9; $p<0.05$). Although all this differences were statistically significant, the magnitude of differences was considered clinically not relevant.

Conclusions: basing on our data we proved that patients shifting from other biologics had a more severe profile compared to naïve patients in terms of asthma comorbidity, extension of surgery and intake of systemic steroids. We also observed a significant increase of blood induced eosinophilia in patients shifting from an anti IL-5 pathways. We finally observed some significant differences in terms of outcomes although the differences were not clinically relevant.



4403

The clinical applications of biologics in extensive allergic fungal sinusitis

Ali Almomen[1]

[1]*Senior Consultant, Rhinology and Skull Base Surgery, King Fahd Specialist Hospital, Saudi Arabia*

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Background: Allergic fungal rhinosinusitis (AFRS) is defined as a localized inflammatory hypersensitivity reaction in the nasal cavity and sinuses caused by fungal colonization. The high rates of surgical revisions and recurrences of AFRS have prompted the recent hypothesis and ongoing experimentation of an advancement in medical treatment by using biologics. However, the studies in this aspect are very limited; hence, this study aimed to compare two biological agents with the standard therapy of this condition.

Methods: This is a prospective cohort study that involved three groups (Dupilumab, Mepolizumab, and intranasal corticosteroid groups). The patients were followed and assessed in their first presentation and after 9 months of their therapy. Multiple clinical (SNOT-22 and VAS), endoscopic (nasal polyp score), and radiological (Lund-Mackay score) variables were evaluated. SPSS was utilized to analyze the data and compare the groups.

Results: A total of 35 patients were involved in the study (8 in the Dupilumab group, 10 in the Mepolizumab group, and 18 in the control group). In the three groups, there were highly significant differences between pre/post-treatment clinical and endoscopic findings. Comparison between the three study groups at 9 months showed a highly significant difference ($p = 0.001$) between post-treatment SNOT-22 and VAS scores in favour of the biologic groups. There was no statistically significant difference between the three groups as regarding post-treatment nasal polyp score. The most common encountered side effects in the biologic groups were injection site reaction, hair loss, arthralgia, and myalgia, respectively.However, none of these patients had significant side effect**.**

Conclusion: The use of Dupilumab and Mepolizumab was effective and safe in treating patients with extensive AFRS in comparison to the standard therapy. This modality of treatment has been shown to reduce the rates of surgical revisions and recurrences of AFRS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3841

Dupilumab Real-World Effectiveness in Surgery-Naïve and Previous Surgery Patients with Chronic Rhinosinusitis with Nasal Polyps: Results from the Global AROMA Registry

Marjolein E. Corbet[1], Jayant M. Pinto[2], Martin Wagenmann[3], Shigeharu Fujieda[4], Changming Xia[5], Mark Corbett[6], Scott Nash[5]

[1]Department of Otorhinolaryngology, Alrijne Hospital, Leiderdorp, The Netherlands, *[2]Department of Surgery, University of Chicago Medicine and Biological Sciences, Chicago, IL, USA*, *[3]Department of Otorhinolaryngology, Düsseldorf University Hospital (UKD), Düsseldorf, North Rhine-Westphalia, Germany*, *[4]Department of Otorhinolaryngology, Head and Neck Surgery, University of Fukui, Fukui, Japan*, *[5]Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA*, *[6]Sanofi, Bridgewater, NJ, USA*

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Introduction: Sinonasal surgery is considered for refractory chronic rhinosinusitis with nasal polyps (CRSwNP). Real-world evidence of dupilumab's effectiveness in patients with previous surgery is limited.

Materials and methods: AROMA (NCT04959448) is a phase 4, prospective, global registry study of adults with CRSwNP initiating dupilumab.Results691 patients initiated dupilumab (74.1% previous sinonasal surgery). Patients with previous surgery were more likely to be male (58.4% vs 48.0%) and report prior oral corticosteroid use (67.2% vs 62.0%). Mean (SD) nasal congestion (score 0–3) improved from baseline to Month (M) 24 in patients with previous surgery (1.8 [0.87], n=473 to 0.4 [0.56], n=51; change from baseline [CFB] –1.1 [0.87], n=51) and surgery-naïve patients (1.8 [0.85], n=136 to 0.8 [0.76], n=25; CFB –1.0 [1.14], n=25). Similar improvements were seen for loss of smell (0–3): previous surgery: 2.3 (1.07) (n=473) to 0.8 (0.91) (n=51) (CFB –1.3 [1.37], n=51), surgery-naïve: 2.1 (1.05) (n=136) to 1.2 (1.01) (n=25) (CFB –1.2 [1.09], n=25); total symptom score (0–9): previous surgery: 5.4 (2.25) (n=473) to 1.6 (1.46) (n=51) (CFB –3.3 [2.54], n=51), surgery-naïve: 5.3 (2.22) (n=136) to 2.7 (2.03) (n=25) (CFB –3.0 [2.76], n=25). SNOT-22 (0–110) improved from baseline to M18: previous surgery: 46.1 (21.20) (n=430) to 16.1 (12.15) (n=71) (CFB –26.4 [21.48], n=71), surgery-naïve: 45.1 (21.60) (n=139) to 16.4 (15.18) (n=37) (CFB –20.5 [21.59], n=28).

Conclusions: In AROMA, dupilumab improved symptoms regardless of surgical history, consistent with clinical trials, through 24 months. This supports dupilumab's long-term effectiveness in CRSwNP in real-world practice, even in patients with previous surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3942

The role of Eotaxin-3 in the recurrence of Chronic Rhinosinusitis with Nasal Polyps

Maria-Delia Florean[1], **Delia Florean**[1], Anda Gata[2], Veronica-Elena Trombitas[2], Livia Budisan[3], Oana Zanoaga[4], Silviu Albu[2]

[1]Clinical Emergency Hospital Alba Iulia, Romania, [2]University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca Romania, [3]Research Center for Functional Genomics, Biomedicine and Translational Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania;, [4]Research Center for Functional Genomics, Biomedicine and Translational Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, 400349 Cluj-Napoca, Romania;

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is characterized by type 2 inflammation with the eosinophilic phenotype, being associated with disease severity and a high recurrence rate. Eotaxin-3, an eosinophil chemoattractant produced by nasal fibroblasts and mediated by Th2 cytokines, plays a role in eosinophilic infiltration of the nasal mucosa. This study aims to investigate serum eotaxin-3 expression in CRSwNP and its relationship with postoperative recurrence.

Materials and Methods: A total of 69 patients with CRSwNP who underwent surgical treatment, including 29 with eosinophilia, were enrolled in this study. Blood samples were collected, and plasma eotaxin-3 levels were measured using an enzyme-linked immunosorbent assay (ELISA). Postoperative endoscopic findings, symptom scores (SNOT-22), eosinophil counts, tissue IL-33 levels, and computed tomography (CT) findings were analyzed and compared between groups with low and high eotaxin-3 levels.

Results: Serum eotaxin-3 levels were significantly elevated in CRSwNP patients. A positive correlation was observed between eosinophil count and serum eotaxin-3 levels ($p < 0.05$). Additionally, eotaxin-3 was associated with osteitis scores on CT, postoperative nasal endoscopy scores, and SNOT-22 scores ($p < 0.05$). Patients with high eotaxin-3 levels also exhibited significantly higher tissue IL-33 levels ($p < 0.001$).

Conclusions: Eotaxin-3 is upregulated in CRSwNP patients and serves as a strong predictive factor for postoperative recurrence. It may be a potential biomarker for assessing disease severity and prognosis. Further research on biomarkers is needed to advance precision therapy in chronic rhinosinusitis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3943

Efficacy of Dupilumab in Chronic Rhinosinusitis with Nasal Polyps: Evaluating Biweekly and Monthly Dosing Strategies

Martin Kana[1], Stepan Novak[1], Zuzana Balatkova[1], Jan Plzak[1]

[1]*The Department of Otorhinolaryngology Head and Neck Surgery of the 1st Faculty of Medicine, Charles University and Faculty Hospital Motol in Prague*

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Background: Dupilumab, a monoclonal anti-IL-4 and anti-IL-13 antibody, has demonstrated its efficacy in patients with severe chronic rhinosinusitis with nasal polyps (CRSwNP). The objective of this study was to compare two dosing regimens - Dupilumab 300 mg every 4 weeks (Q4W) and Dupilumab 300 mg every 2 weeks (Q2W) - during the first 24 weeks of treatment.

Methods: This single-center observational, longitudinal cohort study included patients with CRSwNP who met the indication criteria for biological treatment according to current EPOS/EUFOREA (European Position Paper on Rhinosinusitis and Nasal Polyps/European Forum for Research and Education in Allergy and Airway Diseases) guidelines. Thirty-one patients were enrolled in the study group and received Dupilumab 300 mg Q4W. Their data, including demographics, medical history, previous surgeries, related comorbidities, total endoscopic nasal polyp score (NPS), SNOT22, odorized markers test (OMT) nasal congestion parameters measured with visual analogue scale (VAS), asthma control test (ACT), eosinophil count, and total IgE, were evaulated at baseline and 24 weeks. Control group data (Dupilumab 300 mg Q2W) were obtained from the Czech Registry of Biological Treatment of Chronic Rhinosinusitis with Nasal Polyps.

Results: After 24 weeks, both dosing regimens led to significant improvements in NPS, SNOT-22, OMT and ACT scores. No significant differences were observed between the two dosing regimens in NPS, SNOT-22, OMT, or ACT scores at 24 weeks. Eosinophil counts and total IgE levels at week 24 did not differ significantly from baseline in both groups. Adverse events and severe hypereosinophilia occurred at comparable rates in both groups.

Conclusion: Both Dupilumab dosing regimens (300 mg Q4W and 300 mg Q2W) provided comparable improvements in nasal polyp burden, symptoms, olfactory function and asthma control over 24 weeks. Further studies are needed to explore long-term outcomes and optimize dosing strategies.



4025

Monoclonal Antibodies significantly improve Symptoms of Aspirin-Exacerbated Respiratory disease

Marie Knudsen[1], Jens Even Tidemandsen[1], Anne-Sophie Homøe[1], Christian Korsgaard Pedersen[1], Kasper Aanæs[1], Vibeke Backer[1]

[1]*Department of Otorhinolaryngology, Head and Neck Surgery and Audiology, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark*

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) impacts quality of life (QoL), especially in patients with asthma and aspirin-exacerbated respiratory disease (AERD). This study investigates the effect of biologic therapy on QoL, focusing on Visual Analogue Scale (VAS) scores in patients with AERD.

Methods: In this prospective observational cohort, 310 CRSwNP patients were treated with mepolizumab or dupilumab. Inclusion required four absolute criteria: bilateral nasal polyps, sinus surgery within the last three years, Type-2 inflammation and adherence to nasal corticosteroids. Furthermore, ≥ 3/5 criteria are required: ≥2 systemic steroid courses/year, SNOT-22 ≥50, smell score ≤8, nasal polyp scores (NPS) ≥5, or comorbid asthma. Baseline VAS scores (0 = no symptoms, 100 = severe) were collected for CRS, smell dysfunction, and AERD. Follow-up occurred at six months.

Results: At baseline, 66% had asthma, 56% allergic rhinitis, and 30% AERD. Mean age was 53 years and 57% were male. Baseline scores: SNOT-22 64 (SD 18), VAS CRS of 82 (SD 16), VAS smell 85 (SD 20), VAS AERD 81 and NPS 4.7 (SD 1.55).After six months of biologic therapy VAS CRS decreasing to 40. In patients with AERD, VAS AERD decreased to 48. Smell scores and NPS also demonstrated substantial reductions, reflecting improved disease control and QoL.

Conclusions: Biologic therapy significantly reduces VAS AERD and improves quality of life in patients with severe CRSwNP. These findings highlight the significant impact of biologic treatment in managing both AERD and overall disease burden, offering substantial benefits to this patient population.



4255

Correlation of baseline eosinophil cell counts and baseline serum total IgE level with olfactory improvement and nasal polyp scores in CRSwNP patients during dupilumab treatment

Gábor Forgács, Imre Dóka, Kristóf Ludányi, Dávid Nagy, Zsuzsanna Horváth, Tünde Orosz, Bálint Liktor, Lili Lakatos, Ágnes Kiricsi, Andor Hirschberg, Vivien Vass, Péter Hegyi, Csenge Zsiros, Ágnes Tőkés-Szalenkó, Tibor Szalóki, Mária Matúz, Zsolt Bella, Eszter Erdélyi, Anna Bódi, László Tóth, Zoltán Fent, Balázs Liktor, László Lujber, Helga Kraxner

CRS – Biologics 2 | ROOM 10 – G7 - Level +1| Monday June 23, 2025

Introduction: In chronic rhinosinusitis patients with nasal polyps (CRSwNP) type 2 inflammation is frequently observed. In type 2 inflammation the excess imflammatory response is caused by the overreaction of the immune system to triggers like allergens, irritants, or infections. Dupilumab is a fully human monoclonal antibody that targets IL-4Rα and inhibits IL-4 and IL-13 signalling which are the two main sources of type 2 inflammation. Dupilumab downregulates type 2 immunity, which can be used in patients with uncontrolled CRSwNP.

Material and Methods: In our study, we investigated whether baseline eosinophilic cell count and baseline serum total IgE level could be indicators for the degree of improvement of olfaction and nasal polyp score (NPS) as a result of biological therapy, in 24 patients with CRSwNP between 2021 and 2024.

Results: Based on our results, baseline eosinophil count does not correlate with neither the six-month change in NPS nor the six-month improvement in olfaction (TDI score). (p=0,36, p=0,49 respectively). Similarly, our findings indicate that these parameters do not show any correlation with the baseline total IgE level (p=0,27, p=0.99 respectively).The rate of olfactory improvement induced by dupilumab therapy—representing the time required to reach the plateau of olfactory recovery—also does not depend on the baseline eosinophil count (p= 0,72) or the baseline total IgE level (p= 0,90).There was no significant difference in baseline eosinophil count between those with no improvement despite treatment and those who experienced olfactory improvement (p=0,77). A considerable difference was observed between baseline total IgE levels in the no improvement group comparing to the group of patients who had olfactory improvement, however the difference was not statistically significant (377.48 IU/ml vs. 669.34 IU/ml, p=0.51).

Conclusion: Our study results suggest the possibility that elevated baseline total IgE level could be an indicator for the effectiveness of dupilumab therapy on olfaction in patients with CRSwNP.



Skull Base Surgery 1

3829

A Novel Protocol for Management of Idiopathic Intracranial Hypertension in Patients with Spontaneous Anterior Skull Base Cerebrospinal Fluid Leaks

Talisa Ross[1], Marlene Speth[1], Catherine Rennie[1]
[1]Charing Cross Hospital, Imperial College Healthcare NHS Trust

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Idiopathic Intracranial Hypertension (IIH) is associated with spontaneous anterior skull base cerebrospinal fluid (CSF) leaks. Reduction of CSF pressure is paramount to optimising success rates of surgery and reducing the risk of recurrence. This requires early recognition and prompt treatment, in advance of surgical repair. We devised a protocol outlining diagnosis and management of CSF leaks in this patient cohort.

Materials and Methods: We devised a novel evidence-based protocol for diagnosing and managing CSF leaks in patients with suspected IIH in our tertiary skull base centre. This was created jointly by Ear Nose and Throat (ENT) surgeons, Neurosurgeons, Head and Neck Radiologists and Neuro-ophthalmologists.

Results: The protocol includes guidance on clinical and radiological findings suggestive of IIH, recommendations for measuring opening pressure, guidance on when to refer to Neuro-ophthalmology, when to initiate Acetazolamide and when to consider a lumbar drain during surgical repair. It also details when to refer to the weight loss multi-disciplinary team to consider medical management with GLP-1 agonists or bariatric surgery.

Conclusion: Through review of the published literature and local expertise at our high volume skull base centre, we have successfully devised a protocol to manage IIH in patients with anterior skull base CSF leaks. This has been ratified by our skull base multi-disciplinary team. Future research intends to measure the impact of implementing this protocol on patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3773

Oncological outcomes of T3/T4 malignancies of the anterior skullbase - single surgeon consecutive series

Todor M Popov[1], Dimitrov Lyuben[1]

[1]Department of ENT, Medical University - Sofia, [2]Department of ENT-Head and Neck Surgery , University Hospital "Queen Joanna"-ISUL, Medical University-Sofia

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Endoscopic endonasal resection is an established technique for approaching the anterior skull base and it is the current golden standard in terms of resecting advanced malignancies in this area. The aim of this study is to present our oncological outcomes of endonasal resection in patients with T3/T4 malignancies in the area of the anterior skull base.

Material and Methods: 18 patients met the inclusion criteria and were enrolled in the current study. Patients had pathologically confirmed malignancies in T3 (35.29%) and T4 (64.71%) stage and underwent primary endonasal endoscopic radical resection with post-operative radiotherapy at the University Hospital "Queen Ioanna-ISUL", Medical University - Sofia, Bulgaria. Inclusion criteria was involvement of structures that are in direct contact to dura. Patients were operated during the period 2021-2023 - single surgeon consecutive series. Median follow-up was 24 months.

Results: Mean age of the patients is 59, 55.56% males and 44.44% females. Overall survival rate for the follow-up period was 83.3% and recurrence-free percent is 77.7%. This encompasses a disease-specific mortality rate of 22.3% for the whole group. Additional subgroup analysis is presented.

Conclusion: Despite the advanced tumor stage, surgical modality could offer significant overall survival rate in patients with anterior skull base cancer and low disease-specific mortality rate.



3659

Endoscopic Transnasal Resection Of Nasopharyngeal Angiofibroma: Embolization Impact-Analysis Of 30 Cases At Umc In 10 Years

Aizhan Nurmagambetova[1]

[1]*University Medical Center*

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Juvenile nasopharyngeal angiofibroma (NPAF) is a benign but highly vascular tumor typically seen in adolescent males. Endoscopic transnasal resection, coupled with preoperative transcatheter arterial embolization (pTAE), is commonly employed to reduce bleeding and recurrence risk. This study retrospectively assesses the impact of pTAE on the clinical outcomes of 30 patients over a 10-year period at the University Medical Center.

Material & Methods: A total of 30 adolescent males aged 12 to 17 with NPAF, treated between February 2014 and December 2023, were analyzed. The cohort was divided into two groups: 19 patients who underwent preoperative embolization (pTAE group) and 11 who did not (non-pTAE group). Key outcomes analyzed included recurrence rate, intraoperative bleeding volume, surgery duration, and postoperative complications.

Results: Preoperative embolization was associated with a significant reduction in recurrence rates across all stages of NPAF (Stage I: 0% vs 9%, Stage II: 0% vs 18%, Stage III: 0% vs 18%). Intraoperative bleeding was notably lower in the pTAE group across all stages (Stage I: 268 vs 364 mL, Stage II: 817 vs 1379 mL, Stage III: 1217 vs 2105 mL). Surgery durations were shorter in the pTAE group (Stage I: 100 vs 150 minutes, Stage II: 170 vs 200 minutes, Stage III: 245 vs 300 minutes), though differences were not statistically significant. No adverse events occurred during embolization.

Conclusion: pTAE significantly reduces intraoperative bleeding and recurrence rates in endoscopic resection of NPAF but does not substantially impact surgery duration or tumor volume removal. Further randomized controlled trials are needed to confirm the long-term safety and efficacy of pTAE in NPAF management.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3672

Anatomical Parameters in Pediatric Skull Base Among Filipinos: Data From A Single Tertiary Hospital in the Philippines

Cedric Jonathan Ng[1], Ryan Chua[2]

[1]University of Santo Tomas Hospital, [2]University of Santo Tomas Hospital; Jose R. Reyes Memorial Medical Center; The Medical City; Cardinal Santos Medical Center; National Center for Mental Health

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Pediatric endoscopic endonasal surgery (EES) is currently becoming a viable and safe approach for skull base lesions since its inception; however, this approach is complex because children have distinct anatomical considerations compared to adults. To date, pediatric ESS literature is limited to a few international case series, and institutional retrospective reviews. Moreover, there has been no published studies in Philippine literature regarding the variations and measurements of the Filipino pediatric skull base parameters, despite its relevance in the current surgical setting. This study aims to evaluate and determine the anatomical variations across different pediatric age groups and sex in the Filipino population.This study involved a cross-sectional design through a retrospective review of pediatric maxillofacial CT scan results done at UST Hospital Philippines from January 2019 - January 2024. A total of 111 DICOM patient files were retrieved and reviewed. The following variables were measured: Piriform aperture width, Nare to sella distance, Sphenoid to sella distance, Sphenoid pneumatization type, Sphenoid sinus width, Olfactory fossa depth, Lateral lamella-cribriform plate angles, Intercarotid distances at the levels of superior clivus and cavernous sinus, potential Nasoseptal flap length, and Sellar defect length. Subjects were then divided into three general age groups (<5, 5-12, 13 and older), and sex (Males, Females). Statistical analyses were conducted accordingly. Results show that the aforementioned measurements were higher among the male pediatric cohort but not statistically significant. Mean scores of all variables were significantly higher among age groups 13 years and older, and significantly lowest among age groups less than 5 years. Finally, nasoseptal flap reconstruction of pediatric sellar defects among the Filipino pediatric population seems feasible. Theoretical and practical implications were further discussed.



3721

Our experience in petroclival lesions using a contralateral transmaxillary approach

Maria Casasayas Plass[1], Juan Ramón Gras-Cabrerizo[2], Katarzyna Kolanczak[2], Fernando Muñoz-Hernández[3], María Martel Martin[4], Esther Granell Moreno[5]

[1]Hospital de la Santa Creu i Sant Pau, *[2]ENT Department, Hospital de la Santa Creu i Sant Pau*, *[3]Neurosurgery Department, Hospital de la Santa Creu i Sant Pau*, *[4]ENT Department, Hospital del Mar*, *[5]Radiology Department, Hospital de la Santa Creu i Sant Pau*

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Petroclival lesions represent a surgical challenge during the endonasal endoscopic approach, as they may involve maneuvers with severe comorbidity. To avoid the morbidity caused by these maneuvers, a contralateral transmaxillary approach (CTA) has been proposed to complement the endoscopic endonasal approach. The aim of our study is to review the safety and efficacy of this approach.We included three patients with lesions affecting the petroclival region, one cholesterol granuloma and two macroadenomas, who were surgically treated with a combined ipsilateral transpterygoid approach and a CTA. The latter was performed by wide osteotomy on the anterior wall of the maxillary sinus through a gingivolabial incision.Complete resection was achieved in the patient with a cholesterol granuloma and subtotal resection in the two patients diagnosed with macroadenoma. One patient presented ecchymosis of the malar area as the only complication.The contralateral transmaxillary approach may improve exposure and dissection of the petroclival area compared to the homolateral endoscopic endonasal approach allowing reaching the most lateral and posterior region of this territory without the need to manipulate the internal carotid artery.



3740

Single-center review of patients with cerebrospinal fluid leaks of the anterior skull base

Sergey Gorbunov[1], Georgiy Polev[2], Marina Nersesyan[3]

[1]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia, [2]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia, [3]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Endoscopic closure of cerebrospinal fluid (CSF) leaks from the anterior skull base (ASB) has become the standard of care. The aim of this study was to evaluate the effectiveness of transnasal endoscopic closure of CSF leaks and to identify relevant patient characteristics.

Material & Methods. Single center retrospective review of patients with ASB CSF leaks between 2022 and 2024 (n = 15). Age, gender, body mass index (BMI), defect localization, cause of the leak, recurrence rate, and comorbidities were evaluated.Results. The mean age of the patients was 44±17 years, with a majority being female (n=11, 73.3%). The average BMI was 32.0±5.2. 10 patients (66,7%) had spontaneous CSF leaks, 3 (20%) had traumatic causes, and 2 (13,3%) had iatrogenic causes. Obesity was present in 5 patients (33.3%), and 3 (20%) had diabetes mellitus. The most common leak sites were the sphenoid lateral pterygoid recess (n=7, 46,7%), followed by the ethmoid roof (n=5, 33,3%) and the cribriform plate (n=3, 20%). All patients underwent transnasal endoscopic closure without the use of lumbar drains. There was no recurrence of CSF leakage during a **mean follow-up of 1 year.**

Conclusion: The transnasal endoscopic closure of ASB CSF leaks in our center demonstrated a 100% success rate.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3827

Endoscopic management of CSF leak

Zuzana Balatková[1], Jan Plzák[2]

[1]Dept of otorhinolaryngology 2nd Faculty Of Medicine, Charles University Prague, University Hospital Moto, *[2]Dept of otorhinolaryngology 1st Faculty Of Medicine, Charles University Prague, University Hospital Moto*

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Endoscopic approaches´ success rate in CSF leak management reaches 90 % and more. Spontaneous CSF leak in benign intracranial hypertension is of special interest because of the higher recurrence rate.

Methods: Retrospective study of 21 patients undergoing endoscopic repair of CSF leak between 2019 and 2023. Major etiology is traumatic and skull base defect after tumour removal.

Results: In our study the overall success rate of 95.2% was achieved. Higher recurrence rate was observed in benign intracranial hypertension. Only one patient underwent revision from external approach.

Conclusions: Endoscopic approach is a method of choice for the skull base reconstruction with high safety and excellent success rate. Benign intracranial hypertension requires special attention.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3864

Reducing nasosinusal morbidity in endoscopic skull base surgery: reconstruction with free grafts and other important keys to consider in the approach

Cristina Rodríguez Prado[1], Ainhoa García-Lliberós[2], María José Gómez[2], Carmen García Navalón[2], Moisés Sánchez[3], Sara Orozco[4], Enrique Zapater[4]

[1]Head and Neck department, General Universitary Hospital of Valencia, [2]Rhinology and Skull Base Surgery, Head and Neck Department, General Universitary Hospital of Valencia, [3]Neurosurgery Department, General Universitary Hospital of Valencia., [4]Head and Neck Department, General Universitary Hospital of Valencia

Skull Base Surgery 1 | ROOM 11 – G10 - Level +1| Monday June 23, 2025

Introduction: Expanded endonasal endoscopic approach in skull base surgery offers significant quality-of-life benefits over traditional techniques. During years, surgeons have developed strategies to reduce this morbidity by minimizing damage to nasal structures. This study aim is to present the results obtained in some patients who underwent a transellar approach, using a free floor mucosal graft along with other measures to reduce morbidity

Methods: This study prospectively analyzed patient´s clinic histories undergoing transellar endoscopic skull base surgery with free floor mucosal grafts and other preservation techniques Patient outcomes were assessed with SNOT-22, olfactory VAS scores and endoscopic evaluations at multiple intervals

Results: 16 patients were included. SNOT-22 and olfactory VAS scores returned to baseline levels by 6 months postoperatively. Both middle turbinates were preserved in 88% of cases, and bilateral rescue flaps were done in 81%. Intraoperative cerebrospinal fluid (CSF) leaks occurred in 50%but postoperative rates were 0%. Endoscopic evaluations showed minimal alteration in sinonasal anatomy with rapid crusting resolution.

Conclusion: The study demonstrates that using free nasal floor grafts with additional preservation techniques promotes faster healing and minimizes sinonasal morbidity, improving patients' quality of life. This approach not only reduced morbidity by preserving nasal structures but also kept other reconstructive options available.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3930

Sinonasal, nasopharyngeal, upper oral and oropharyngeal cavity adenoid cystic carcinoma: an international multi-center retrospective study on 457 patients

Gloria Schiavo[1], Mario Turri-Zanoni[2], Davide Mattavelli[3], Alessandro Vinciguerra[4], Carlo Conti[3], Giacomo Gravante[2], Ester Orlandi[5], Barbara Vischioni[5], Benjamin Verillaud[6], Yunxia Sarah Guo[7], Philippe Herman[6], Ehab Y Hanna[7], Paolo Castelnuovo[2], Piero Nicolai[8], Marco Ferrari[8]

[1]ASST LARIANA - OSPEDALE SANT'ANNA, COMO, [2]UNINSUBRIA, [3]Università DEGLI STUDI DI BRESCIA, [4]ASST LARIANA, OSPEDALE SANT'ANNA, COMO, [5]CNAO, [6]APHP, [7]MD Anderson Cancer Center, [8]UNIPD

Best Abstract Presentation | ROUND TABLE 1 | ROOM 1 - (F1-F2-F3) - Ground Floor | Sunday June22, 2025

INTRODUCTION: The study has the following aims: 1) define the best treatment strategy for patients suffering from adenoid cystic carcinoma (ACC) of the sinonasal tract, nasopharynx, upper-oral and upper-oropharyngeal cavity; 2) identify a new definition of recovery for ACC, given its unique behavior.

MATERIAL AND METHODS: Primary or secondary sinonasal, nasopharyngeal, upper oral and oropharyngeal cavity ACCs treated at the hospitals of Padua, Brescia, Paris, Varese, Houston were included. A pseudonymized database was created to collect patient-, treatment- and follow up-related data. A univariate survival analysis was performed in terms of overall survival (OS), disease-specific, progression- and recurrence-free survival (DSS, PFS, RFS). Local treatment strategies were compared to each-other and to the most relevant prognostic variables. Symptoms burden change after retreatment and cumulative incidence of adverse effects were calculated.

RESULTS: The study included 457 patients. The survival analysis demonstrated the prognostic validity of disease stage, grade, treatment intent, residue, response after treatment and margin status. The multivariate analysis demonstrated that cT, cM and Perzin/Szanto grade are independent prognostic factors. The analysis of symptoms burden change after retreatment demonstrated that, mostly, is higher. The cumulative incidence analysis showed that 40% of patients experienced at least one **G3/G4 event at 120 months.**

CONCLUSIONS: The study demonstrated that: gross total resection w/o adjuvant radiotherapy provides a higher DSS; patients who undergo treatment with a non-curative intent are associated with a worst prognosis; burden of symptoms and toxicity caused by retreatments are considerable despite a limited prognostic gain; local and distant metastases can occur many years after the primary treatment.



3869

Endoscopic Endonasal Surgery of Skull Base Osteoradionecrosis with the Internal Carotid Artery Invaded: Clinical Characteristic and Surgical Strategy

Zhaohui Shi[1]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, Department of Allergy, Naso-Orbital-Maxilla and Skull Base Center, The Third Affiliated Hospital of Sun Yat-sen University, [2]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University

Best Abstract Presentation | SYMPOSIUM 36 | ROOM 1 - (F1-F2-F3) - Ground Floor | Wednesday, June 25, 2025

Objective: This study aims to summarize the clinical characteristics of skull base osteoradionecrosis (ORN) with the internal carotid artery (ICA) involvement and to distill the key surgical techniques that can enhance the protective measures for ICA.

Methods: We conducted a retrospective, observational study over a six-year period from February 2017 to May 2023. We included patients who were diagnosed with osteoradionecrosis with invasion of the internal carotid artery and collected their demographic information, pathology results, complication rates, ect. The goal was the alleviated rate after the surgery and the anatomic considera- tion during the surgery. We compared the verbal rating score (VRS) of headache pre- and post-operation by the Wilcoxon rank-sum test.

Results: A retrospective analysis was conducted on 19 patients diagnosed with ORN, with a mean age of 53.73 yr (range, 32–68 yr). Among them, 17 patients (89.47%) were nasopharyngeal carcinoma (NPC), 1 patient (5.23%) was squamous cell carcinoma of the sphenoid sinus, and 1 patient (5.23%) had adenoid cystic carcinoma. After the surgery, 1 fatality occurred within 2 months, which was attributed to a severe parapharyngeal space infection.1 patient succumbed to ICA rupture two days post-operation. Additionally, 1 patient experienced ORN recurrence 2 years after the initial surgery. The mean follow-up period for the study was 37.47 mo (range 2 −77 mo). The alleviation rate was 89.4%. The results revealed a significant decrease in VRS after the surgery (Z=−3.921, P=0.000). Finally, we summarized clinical evidences of ICA involvement, such as the formation of pseudoaneurysm.

Conclusion: A four-quadrant division of SBORN as a standardized and systematic approach is meaningful to guide surgical intervention for osteoradionecrosis. There are relevant clinical and imaging evidences that can predict the rupture of ICA.



Rhinoplasty 1

4253

Non-Surgical Rhinoplasty: Indications and Avoidance of Complications

Mohsen Naraghi[1]

[1]Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Non-surgical rhinoplasty by the use of soft-tissue fillers to reshape the nose has grown considerably in recent years. The nose is a highly vascular area of the face. Vascular compromise and tissue necrosis are the most distressing complications seen with filler use. The complication rate is increasing with the increasing use of fillers by otolaryngologists. The best management of complications is prevention. Complications should be recognized and managed as early as possible to decrease long-term sequels. Proper knowledge of anatomy, indications, and limitations to using can improve outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4262

Comparison of Preservation versus Structural Rhinoplasty in Deviated Noses

Mohsen Naraghi[1], Amirhossein Babaei[2]

[1]Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery, *[2]Rhinology Research Society*

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Background: Rhinoplasty is a common surgical procedure that aims to correct nasal deformities and improve aesthetic appearance and functional breathing. In deviated noses, surgeons often decide between preservation or structural techniques. This systematic review critically evaluates the existing literature to compare the efficacy, outcomes, and complications of preservation versus structural rhinoplasty, specifically in the context of deviated noses.

Methods: A systematic literature review was performed using search terms ("preservation" OR "structural") AND "deviated nose" AND "rhinoplasty" on PubMed, Cochrane, SCOPUS, and EMBASE databases for studies between January 2000 and December 2023.

Results: There were 16 related studies included in this review. Findings suggest that preservation rhinoplasty generally involves less invasive maneuvers, resulting in potentially quicker recovery times and reduced risk of structural damage. On the other hand, structural rhinoplasty may offer more comprehensive correction of nasal deviations, leading to improved long-term aesthetic and functional outcomes.

Conclusions: In conclusion, the decision between preservation and structural rhinoplasty in deviated noses remains complex and multifaceted. While preservation rhinoplasty may offer advantages in terms of less invasive maneuvers and quicker recovery times, structural rhinoplasty may provide more thorough correction and potentially better long-term outcomes. Ultimately, the choice between these techniques should be based on individual patient characteristics, preferences, and the surgeon's expertise. Further research and clinical studies are needed to understand better the optimal approach for deviated nose correction in rhinoplasty surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4023

Optimising training in septorhinoplasty through collaborative working to ensure learning from long-term outcomes

Tharsika Myuran[1], Ajmal Masood[1]
[1]*North West Anglia Foundation Trust*

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: With annual or biannual movement of residents through rotations, and difficulty in post-op patients receiving long-term post-operative follow up appointments in the national health system, learning from long-term outcomes from septorhinoplasty has become challenging for many trainees in under resourced centres in the UK. We set out to collaborate successive trainees to improve learning from long-term outcomes at our centre. This project presents a unique description of optimising training in septorhinoplasty through the use of collaborative database review long-term.

Methods: A database of rhinoplasty cases was set up so that findings could be corroborated with the pre-op photos and op notes and shared between current trainee, past trainee and discussed together with the trainer. Views of this learning experience and how to improve teaching further also discussed.

Results: In our centre 21 cases to date have been discussed and whilst the 1 week follow ups were consistent for the removal of splints, it was identified that there was inconsistency in the use of PROMS particularly if the follow up was not done by the operating surgeons. Furthermore, long-term follow up needed to be chased highlighting the patient benefit from this training exercise.

Conclusions: In an under-resourced health system with shorter training placements, trainees need to collaborate in order to learn the long-term outcomes of their patients. This is mutually beneficial for trainees, trainers and patients alike and is particularly relevant for procedures such as septorhinoplasty.



4031

Tip onlay graft and columellar strut graft: a valuable combination in nasal tip surgery.

Alessandro Varini[1], Giulia Del Piero[1]
[1]*ENT department, Policlinico Triestino, Trieste, Italy*

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: Nasal tip projection and rotation, and tip support are recognized as critical in nasal aesthetics and function. Tip onlay and columellar strut grafts can manage these parameters. In this study we present our experience with the use in association of these two fundamental grafts in primary rhinoplasty. Details of the technique and analysis of the case series and of the literature are presented.

Materials and methods: A total of 30 consecutive primary closed rhinoplasty patients were included in the study. Pre- and post-operative ROE test and VAS score and standard photographic assessment were documented.Results.Significant improvement with ROE and VAS was found at 1 year. One patient required a revision due to the visibility of a shifted tip graft. No grafts extrusion or infection were noted.

Conclusions: As for other grafts, the tip graft should be used more cautiously in thin-skinned patients. Tip bifidity, dome irregularities and asymmetries can be corrected. Increase in tip rotation in thick-skinned patients can be mainly achieved by grafting. The combination of thick skin and excess fibrofatty tissue with weak lower lateral cartilages is a clear indication for graft augmentation to provide better definition. The columellar strut establishes a foundation for nasal tip refinement by providing tip support, preserving adequate projection and has proved a valuable role in correcting medial crura asymmetry. Among the vast array of grafting techniques described, the combination of these two grafts offers in our experience a versatile and effective way to change nasal tip characteristics.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4191

The Effect of Drainage Cannula Use on Postoperative Periorbital Edema and Ecchymosis in Rhinoplasty Patients

Ozan Çolak[1], Emre Demirel[1], Meryem Çoldur[1], Mehmet Çelebi[1], Özgür Kemal[1]
[1]*Ondokuz Mayıs University Department of Otorhinolaryngology ,Samsun,Turkey*

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Introduction: This prospective, randomized controlled study evaluates the impact of drain usage on postoperative ecchymosis and edema following primary rhinoplasty.

Material-Methods: Seventy-two patients undergoing primary rhinoplasty at Ondokuz Mayıs University were randomly assigned to two groups: 36 patients received a drain, while 36 did not (control group). Patients younger than 18 years, those with sinonasal infections, chronic sinusitis, nasal trauma, or systemic diseases were excluded. All surgeries were performed by the same surgeon under standardized conditions using hypotensive general anesthesia. Postoperative ecchymosis and edema were assessed on days 1, 7, and 28 by two blinded expert examiners using a validated 0–4 scale. Subjective nasal obstruction and cosmetic outcomes were measured preoperatively and on day 28 using the Standardized Cosmesis and Health Nasal Outcomes Survey (SCHNOS). Statistical analyses included Mann-Whitney U tests and linear regression models adjusted for gender.

Results: The drain group exhibited significantly reduced periorbital ecchymosis on day 7 ($p = 0.002$) and edema on days 1 ($p = 0.011$) and 7 ($p < 0.001$). Female patients demonstrated greater susceptibility to postoperative ecchymosis ($p = 0.007$). SCHNOS scores improved significantly postoperatively in both groups; however, no significant difference was observed between groups.

Conclusion: The use of a drain in primary rhinoplasty effectively reduces early postoperative periorbital ecchymosis and edema, particularly on days 1 and 7, without affecting subjective nasal function or cosmetic outcomes. These findings support the selective use of drains to optimize patient recovery.



4251

Septorhinoplasty in The Deviated Noses: The Entire Framework Approach

Mohsen Naraghi[1]

[1]*Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery*

Rhinoplasty 1 | ROOM 12 – G11 - Level +1| Monday June 23, 2025

Background: Establishing stable and long-term results in the correction of the deviated nose has been a nightmare even for experienced surgeons. Most patients have problems both in form and function. Analyzing the underlying anatomy in each case is important to establish the plan of treatment that differs in every case.

Methods: Six hundred seventy selected deviated nose patients underwent different surgical procedures for correction of the deviated nose. More than three fourth of patients had a combination of more than four procedures to correct various aspects of deviation from radix to the tip. All types of deviated noses were operated in one stage with the correction of the pyramid and septum. Proper cuts and resections of cartilage and insertion of resected materials as different types of grafts were the basis of most techniques for correction.

Results: Correction of form and function included restoration of the straight dorsum, reducing asymmetries and providing a functionally patent nasal valve. There was an improvement in breathing and appearance of the nose with varying degrees in our cases. Improvement was more noticeable in patients with multiple procedures to correct the entire framework from the radix to the tip.

Conclusions: The deviated nose is a complex deformity extending from the radix to the tip. Successful surgery is not possible without the correction of tip deformities and asymmetries as an important part of the procedure.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3779

An Overview of Rhinoplasty Practices: European Academy of Facial Plastic Surgery, Collaborative Cross-Sectional Study

Dilen Parmar[1], Diego Sanz[2], Bruno Paulucci[3], Alwyn D'Souza[4], Rishi Mandavia[6], Muhammad Ahmed[7], Veysel Berber[8]

[1]London North West University Healthcare NHS Trust, [2]Miguel Servet University Hospital, Zaragoza, Spain, [3]Royal Free NHS Trust, London, United Kingdom, [4]Department of Otolaryngology, Lewisham and Greenwich NHS Trust UK, London, United Kingdom, [5]Department of ENT, Head and Neck Surgery, London North West University Healthcare NHS Trust, Watford Road, Harrow HA1 3UJ, [6]Department of ENT, Head and Neck Surgery, University College London Hospitals, NHS Trust, London, United Kingdom, [7]Queen Elizabeth Hospital, Birmingham, United Kingdom, [8]Department of Otolaryngology, Ege University, Izmir, Turkey, [9]eafpsjr@gmail.com

Best Abstract Presentation | SYMPOSIUM 27 | ROOM 6 - G1+G2 - Level +1 | Tuesday June 24, 2025

Introduction: Rhinoplasty is a complex and frequently performed facial plastic surgery with varying practices across countries. This study aimed to provide a comprehensive overview of rhinoplasty practices by analysing data from European Academy of Facial Plastic Surgery (EAFPS) members, highlighting surgical approaches, indications, revision rates, and the role of preoperative psychological assessment to inform clinician and patient decision-making.

Materials & Methods: A multicentre cross-sectional study was conducted as per STROBE guidelines. EAFPS members submitted anonymised data on rhinoplasties performed between January 1, 2019 and January 1, 2022. The dataset, covering 41,259 rhinoplasties across 33 countries, included details on primary and secondary surgeries, indications, surgical techniques, revision rates, and psychological assessments. Descriptive statistical analysis was performed.

Results: Of the 41,259 rhinoplasties, 80% were primary, 65% of which used an open approach and 58% addressed both functional and cosmetic concerns. Secondary rhinoplasties constituted 20%, with 56% performed using an open approach. Revision rates were 5% for primary and 1% for secondary surgeries. Preoperative psychological assessments were conducted in only 3% of cases. Common revision indications included dorsal asymmetry, nasal blockage, and dissatisfaction with the nasal tip.

Conclusion: This study, the largest rhinoplasty dataset to date, provides a comprehensive benchmark for global rhinoplasty practices. The findings reveal significant variability in surgical approaches, limited use of psychological assessments, and key causes for revision surgery. These insights underscore the importance of standardised psychological evaluations and highlight the potential of collaborative research to advance rhinology and facial plastic surgery, improve surgical outcomes, and enhance patient satisfaction.



Rhinology – Miscellaneous 2

4078

Effect of Warm Saline Irrigation on Core Body Temperature in Elderly Patients Undergoing Endoscopic Sinus Surgery

Luo Sheng-Dean[1], Wu Ching-Nung[2], Chen Wei-Chih[2], Yang Kai-Shan[3]

[1]Department of Otolaryngology Head Neck Surgery, Kaohsiung Chang Gung Memorial Hospital, *[2]Department of Otolaryngology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine*, *[3]Department of Otolaryngology, Kaohsiung Chang Gung Memorial Hospital, Chang Gung University College of Medicine*

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Warm saline irrigation is widely used in endoscopic sinus surgery (ESS) to reduce intraoperative bleeding and enhance endoscopic visualization. However, its impact on core body temperature (CBT), particularly in the context of Enhanced Recovery After Surgery (ERAS), remains underexplored. Intraoperative hypothermia can impair coagulation, prolong drug metabolism, and delay postoperative recovery, making CBT management crucial, especially in elderly patients.

Materials & Methods: A retrospective analysis was conducted on 818 ESS patients (2017–2022). Propensity score matching was applied to age, gender, and ASA classification. Patients were divided into two groups: cold saline irrigation vs. warm saline irrigation. The primary outcome was intraoperative CBT, reported as median (IQR).

Results: Patients receiving warm saline irrigation had significantly higher intraoperative CBT [35.6°C (35.3–36.0)] compared to those receiving cold saline irrigation [35.4°C (35.1–35.9), p=0.013]. The effect was more pronounced in patients aged ≥65 years.

Conclusion: Warm saline irrigation not only improves surgical visualization but also plays a crucial role in ERAS by mitigating intraoperative hypothermia, particularly in elderly patients. This finding underscores the importance of temperature management strategies to enhance surgical outcomes and postoperative recovery.



4028

Characterisation of bacterial diversity in primary ciliary dyskinesia-related chronic rhinosinusitis

William Tsang[1], Philip Harries[2], Huw Jones[2], Ashok Rokade[2], Andrea Burgess[2], Hasnaa Ismail-Koch[2], Rami Salib[1]

[1]University of Southampton, [2]University Hospital Southampton

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Primary ciliary dyskinesia (PCD) is a genetic disorder manifesting with chronic respiratory and sinonasal infections. There is a paucity of data relating to the upper airway microbiome in adult PCD-related chronic rhinosinusitis (CRS). The adult PCD-related CRS microbiome is relatively uncharted. Clinical decisions are currently based on culture analysis, despite detecting only a fraction of relevant pathogenic bacteria. Better characterisation of the microbiome would enable more effective and targeted treatments in this group of patients.

Methods: Paired nasal swabs from adult PCD patients underwent routine culture and next generation sequencing (16s rRNA). Bacterial composition, alpha and beta diversity metrics were determined. Preliminary data from 30 patients will be presented.

Results: The culture-dependent technique identified Streptococcus and exaggerated the incidence of Pseudomonas. Using 16s RNA analysis, Staphylococcus, Moraxella and Haemophilus were additionally detected as dominant species in the same patients.

Conclusion: Preliminary characterization of the microbial diversity in adult PCD-related CRS using culture and culture-independent molecular techniques points to a polymicrobial aetiology. Culture data in isolation appear to be unrepresentative of the true diversity of the microbial community within samples. This drawback, along with the length of time required to complete the analysis, support the adjunctive use of molecular nonculture-dependent techniques. Our results demonstrate the complex polymicrobial nature of adult PCD-related CRS, which urgently requires further research.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4038

Anatomical considerations for successful balloon sinuplasty

Huw Davies[1], Victoria Evans[1], Benjamin Stew[1]
[1]*Cardiff and Vale University Health Board*

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Balloon sinuplasty (BSP) is a minimally invasive procedure used to treat several sinus pathologies that are refractory to medical therapy, particularly in select patients with single-cell sinus involvement (e.g. maxillary, frontal, or sphenoid sinuses). This technique offers several advantages, including the ability to be performed under local anaesthetic while remaining safe and cost-effective. However, BSP can be technically challenging due to anatomical variations and the inability to modify anatomy easily. Based on our experience performing BSP at a tertiary rhinology centre in the UK, we have developed a list of anatomical considerations (Table 1) that should be assessed both endoscopically and radiologically before listing a patient for BSP. This evaluation facilitates successful interventions and can be easily remembered using the acronym SMURF (Septum, Middle turbinate/Mucosa, Uncinate process, and Recessus Frontalis). Difficulties with BSP can arise during ostial cannulation due to unfavourable anatomy and when stabilizing the balloon during inflation. Each of the three paired single-cell sinuses presents its own challenges for BSP. Cannulation may be impeded by septal deflections, lateralised/pneumatised middle turbinates (MT) or uncinate process, mucosal oedema, and the arrangement of the frontoethmoidal complex. Balloon stabilisation can be particularly challenging when the MT is short (<0 mm). We present a series of radiographic and endoscopic photographs illustrating favourable and unfavourable anatomical variants. BSP can be an effective treatment for sinus dysfunction in select patients. Careful assessment and a thorough understanding of clinical and radiographic anatomy are pivotal to its success. Acronyms such as SMURF may help facilitate this process.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4122

Screening for AIFRS in Onco-Hematologic Patients: The Superiority of Nasal Endoscopy Over Serum Galactomannan

Edwin Tamashiro[1], Andre Luiz Amaral Barbosa[1], Cláudio Penido Campos Junior[2], Wilma Terezinha Anselmo-Lima[1], Fabiana Cardoso Pereira Valera[1]

[1]Department of Ophtalmology, Otorhinolaryngology, and Head and Neck Surgery. , [2]Division of Infectious Diseases, Clinics Hospital of Ribeirao Preto School of Medicine

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Early diagnosis of Acute Invasive Fungal Rhinosinusitis (AIFRS) is crucial for reducing morbidity and mortality in at-risk patients. Galactomannan (GM), a polysaccharide produced by fungi like Aspergillus, is a biomarker for invasive fungal diseases such as pulmonary aspergillosis. However, its role in detecting AIFRS remains unclear. This study evaluates serum GM for AIFRS diagnosis and compares it with nasal endoscopy findings in onco-hematologic patients.

Methods: We conducted a six-year retrospective cohort study of adult patients with onco-hematological risk factors for AIFRS. Serum GM levels (ELISA) were compared with proven AIFRS diagnoses using ROC curve analysis. Nasal endoscopy findings and patient demographics were also assessed.

Results: Of 379 cases, 25 (6.6%) had proven AIFRS, with Aspergillus confirmed in 21. The AUC for GM levels (cut-off 0.5) was 0.634 (95% CI 0.507–0.760, p=0.026), with 56% sensitivity and 71.2% specificity (p=0.004). In contrast, nasal endoscopy findings suggestive of invasive fungal disease (crusting, pallor, necrosis) showed 96% sensitivity and 87.3% specificity (p<0.001).

Conclusions: Serum GM is a poor biomarker for proven AIFRS, whereas nasal endoscopy is a reliable screening tool for at-risk patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4190

Endoscopic Sinus Surgery and Lung Transplantation in Cystic Fibrosis: A Systematic Review and Meta-Analysis

Melis Demirag Evman[1], Omar Alomari[2], Muhammed Edib Mokresh[3], Sinem Nur Ertan[4], Habiba Eyvazova[4], Rumeysa Yegin[4], Beyzanur Guney[4], Cagla Sumeyye Caliskan[4], Riza Serdar Evman[5]

[1]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Otolaryngolgy Head and Neck Surgery Istanbul Turkey, *[2]University of Medical Sciences Hamidiye International School of Medicine*, *[3]University of Medical Sciences Hamidiye Inernational School of Medicine Istanbul Turkey*, *[4]University of Medical Sciences Hamidiye International School of Medicine Istanbul Turkey*, *[5]University of Medical Sciences Sureyyapasa Respiratory Diseases and Thoracic Surgery Training and Research Hospital Istanbul Turkey*

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: Cystic fibrosis (CF) is a genetic disorder that leads to progressive respiratory failure, often necessitating lung transplantation. Post-transplant infections, particularly those caused by Pseudomonas aeruginosa, increase the risk of graft failure. The sinuses serve as bacterial reservoirs, potentially contributing to lung infections. Endoscopic sinus surgery (ESS) has been proposed as a preventive measure to reduce bacterial colonization and improve post-transplant outcomes. This study systematically evaluates the impact of ESS on lung transplantation outcomes in CF patients.

Material&Methods: A systematic review and meta-analysis adhering to PRISMA guidelines was conducted. Databases searched included PubMed, Scopus, Embase, Cochrane, and Web of Science. Studies assessing the role of ESS in CF patients undergoing lung transplantation were included. Data were analyzed using R version 4.3.1, and heterogeneity was assessed using τ^2, I^2, and Q-tests.

Results: The search identified 18 studies meeting the inclusion criteria. The studies encompassed 763 patients (ages 11–57 years), with 664 undergoing lung transplantation. Meta-analysis evealed significant reductions in antibiotic use (SMD= −0.81, p=0.002) and hospital stay duration (SMD= −0.76, p=0.031) with low-to-moderate heterogeneity. SNOT-22 scores and FEV1 showed no significant changes. Infection rates varied, with Pseudomonas aeruginosa being the most common pathogen in BAL (58.1%) and sinus aspirates (52.1%). Significant heterogeneity in infection proportions was observed.

Conclusion: ESS appears to be a beneficial intervention for CF patients undergoing lung transplantation, reducing postoperative infections and improving respiratory function. However, the existing literature is limited, and further high-quality prospective studies are needed to establish standardized protocols and long-term efficacy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4011

Unraveling the snot-22 puzzle in CRSwNP: an exploration of the connection between its items and domains and the step-up therapy

Miriam García Lerma[1], **Blanca Mateos Serrano**[1], Jesús Díez Sebastián[1], Coloma Grau Van Laak[1], Beatriz Arana Fernández[1], Carolina Alfonso Carrillo[1]
[1]*La Paz University Hospital*

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

INTRODUCTION: SNOT-22 questionnaire is criticized for its length and low specificity of some items. Our study aims to assess its relationship with treatment decisions.

MATERIALS AND METHODS: A one-year observational study was conducted reviewing medical records of patients with CRSwNP evaluated at a tertiary care center excluding those who had received oral corticosteroids, surgery, or biologics (step-up therapy) in the last year. SNOT-22 global punctuation and items were collected. Prescribed treatment was registered. Means of the overall score and items of SNOT-22 were compared between patients who underwent step-up therapy and those who did not.Two multivariate logistic regression models for predicting therapeutic attitude were made for SNOT-22 items. ROC curves were built, and AUC was calculated.

RESULTS: A total of 141 patients were included in the study, with a mean age of 55 years and a 2:1 male-to-female ratio. SNOT-22 demonstrated an average punctuation of 33.8 (23.1). The items with the highest values were #21 (“sense of taste/smell”), and #22 (“blockage/congestion of nose”), with values of 2.89/5 and 2.4/5 respectively.Step-up therapy was prescribed on 35% of patients.Item #22 (“blockage/congestion of nose”) had the highest AUC (0.77), followed by #1 (“need to blow nose”, 0.75) and #3 (“runny nose”, 0.74). Items #20 (“embarrassed”), #8 (“dizziness”) and #9 (“ear pain”) did not show a statistically significant AUC. All domains showed a statistically significant AUC concerning their capacity for predicting step-up therapy .The global value of SNOT-22 test demonstrated an AUC of 0.75 (0.67-0.84). Meanwhile, SNOT-8 showed an AUC of 0.77 (0.69-0.86). No statistically significant difference was found between the AUC of both questionnaires.

CONCLUSIONS: Step-up therapy primarily relies on SNOT-22 items related rhinologic symptoms, especially #22. Creating a shorter questionnaire focused on rhinologic symptoms with comparable diagnostic ability would be possible.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4064

Exploring causes for inequities in Rhinology care

Andrew Wood[1]
[1]*The University of Auckland*

Rhinoplasty - Miscellaneous 2 | ROOM 13 – G15 - Level +1| Monday June 23, 2025

Introduction: We have previously described inequities in our provision of Rhinology care, specifically access to clinic appointments, sinus imaging and endoscopic sinus surgery. We wished to explore common processes in Rhinology, specifically the use of the SNOT-22 tool and the use of patient information pamphlets and whether they have a negative impact on equity.

Method: We present a scoping review examining the impact of ethnicity on SNOT-22 scores and data from our prospective database examining SNOT-22 scores in consecutive new Rhinology patients presenting to our clinic over an 18 month period, analysed with respect to ethnicity, deprivation and rurality. We also studied the readability of the Royal Australasian College of Surgeons patient information leaflets for Otolaryngology.

Results: We found a single prior study that examined SNOT-22 scores with regards to ethnicity but evidence from other fields of medicine imply that the use of quality of life tools in treatment decisions may disadvantage indigenous and minority populations. In our population, the mean SNOT-22 scores by ethnicity were: European 56.5, Māori 61.8, Asian 62.2, Pacific 74.5 ($p>0.05$). The Flesch Reading Ease score for our patient information leaflets was in the “difficult” range with the mean reading age being 3 years above recommended levels.

Conclusions: Recognizing the sampling bias, we have not found evidence to support our hypothesis that use of the SNOT-22 score in treatment decisions disadvantages indigenous and minority groups. However, use of our patient information leaflets discriminate against patients with below average literacy skills.



Skull Base Surgery 2

3931

Classification of Postradiation Nasopharyngeal and Skull Base Necrosis and Selection of Repair and Reconstruction Options

Zhaohui Shi[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University,*

Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Objective: This study aims to establish a clinical classification system for nasopharyngeal and skull base radionecrosis, providing supportive evidence and insights for debridement surgical procedures, selection of repair strategies, and prognosis assessment. Methods Based on anatomical, clinical treatment, and follow-up data, this paper evaluates the extent of necrosis in patients from a three-dimensional perspective and elaborates on the classification of nasopharyngeal and skull base osteoradionecrosis. Comprehensive judgments are made across three dimensions: length, depth, and width. With the aid of auxiliary examinations such as CTA and MRI, the osteoradionecrosis is classified, and corresponding repair and reconstruction methods are selected.

Results In terms of length: L1 is confined to the nasopharynx; L2 extends beyond the nasopharynx to involve the oropharynx. In terms of depth: D1 represents focal lesions in the mucous membrane and submucosa of the nasopharynx, partially involving the longus capitis muscle and superficial layers; D2 involves necrosis of muscles, ligaments, and Pharyngobasilar Fasciae (PBF), with bone involvement but without dural involvement; D3 involves the dura mater, posing a risk of cerebrospinal fluid leakage or intracranial infection. In terms of width: W1 affects the midline skull base area, located medial to the foramen lacerum and bilateral vidian nerve; W2 involves the paraclival internal carotid artery and/or the parapharyngeal space and/or the Eustachian tube area, without involving the parapharyngeal internal carotid artery; W3 spreads outward from the parapharyngeal space to involve the unilateral parapharyngeal internal carotid artery; W4 involves bilateral parapharyngeal internal carotid arteries.

Conclusion: corresponding surgical and repair strategies based on different grades can be selected to improve the surgical success rate for nasopharyngeal and skull base osteoradionecrosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3888

Endoscopic Endonasal Approach For Clival Chordoma Resection: A Two-Case Study

Joana Guincho[1], Luís Baptista[1], Beatriz Rodrigues[1], Carlota Sousa[1], Filipe Correia[1], Luís Castelhano[1], Rui Cabral[1], Tiago Colaço[1], Beatriz Lança[1], Pedro Escada[1]

[1]Unidade Local de Saúde Lisboa Ocidental - Hospital Egas Moniz, [2]NOVA Medical School, [3]Introduction: Despite advancements in various surgical techniques, the treatment of clival tumors and their involvement of surrounding structures continue to pose significant challenges. Objective: To highlight the effectiveness of the endoscopic endonasal approach (EEA) in managing clival tumors. Methods and Materials: Two patients diagnosed with clival chordoma were evaluated using preoperative CT and MRI. The diagnosis was confirmed by biopsy under local anesthesia. Surgery was carried out by a multidi

Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Despite advancements in various surgical techniques, the treatment of clival tumors and their involvement of surrounding structures continue to pose significant challenges. Objective: To highlight the effectiveness of the endoscopic endonasal approach (EEA) in managing clival tumors.

Methods and Materials: Two patients diagnosed with clival chordoma were evaluated using preoperative CT and MRI. The diagnosis was confirmed by biopsy under local anesthesia. Surgery was carried out by a multidisciplinary team, including ENT and neurosurgical surgeons. Preoperative imaging and surgical photographs are presented.

Results: Both patients underwent bilateral Full-House FESS. A nasoseptal flap was elevated and a posterior septectomy was performed, complete drilling of the sphenoid rostrum and transclival approach were performed. The major vascular structures' location was confirmed using neuronavigation and Doppler. In the first case, due to the tumor's location, a left transpterygoid approach was required, and the dura-mater was opened. It was decided intraoperatively that residual tumor would remain in the left cavernous sinus due to the challenging dissection of the dural plane. The skull base defect was reconstructed using an underlay-overlay technique with Duragen® and the mucosal flap, respectively. Surgicel® and fibrine glue were applied over the reconstruction site. Nasopore® and Merocel® were used for packing and removed on the 7th postoperative day.

Conclusion: The EEA offers superior access and visualization, reducing morbidity and complications compared to transcranial methods. Technological advances such as neuronavigation equipment and Doppler probes are contributing to help surgeons achieve better resection margins with lesser risk for vital structures.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3898

Reviewing the role of weight loss in patients with high Body Mass Index (BMI) and raised Idiopathic Intracranial Hypertension (IIH) on the outcomes of CSF leak repairs.

Faaizah Chishty[1], **Zara Shaida**[2], Talisa Ross[3], Catherine Rennie[1]

[1]Imperial College Healthcare NHS Trust, *[2]University College London Hospitals NHS Foundation Trust*, *[3]London North West Healthcare NHS Trust*

Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: This case series reviews the impact of weight loss on success of endoscopic anterior skull base repair in patients with Idiopathic intracranial hypertension (IIH). IIH is a known risk factor for patients who develop a cerebrospinal fluid (CSF) leak. Patients with IIH will like to have a high Body Mass Index (BMI). We look to deduce the result of weight look on successful CSF repairs.

Case Study: Through retrospective review in our tertiary anterior skull base unit, four patients with raised BMI and IIH, as diagnosed by our neurology colleagues, were all offered endoscopic CSF leak repair.

Results: The patients were managed by a multi-disciplinary team (MDT) approach, with all patients referred to weight loss services. Through the bariatric services or the patient's general practitioner, the patients were counselled on weight loss and some patients started on GLP-1 agonists. Some patients were offered gastric sleeve operations. After CSF repair surgery and weight loss, patients reported a reduction or resolution of symptoms.

Conclusion: There are currently no clear guidelines on the role of weight loss management in patients with IIH and CSF leak, whilst weight loss strategies are recognised in treating IIH. Weight loss strategies prior to primary CSF leak repair should be considered to optimise success and reduce the risk of revision surgery. Our skull base unit recommend deferring surgery until weight has been optimised.



3900

Endoscopic debridement for post-irradiation nasopharyngeal osteonecrosis in patients with history of nasopharyngeal carcinoma – a treatment protocol and retrospective review

Shi Yeung Ho[1], Wing Kay Katherine Lai[1]
[1]*Queen Mary Hospital, Hong Kong*

Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Post-irradiation nasopharyngeal osteoradionecrosis is a known and yet serious complication that can arise after irradiation for nasopharyngeal carcinoma patients. It is prevalent in southern China and South-East Asia given the high prevalence of nasopharyngeal carcinoma with radiotherapy as primary treatment modality. PRNN can affect patient's quality of life and potentially jeopardize patient's survival. With the advent of endoscopic technique, we have developed a treatment protocol for patients with PRNN with endoscopic debridement and nasoseptal flap following with a course of systemic and topical antibiotics treatment. In this retrospective review, we evaluate the efficacy and safety of our treatment protocol in patients with PRNN in our tertiary referral center.

Methods: From January 2019 to December 2023, complete medical records of patients diagnosed with PRNN in our department were reviewed. The treatment comprised of endoscopic debridement with nasoseptal flap reconstruction, then followed by period of systemic and topical antibiotics treatment. The duration is guided by reassessment imaging result.

Results: From January 2019 to December 2023, a total of 16 patients who had been diagnosed with PRNN had undergone treatment. The mean latency from time of irradiation to symptom onset was 15.2 years. All patients had undergone endoscopic debridement with nasoseptal flap as treatment. Mean duration of antibiotics after treatment was 9.84 weeks. 81.3% (13/16) of patients are asymptomatic after operation. The epithelialization rate after operation was 68.8% (11/16). 93.6% (15/16) of patients showed resolution of collection on reassessment imaging examination. No rupture of internal carotid artery was noted in any of the patients in the cohort. The survival was at 100% at an average 20 months of follow up.

Conclusions: Endoscopic debridement for nasopharyngeal osteoradionecrosis demonstrates good efficacy in treatment of patients with nasopharyngeal osteor



3970

Advancements in Skull Base Reconstruction: A Retrospective Analysis of Complication Management in Endoscopic Surgery (2018–2024)

Marcel Marjanovic Kavanagh[1], Vjerislav Peterković[2], Hrvoje Barić[2], Goran Mrak[2]

[1]Department of ENT, Head nad Neck Surgery, KBC Zagreb, *[2]Department of Neurosurgery, KBC Zagreb*

Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction (Background & Aim): Endoscopic skull base surgery has evolved significantly, with reconstruction playing a key role in minimizing postoperative complications, particularly cerebrospinal fluid (CSF) leaks. As a tertiary referral center, we aim to present our experience in managing complications, with an emphasis on reconstructive techniques and their impact on surgical outcomes.

Material & Methods: A retrospective analysis was conducted on 314 patients who underwent endoscopic endonasal skull base surgery between 2018 and 2024. The study focused on intraoperative CSF leak classification and postoperative outcomes. Reconstruction was performed using nasoseptal flaps, fascia lata, pericranial flaps, and fat grafts. Recently, temporal fascia has also been incorporated into our reconstructive approach, with preliminary findings suggesting a potential benefit in select cases.

Results: Among 314 patients, 120 (38.2%) had intraoperative CSF leaks, classified as grade I (40%), grade II (30%), and grade III (30%). Postoperative CSF leaks were observed in 13 cases (4.1%). A multilayered reconstruction approach has proven effective in reducing postoperative complications, particularly in high-risk cases.

Conclusions: Comprehensive skull base reconstruction is essential for optimizing outcomes following endoscopic surgery. Our experience underscores the importance of individualized reconstructive strategies, including pericranial and temporal fascia grafts, to improve surgical success. Further studies are needed to validate the long-term impact of specific reconstructive materials on postoperative CSF leak rates.



3978

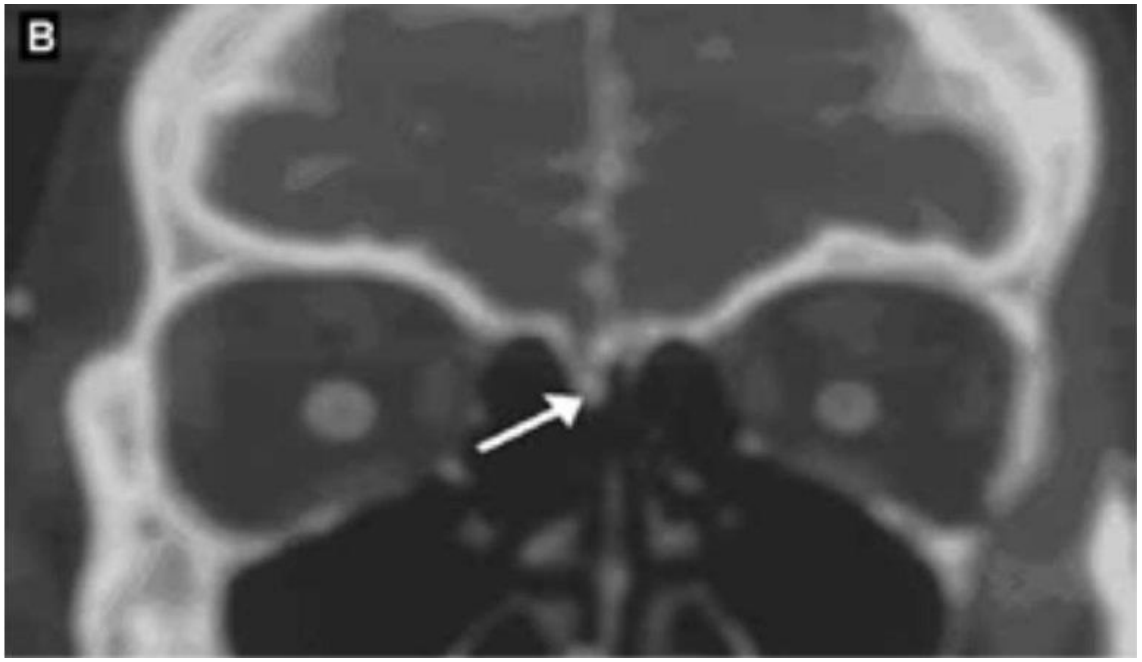
Spontaneous cerebrospinal fluid (CSF) rhinorrhea poses a major challenge to rhinologists. Much controversy attends its cause, pathophysiology, management, and prognosis. It has been suggested that endoscopic placement of a septal graft with a middle turbin

Sevki Elmoursi[1]

[1]*Al-Mansoura University, Egypt*

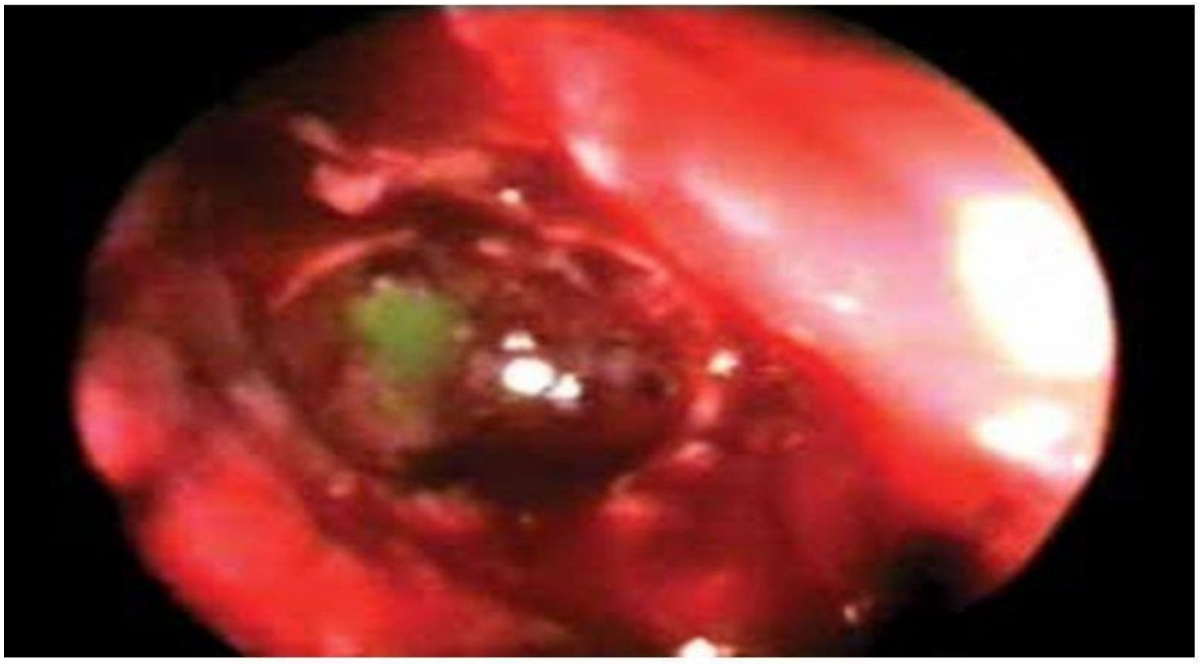
Skull Base Surgery 2 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Spontaneous cerebrospinal fluid (CSF) rhinorrhea poses a major challenge to rhinologists. Much controversy attends its cause, pathophysiology, management, and prognosis. It has been suggested that endoscopic placement of a septal graft with a middle turbinate rotational flap may represent the ideal approach to closing skull base defects. We conducted a retrospective chart review to compile the results of this approach in 31 patients with spontaneous CSF rhinorrhea—22 women and 9 men, aged 18 to 67 years (mean 38.5 ± 8.96) at diagnosis. After one surgery, success had been achieved in 27 of these patients (87.1%). The remaining 4 patients underwent a second surgery, and 2 of them experienced a successful closure. In the remaining 2 patients, a third surgery was still unsuccess- ful, and they were referred to the neurosurgical team for a shunt procedure. Thus, the overall success rate with the septal graft and a middle turbinate rotational flap was 93.5% (29/31). Septal grafts and middle turbinate flaps are easy to harvest and easy to place. Accurate localization of the defect, meticulous surgical technique, and cerebral dehydrating measures may improve outcomes. Further study of spontaneous CSF rhinorrhea to better evaluate its pathophysiology and prognostic factors is warranted.




ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary


A





Acute Rhinosinusitis –Non-Allergic Rhinitis

3744

The effectiveness of active paranasal sinus drainage in acute bacterial rhinosinusitis

Sergey Gorbunov[1], Yuri Rusetsky[2]

[1]Department of head and neck surgery, Ilyinskaya Hospital, Moscow region, Russia; Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia, *[2]Department of otorhinolaryngology, Central State Medical Academy, Moscow, Russia*

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Given the pathogenesis of acute bacterial rhinosinusitis (ABRS), active drainage of the paranasal sinuses (PNS) may be a beneficial adjunct to antibiotic therapy. This study aimed to evaluate the effectiveness of active PNS drainage as a treatment option in ABRS.

Material & Methods: Adult patients with ABRS were divided into four groups of 50 patients each (n=200). All groups received antibiotics, nasal irrigation, and decongestants. Additionally, three groups underwent specific procedures: bilateral nasal catheter procedure (NCP), antral puncture (AP), or the Proetz procedure (PP). Quality of life, nasal endoscopy results, and tolerance to the procedures were assessed.

Results: Both NCP and AP significantly reduced disease severity, as measured by the SNOT-16 scale and nasal endoscopy findings, on days 5–6 compared to antibiotics and PP ($p<0.05$). However, long-term results did not differ significantly between the groups ($p>0.05$). The odds ratio for recovery on days 10–14 was 1.21 (95% CI [0.51; 2.85]), ($p>0.05$) for the NCP and AP groups. Facial pain decreased more rapidly 30 minutes after the procedure in the NCP and AP groups compared to the antibiotics and PP groups ($p<0.05$). The median pain score during the procedure was 2.0 [1.0; 3.0] points in the NCP and AP groups, and 0.0 [0.0; 0.0] in the PP group.

Conclusion: Given the modest effectiveness, active drainage in ABRS should be considered primarily in cases where facial pain is present.



3822

The role of maxillary sinus puncture in the treatment of acute rhinosinusitis. A randomized, prospective study

Marie Lundberg[1], Maija Ylivuori[2], Maija Hytönen[1], Risto Roine[3], Harri Sintonen[4], Karin Blomgren[5], Paula Virkkula[6]

[1]Department of Otorhinolaryngology – Head and Neck Surgery, Helsinki University Hospital and University of Helsinki, Helsinki, Finland, [2]Department of Otorhinolaryngology – Head and Neck Surgery, Helsinki University Hospital, University of Helsinki, and Aava medical center, Helsinki, Finland, [3]University of Helsinki and Helsinki University Hospital, Helsinki, and Department of Health and Social Management, University of Eastern Finland, Kuopio, Finland, [4]Department of Public Health, University of Helsinki, Helsinki, Finland, [5]Suomen Terveystalo, Helsinki, Finland, [6]Helsinki University Hospital

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Acute rhinosinusitis (ARS) is a common condition with an annual prevalence of 6-18%, typically relieved with symptomatic treatment, intranasal corticosteroids, and antibiotics. Maxillary sinus puncture (MSP) was once the gold standard for ARS treatment, but its use has declined due to limited evidence. This study aimed to determine the benefits of MSP in ARS patients.

Materials and methods: In this randomized trial, 74 patients with mild to moderate ARS were treated with fluticasone furoate, doxycycline, and paracetamol. In addition, half of the patients underwent MSP. Symptoms and quality of life were monitored daily over a two-week period, with a follow-up survey conducted six months later.

Results: The two treatment schemes did not render any statistical differences in SNOT-22 score (MSP vs. medical group at start/ day 7/ day 14/ 6 months: 41.6/ 20.8/ 15.4/ 11.8 and 43.8/ 21.9/ 15.8/ 11.0, respectively) or generic QoL questionnaire 15D scores. The mean VAS scores for nasal blockage were similar at the start but significantly lower in the MSP group on days 2–4, with this trend continuing until day 11. Similarly, VAS scores for olfaction and overall nasal symptoms were significantly lower in the MSP group during the early recovery, compared to the medication group.

Conclusion: In patients with mild to moderate ARS symptoms, medication alone effectively alleviates symptoms and improves Health-related QoL within a week. Further research is needed to assess MSP's efficacy in severe ARS



4385

Clinical outcomes of severe rhinosinusitis complicated with cavernous sinus syndrome

Fang-Wei Lin[1], Yung-Hsuan Lee[1], Liang-Chun Shih[1]
[1]*Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University Hospital, Taichung, Taiwan (R.O.C.)*

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Various diseases involving the cavernous sinus can cause a condition called cavernous sinus syndrome (CSS), which is characterized by ophthalmoplegia or sensory deficits over the face resulting from the compression effect of internal structures. While tumor compression is the most reported cause of CSS, statistical data on CSS caused by infections are limited. Its risk factors, treatment methods, and clinical outcomes are not well-documented.In our study, we reviewed the data of patients admitted to a tertiary medical center from 2015 to 2022 with a diagnosis of acute and chronic sinusitis and at least one diagnostic code for CSS symptoms. We manually reviewed whether patients were involved in two or more of the following cranial nerves (CN): CN III, CN IV, CN V, or CN VI, or at least one of these nerves with a neuroimaging-confirmed lesion in the cavernous sinus.



4408

Histopathological Characterization of Recurrent Acute Rhinosinusitis: Comparative Analysis of Fibrosis, Inflammation, and Vascularization

Avraham Abergel[1], **Hen Chaushu**[1], Ran Bilaus[1], Narin Nard Carmel Neiderman[1], Liyona Kampel[1], Nidal Muhanna[1], Forsan Jahshan[1]

[1]*Tel Aviv Sourasky Medical Center*

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Recurrent acute rhinosinusitis (RARS) is defined as four or more episodes of acute sinusitis per year, separated by symptom-free intervals. Unlike chronic rhinosinusitis with polyps, RARS remains poorly understood at the tissue level. While clinical management is well-documented, little is known about its underlying histopathological changes. This study examines fibrosis and inflammatory pathways in RARS to better understand its pathophysiology and potential treatment implications.

Materials and Methods: In this prospective study, sinonasal tissue samples were collected from RARS patients undergoing surgery and controls with no sinonasal disease. Histological analysis included fibrosis (Masson's trichrome), neovascularization (CD-31 staining), basement membrane thickness, inflammation degree, and inflammatory cell types.

Results: Thirteen RARS samples and six controls were analyzed. RARS samples exhibited increased fibrosis, neovascularization, and basement membrane thickening, suggesting chronic inflammation-induced remodeling. Inflammatory markers and inflammatory cell infiltration were significantly elevated compared to controls.

Conclusion: This study is the first to characterize histopathological changes in RARS. Our findings suggest that persistent inflammation and tissue remodeling contribute to disease recurrence. Understanding these mechanisms may support earlier surgical intervention to reduce infections and improve patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3624

Clinical utility of Th2-related markers for local allergic rhinitis: A meta-analysis and adjusted indirect comparison of diagnostic test accuracy

Minh Hoang[1], Kachorn Seresirikachorn[2], Wirach Chitsuthipakorn[3], Kornkiat Snidvongs[2]

[1]Department of Otolaryngology, Hue University of Medicine and Pharmacy, Hue University, Hue, Vietnam, *[2]Department of Otolaryngology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand*, *[3]Center of Excellence in Otolaryngology-Head & Neck Surgery, Rajavithi Hospital, Bangkok, Thailand*

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Th2-related biomarkers may replace nasal provocation test (NPT) as the diagnostic tool for local allergic rhinitis (LAR). This study seeks to assess the clinical utility of these markers and rank their diagnostic accuracy for LAR.

Materials and Methods: Systematic searches were conducted across five electronic databases. Pooled outcomes, including sensitivity, specificity, positive likelihood ratio (PLR), negative likelihood ratio (NLR), and diagnostic odds ratio (DOR), were calculated. Relative diagnostic outcomes with a 95% confidence interval between index tests were computed using the indirect comparison of modalities.

Results: Twenty-one studies met the inclusion criteria. Nasal eosinophilia detected through nasal cytology had the highest sensitivity (0.69) but had the lowest specificity (0.56). Nasal-specific IgE (nsIgE) had the lowest sensitivity (0.48) but the highest specificity (1.00). The basophil activation test (BAT) had a sensitivity of 0.56 and a specificity of 0.94. Among the three index tests, nsIgE ranked the highest for PLR and DOR, while BAT ranked the lowest for NLR. BAT and nsIgE had significantly higher sensitivity values compared to nasal eosinophilia in screening LAR with indirect-comparison analysis.

Conclusion: None of the existing Th2-related cytological and biological markers can be used as a replacement for NPT in diagnosing LAR

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3859

Effect of Platelet Rich Plasma Injection in Patients with Atrophic Rhinitis: A Systematic Review

Ibrahem Erwe[1]

[1]Otorhinolaryngology, Head and Neck department, Aseer Central Hospital, Aseer region, Abha City. Saudi Arabia

Acute Rhinosinusitis – Non-Allergic Rhinitis | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

INTRODUCTION: Atrophic rhinitis (AR) is a chronic condition characterized by mucosal atrophy, crusting, and impaired mucociliary clearance. The pathophysiology is based on the destruction of the ciliated epithelium and mucosal glands. Current treatments are mainly palliative, with no focus on tissue regeneration. Platelet-rich plasma (PRP) has gained attention for its regenerative properties, In recent years, regenerative therapies, such as Platelet-Rich Plasma (PRP), have been considered a possible solution for AR because it encourages tissue repair and regeneration (8).

AIM: Does PRP improve nasal symptoms? Enhance mucociliary clearance? Impact of PRP on biochemical markers? And are there any adverse effect of PRP?

MATERIAL & METHODS: The present systematic review was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement.the literature was searched for relevant studies. PubMed, Cochrane Library, Embase, and Web of Science were used to search for the articles.

RESULTS: The most highlighted outcome in the reviewed studies is the reduction of nasal symptoms among patients who underwent PRP therapy. Mucociliary clearance, measured using Saccharine Transit Time and was observed improvement. PRP treatment increased the arginase level, indicating better regenerative in the nasal mucosa. The Nasal Obstruction Symptom Evaluation was reported in two of the studies, and both revealed significant improvement after the treatment of PRP.

CONCLUSION:PRP affects nasal symptoms, which is evident by the reduction of SNOT and NOSE scores, mucociliary clearance, and biochemical markers. However, several limitations, such as sample size, follow-up duration, and outcomes heterogeneity, should be considered in future studies.





CRS – Biologics 3

4254

Correlation between total IgE levels and blood eosinophils count with disease control and severity in chronic rhinosinusitis with nasal polyps

Leandro Maria D'Auria[1], Eugenio De Corso[2], Rodolfo Francesco Mastrapasqua[3], Claudio Montuori[1], Marco Corbo[1], Stefano Settimi[1], Elena Cantone[4], Carlotta Pipolo[5], Giancarlo Ottaviano[7], Ernesto Pasquini[8], Sara Torretta[9], Daniela Lucidi[10], Silvia Baroni[11], Jacopo Galli[12]

[1]Department of Head-Neck and Sensory Organs; Catholic University of Sacred Heart, Rome, Italy. , [2]Otorhinolaryngology Unit, A. Gemelli University Hospital Foundation IRCCS, Rome, Italy., [3]ENT Department, Rivoli Hospital, ASL TO3, 10098 Rivoli, Italy., [4]Department of Neuroscience, Reproductive Sciences and Dentistry, University of Naples "Federico II", Naples, Italy., [5]Department of Health Sciences, Università degli Studi di Milano, Milan, Italy., [6]Department of Neuroscience, Reproductive Sciences and Dentistry, University of Naples , [7]Otolaryngology Section, Department of Neurosciences DNS, University of Padua, Padua, Italy., [8]ENT Unit, Bellaria Hospital, AUSL Bologna, 40139 Bologna, Italy., [9]Department of Otorhinolaryngology and Head and Neck Surgery, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy., [10]Otorhinolaryngology Head and Neck Surgery Department, University Hospital of Modena, Modena, Italy., [11]Unit of Chemistry, Biochemistry and Clinical Molecular Biology, Department of Laboratory and Hematological Sciences, Fondazione Policlinico Universitario A. Gemelli IRCCS, Catholic University of Sacred Heart, Rome, Italy., [12]2. Department of Head-Neck and Sensory Organs; Catholic University of Sacred Heart, Rome, Italy.

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Background: CRSwNP may have an heterogeneous response to medical/surgical treatments based on endotypes. Blood eosinophil count and total IgE levels has been suggested as useful in clinical definition of type-2 inflammation, nevertheless their role in term of definition of severity of the disease is still subject of debate. The aim of our study was to verify the correlation between blood eosinophil count and total IgE levels with parameters of severity of the disease.

Materials & Methods: This was a multicentric observational case-control study including 326 patients (female n=108, mean age:51,9) with diffuse CRSwNP consecutively enrolled at six Italian rhinologic centers. We distinguished 2 groups of patients: severe uncontrolled patients basing the EPOS criteria (group A, 176 patients) and patients that did not fit EPOS 2020 criteria for biologic treatment (group B, 150 patients). We compared blood eosinophil count and total IgE levels in the two groups.

Results: In group A was higher the mean number of previous surgery (2,0 vs 1,2) and mean number of brief cycles in the last year (3,5 vs 1,0). Group A had also a significant higher median VAS for nasal symptoms and SNOT 22 scores (48,0+12,0 vs 30,6+16.1). We observed higher mean levels of blood eosinophil count (569,7+335,8 versus 511,2+318,8 cell/microliter, p<0.001) and total IgE levels (354,1+467,1 UI/L vs 269,6+187,1 UI/L, p<0.001) in group A compared to group B

Conclusions: Our data suggest that total IgE levels and blood eosinophil count may be helpful to identify severe patients since they're related to the risk of uncontrolled disease.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4303

Multi-Centric Real-World Effectiveness of Mepolizumab in severe Chronic Rhinosinusitis with Nasal Polyps in Germany

Friederike Bärhold[1], Jan Hagemann[2], Ludger Klimek[1], Patrick Huber[3], Moritz Gröger[4], Andreas Loth[5], Benjamin Philipp Ernst[5], Caroline Beutner[6], Tobias Dombrowski[7], Ulrike Förster-Ruhrmann[8], Heidi Olze[8], Mandy Cuevas[9], Nadine Gunder[9], Juana Malanda[10], Martin Laudien[10], Sven Becker[11]

[1]Center for Rhinology and Allergology, Wiesbaden, Germany, *[2]Center for Rhinology and Allergology Wiesbaden, Hesse, Germany*, *[3]Department of Otorhinolaryngology, Head and Neck Surgery, Ludwig-Maximilian-University, Germany*, *[4]Department of Otorhinolaryngology, Head and Neck Surgery, Ludwig-Maximilian-University, Munich, Germany*, *[5]Department of Otorhinolarygology, Goethe University Frankfurt am Main, Frankfurt am Main, Germany*, *[6]Department of Dermatology, Venereology and Allergology, University Medical Center Göttingen, Göttingen, Germany*, *[7]Department of Otolaryngology, University Medical Center Georg-August-University, Göttingen, Germany*, *[8]Department of Otorhinolaryngology, Charité-Universitätsmedizin, Berlin, Germany*, *[9]Department of Otolaryngology, Head and Neck Surgery, University Hospital Carl Gustav Carus, Technical University of Dresden, Dresden, Germany*, *[10]Department of Otorhinolaryngology, Head and Neck Surgery, Kiel University, University Medical Centre Schleswig-Holstein, Kiel, Germany*, *[11]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Tübingen, Tübingen, Germany*

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) is a chronic condition affecting approximately 11% of the population worldwide. Within the last years, monoclonal antibodies (biologicals) have revolutionized the treatment of CRSwNP and significantly improved symptom control in otherwise refractory cases. The effectiveness and safety of the biological Mepolizumab, an IL-5 receptor antibody, has not yet been investigated extensively. This multi-centric study assesses its impact on a large German patient cohort.

Material and Methods: In this retrospective multi-centric study, patients with the diagnosis of severe CRSwNP treated with Mepolizumab by German tertiary referral centers were included. Data were collected retrospectively from patient files. The change from baseline regarding patient reported symptom control, serum biomarkers, polyp size, and smell were analysed over a course of up to 30 months.

Results: 96 patients from 8 tertiary treatment centers were included, 36.5% female, with a mean age of 54.1±14.3 years. Patient reported outcome measures (SNOT22: -16.8±23.1, p=<0.001; VAS: -2.2±3.3, p=<0.001), smell (sniffin'sticks score: +2.1±4.7, p=<0.001), and polyp score (-0.68±1.1, p=<0.001) improved significantly within 6 months after treatment initiation or switch from a different biological to Mepolizumab. 13.5% of patients reported adverse events, none of which were severe.

Conclusions: Our real-world data show a sustained therapeutic effect and safety of Mepolizumab in CRSwNP, regardless of prior treatment with different type-2 biologicals. This study is the second largest real-world cohort to date depicting realistic treatment and disease situations, confirming a broad range of indication for Mepolizumab in severe CRSwNP.



4320

Socioeconomic and Demographic Influences on Biologic Treatment Outcomes in patients with Chronic Rhinosinusitis

Ameen Biadsee, Tomer Bolder, Firas Kassem, Dafna Gernshbel-Milk, Itamar Shenfeld, Ohad Regev

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Background: Socioeconomic and demographic factors significantly impact healthcare outcomes. This study examines their influence on baseline symptom severity and quality of life (QOL) before and after monoclonal antibody therapy for chronic rhinosinusitis (CRS).

Methodology: This retrospective study included patients treated with monoclonal antibodies for recalcitrant CRS from 1/2020–1/2024. Socioeconomic and demographic data, alongside Meltzer polyp and SNOT-22 scores, were analyzed pre/post-treatment.

Results: Forty patients (21 males, 19 females; mean age 50.4±12.1) were included. The mean baseline SNOT-22 score was 69.0±15.8, while the median Meltzer score was 3 (interquartile range: 2–3.75). At 16-week follow-up, these scores improved to 33.8±20.5 and 1 (IQR: 0–2), respectively. Low-income patients had worse baseline SNOT-22 scores (78.6 vs. 68.4 vs. 57.1, p=0.011) but showed the greatest improvement (ΔSNOT-22, 49.4 vs. 36.7 vs. 20.8, p=0.007). Although no significant differences were observed in follow-up SNOT-22 scores between income groups, a positive correlation was found between income percentile and SNOT-22 scores (r=0.361, p=0.026). Low-income patients demonstrated better clinical outcomes and the most significant improvement after biological treatment (p=0.007).

Conclusions: Low-income patients exhibited worse baseline symptoms but the greatest improvement in QOL following biologic treatment. Recognizing socioeconomic factors can enhance the effectiveness of biologic therapies in CRS.



4226

Early Comparative Effectiveness of Dupilumab and Mepolizumab in Patients with Uncontrolled Primary Diffuse Type 2 Chronic Rhinosinusitis

Tommaso Saccardo[1], Giuseppe Roccuzzo[1], Giancarlo Ottaviano[1]
[1]*Department of Neurosciences, Otolaryngology Section, University of Padova, Padova, Italy*

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a type 2 inflammatory disease causing significant morbidity. Biologics such as dupilumab (anti-IL-4Ra) and mepolizumab (anti-IL-5) are effective treatments; however, comparative real-world data remain limited. This study evaluates their effectiveness over the first six months in patients with severe uncontrolled CRSwNP.

Methods: A retrospective analysis was conducted on 85 CRSwNP patients treated at Padova University Hospital (58 dupilumab, 27 mepolizumab). Patient-reported (SNOT-22, VAS scores) and clinician-reported (NPS, SSIT, PNIF) outcomes were assessed at baseline (T0), one month (T1), three months (T2), and six months (T3).

Results: Dupilumab showed a rapid and significant improvement in all assessed PROMs and CROMs ($p<0.001$), with a marked reduction in nasal polyp size and superior early olfactory recovery. By six months, 17% of dupilumab-treated patients achieved normosmia versus 7% in the mepolizumab group. Mepolizumab improved most outcomes except VAS-smell but significantly reduced blood eosinophil counts ($p<0.001$), whereas dupilumab had no significant effect. According to EUFOREA 2023 criteria, 70% of dupilumab-treated patients had a moderate to excellent response versus 37% in the mepolizumab group.

Conclusions: Both biologics are effective for CRSwNP, but their efficacy profiles differ. Dupilumab provides faster olfactory and nasal polyp improvements. Personalized biologic selection is essential, and further studies are needed to define long-term outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4236

Correlation Between Vas-Smell And Sniffin' Sticks In Chronic Rhinosinusitis With Nasal Polyps Treated With Biological Treatment

Cláudia Geraldes[1], Beatriz Nicolau[1], Tiago Velada[1], Jorge Mexia[1], Susana Pereira[1], Herédio Sousa[1]
[1]*Unidade Local de Saúde de São José*

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

INTRODUCTION: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a chronic inflammatory disease with predominant Th2 response. Hyposmia/anosmia are common symptoms due to inflammation of the olfactory mucosa and airflow changes in the olfactory cleft. Biological treatment, such as dupilumab and mepolizumab, have proven effectiveness in managing this condition, though their impact on olfaction is not yet fully understood. In our protocol, olfactory function is assessed subjectively using the visual analogue scale (VAS) for smell and objectively using the Sniffin' Sticks (SS). This study aims to evaluate the correlation between VAS-smell and SS in patients with CRSwNP treated with biologicals.

MATERIALS & METHODS: Retrospective observational study of patients with CRSwNP treated with biologics at a tertiary hospital. Patients were assessed for VAS-smell and SS (Threshold, Discrimination, Identification) at weeks 0, 4, 16 and 52 of treatment. These variables were compared.

RESULTS: A total of 23 patients were included, with 10 women and 13 men, and a mean age of 54,2 years. 16 were treated with dupilumab and 7 with mepolizumab. The mean VAS-smell scores were 9.64±0.66, 6.77±3.29, 4.97±3.44 and 3.29±3.77, while the mean SS scores were 13.35±6.94, 20.43±9.58, 24.15±8.52 and 24.39±8.08 at weeks 0, 4, 16 and 52, respectively. A strong negative Pearson correlation (r=-0.90) was found between ΔVAS-smell and ΔSS (p=0.02).

CONCLUSION: The reduction in VAS-smell was associated with objective improvement of olfactory function, suggesting that it is a reliable subjective tool.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4340

Effectiveness of Mepolizumab 300 mg in the treatment of patients with severe uncontrolled CRSwNP associated to EGPA: Preliminary Analysis at 1 year of Sinonasal Outcomes

Camilla Spanu[1], Eugenio De Corso[2], Marco Corbò[1], Claudio Montuori[1], Giuseppe D'Agostino[1], Giuseppe Alberto Di Bella[1], Serena Pisciottano[1], Alberta Rizzuti[1], Maria Clara Pacilli[1], Jacopo Galli[1], Luigi Fiorillo[1], Gianmaria Santoro[1], Alice Mancini[1]

[1] Catholic University of the Sacred Heart, Department of Head-Neck and Sensory Organs, Rome, Italy, 00168 , [2]A. Gemelli Hospital Foundation, Rome, Italy, 00168

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: The aim of this study is to evaluate the effectivness of Mepolizumab 300 mg in the treatment of severe uncontrolled CRSwNP associated to EGPA in a real-life setting during the first year of treatment.

Material & Methods: We performed a retrospective, observational, single-centre, real-life study including 10 patients with a history of severe uncontrolled CRSwNP associated to EGPA, treated with Mepolizumab 300 mg s.c 1 injection/4 weeks. Patients were followed between July 2023 and January 2025 at our institution, in cooperation with the rheumatologists of our hospital.

Results: Mepolizumab 300 mg proved to be effective in improving clinical symptoms and quality of life. Mean SNOT-22 values decreased from 73.8± 19.75 at baseline to 45.71 ± 29.84 at 1 year ($p<0.05$). Mean values for VAS nasal obstruction decreased from 8.5 ± 2.50 at baseline to 4.25 ±2.91 at 1 year ($p<0.05$). Mean NPS score improved from 4.16 ± 1.32 at baseline to 2.85± 2.11 at 1 year ($p<0.05$). Regarding the olfactory assessment, we did not find a significant improvement in the score, both on Sniffin' Sticks 16-Identification Test, which improved from 4.83 ± 2.78 at baseline to 5 ± 2.44 at 1 year ($p>0.05$), and on VAS smell mean values, wich decreased from 8.5 ± 2.35 to 7 ± 3.33 at 1 year ($p>0.05$). During the whole year of treatment, 7/10 patients discontinued OCS, 2/10 presented with at least 1 exacerbation of sinonasal symptoms, and 2/10 had 1 episode of exacerbation of symptoms related to EOM.

Conclusions: Our study show that Mepolizumab 300mg every 4 weeks was effective in improving symptoms, quality of life, NPS and discontinuation of OCS treatment in patients with severe uncontrolled CRSwNP in EGPA.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3929

Effectiveness of Mepolizumab in Patients with Uncontrolled Chronic Rhinosinusitis with Nasal Polyps: A Multicenter Real-Life Study in Spain

Santiago Almanzo[1], Alfonso García Piñero[2], Tomás Pérez Carbonell[3], María José Gómez Gómez[4], Encarna Domenech Campos[5], Fernando Martinez Expósito[6], Noelia Muñoz Fernández[2], Jordi Calvo Gómez[3], Carmen García Navalón[4], Lucas Fito Martorell[2], Felip Ferrer Baixauli[3], Ainhoa García-Lliberós De Miguel[4], Nezly Mosquera Lloreda[2], Chakib Taleb[3], Carlos Zac Romero[1], Cecilia López Valdivia[1], Miguel Armengot Carceller[2]

[1]Hospital Universitari i Politècnic La Fe , [2]Hospital Universitari i Politècnic La Fe, [3]Hospital Clínic Universitari de València, [4]Hospital General Universitari de València, [5]Hospital Arnau de Vilanova, [6]Hospital Francesc de Borja

CRS – Biologics 3 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a complex inflammatory disease associated with significant symptom burden and reduced quality of life. Traditional treatments, including corticosteroids and surgery, may fail in refractory cases. Mepolizumab, an anti-IL-5 monoclonal antibody, has shown promise in improving symptoms and reducing polyp size. This study evaluated its real-life effectiveness in patients with CRSwNP.

Materials and Methods: The study was conducted in five hospitals in the Valencian Community, Spain. Adult patients with uncontrolled bilateral CRSwNP received Mepolizumab (100 mg subcutaneously) every 4 weeks for 6 months, following EPOS 2020 and POLINA 2023 guidelines. Outcomes included polyp size reduction, symptom improvement (VAS), quality of life (SNOT-22), and tissue and blood eosinophil levels.

Results: Forty-seven patients (mean age: 54 years; 51% male) were included. Atopy was present in 47%, AERD in 64%, and asthma in 91%. After 6 months, polyp score decreased from 5.1 to 2.7 ($p < 0.0001$). Nasal congestion VAS improved from 6.6 to 3.0, and hyposmia VAS from 9.2 to 6.4 ($p < 0.0001$). SNOT-22 scores decreased from 55.1 to 30 ($p < 0.0001$). ACT scores improved from 15.2 to 22.2 in asthmatic patients ($p < 0.001$). Eosinophil counts significantly decreased ($p < 0.0001$). Only one patient required surgery during treatment for CRSwNP.

Conclusion: This real-life multicenter study provides valuable evidence on the effectiveness of Mepolizumab for CRSwNP. The results are consistent with published data and, in certain aspects, exceed previously reported outcomes. These findings reinforce its role as an effective treatment in clinical practice.



Allergic Rhinitis 2

3981

Autonomic Nervous System Dysfunction in Patients with Allergic Rhinitis and Non-Allergic Rhinitis: A Prospective Observational Study

Yi-Tsen Lin[1], Wei-Chia Huang
[1]*National Taiwan University Hospital*

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Evidence suggests autonomic nervous system (ANS) dysfunction, particularly reduced sympathetic activity, contributes to the pathophysiology of allergic rhinitis (AR) and non-allergic rhinitis (NAR). However, parasympathetic function remains unclear. This study evaluates ANS function in NAR using heart rate variability (HRV) and other autonomic tests.

Materials & Methods: This prospective study was conducted in a tertiary otolaryngology clinic. Allergic status diagnosis was confirmed via specific IgE blood testing. Autonomic function was assessed through HRV analysis, including standard deviation of normal-to-normal intervals (SDNN), low-frequency power (LF Power), high-frequency power (HF Power), and the low-frequency to high-frequency ratio (LF/HF Ratio), and peripheral biomarker measurements, including finger temperature, and electromyography (EMG) activity.

Results: Eighty patients were recruited, including 23 with AR and 55 with NAR. HRV parameters (SDNN, LF Power, HF Power, LF/HF Ratio) showed no statistically significant differences between AR and NAR. However, a trend toward higher finger temperature in NAR was observed (suggesting reduced sympathetic vasoconstriction), though not statistically significant ($p = 0.143$). Skin conductance showed no significant difference between groups. These findings suggest potential mild sympathetic dysfunction in NAR, warranting further investigation. Data analysis is ongoing to determine autonomic profiles, including sympathetic and parasympathetic function and correlations with clinical symptoms and quality of life.

Conclusions: This study comprehensively assessed sympathetic and parasympathetic function in NAR using HRV and autonomic biomarkers. Findings enhance understanding of ANS dysfunction as a pathophysiological mechanism in AR and NAR, supporting potential non-pharmacologic interventions for symptom management.



4074

Upregulation of Inflammatory Gene Expression Associated with Steroid Resistance in Chronic Rhinitis Patients

Yu Ting Li[1]

[1]*China Medical University Hospital*

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Background: Chronic rhinitis is a broad spectrum consisting of allergic rhinitis, vasomotor rhinitis, occupational rhinitis, and other conditions . Intranasal steroid spray is the first-line choice with high efficacy and low risks of adverse events. Operation is frequently suggested for patients who failed medical treatment. Unfortunately, about 15% of patients who underwent septoturbinoplasty did not experience significant improvement in symptoms nor quality of life. Steroid-resistance was suspected as culprit to treatment failure.

Aim: This study was performed to find therapeutic potential target for steroid resistance-chronic rhinitis patients to reduce recurrence of nasal symptoms.

Methods: We analyzed nasal epithelium from allergic rhinitis patients from GEO database (NCBI, USA) through IPA analysis. The GSE19187 dataset consisted of 38 samples from France, divided into four groups: 11 healthy subjects, 14 non-asthmatic rhinitis patients, 7 rhinitis patients with asthma, and 6 rhinitis patients with asthma and corticosteroid resistance. To confirm the IPA results, we collected nasal lavage fluid (NALF) from patients who received septoturbinoplasty in China Medical University Hospital

Results: The results of GSE19187 showed that compared to healthy individuals, the expression of AHR was lower in all rhinitis patients, and compared to rhinitis patients, those with corticosteroid-resistant asthma had lower AHR expression ($p<0.05$). Several genes potentially involved in regulating steroid resistance were identified, including CD36, PPARγ, ITGA5, THBS1, FBLN2, Jun proto-oncogene, AP-1 transcription factor subunit (JUN), THBS1, and factor 3(TFF3). Among AHR-downstream regulatory genes, THBS1 and ITGA5 were significantly highly expressed in chronic rhinitis patients.

Conclusions: In the study, we found two AHR downstream genes- THBS1 and ITGA5 might involve the pathologic mechanism of steroid resistant-chronic rhinitis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4152

Molecular diagnosis enhances diagnostic yield of allergy to furry pets

Dichapong Kanjanawasee[1], Siratcha Phanthong[2], Thanadet Udomdamrongkul[1], Suchanart Soontornchainaksaeng[1], Anchalee Tungtrongchitr[1], Pongsakorn Tantilipikorn[1], Nathachit Limjunyawong[1], Nitaya Indrawattana[1]

[1]Center of Research Excellence in Allergy & Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand , [2]Department of Microbiology, Faculty of Medicine, Srinakharinwirot University

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Molecular allergy diagnosis (MAD) is a molecular-based allergy diagnostic tool that identifies specific IgE components of major allergens. This approach provides a more precise diagnosis and aids in the development of effective treatments. This study investigates pet allergens causing allergies using MAD.

Methods: This prospective cohort study included consecutive participants with moderate-to-severe pet allergy symptoms who had a positive skin prick test to either dog or cat allergens. Serum samples were collected and tested for MAD using ELISA. Comparisons were made between MAD and specific IgE (sIgE) testing using crude allergenic extracts, and correlations between MAD results and clinical symptoms were explored.

Results: A total of 62 dog-allergic and 73 cat-allergic participants were included. sIgE to crude extracts identified 28 (38.3%) cases of cat allergy and 38 (61.3%) cases of dog allergy, whereas MAD identified a significantly higher number of positive cases. MAD detected Can f 1 in 55 (88.7%) and Can f 5 in 51 (82.3%) of dog-allergic participants. In cat-allergic participants, MAD identified Fel d 1 in 55 (75.3%) cases. The presence of Can f 1 correlated with nasal congestion, while Can f 5 correlated with both nasal itchiness and congestion. Fel d 1 was associated with nasal itchiness. These correlations were not observed with sIgE testing using crude allergenic extracts.

Conclusion: MAD is a promising diagnostic tool for allergy assessment. This study demonstrates that MAD provides greater specificity and stronger clinical correlations compared to conventional sIgE testing using crude allergenic extracts.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4267

Improved delivery of topical corticosteroids in chronic rhinosinusitis and allergic rhinitis

Sethmi Ranasinghe[1], Xenia Berger[1], Wandia Kimita[1], Kristi Biswas[1], Raymond Kim[1], Richard Douglas[1]
[1]*Department of Surgery, University of Auckland*

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Background: Chronic rhinosinusitis (CRS) and allergic rhinitis (AR) are commonly treated with corticosteroid nasal sprays. These sprays must be taken regularly to be effective, but unpleasant sensations associated with these sprays (dripping down the throat, bitter taste, nasal irritation) are cited as reasons for poor compliance. Optimising the intranasal application experience and efficacy of application are the keys to improving compliance. A novel adaptor has been developed for metered dose inhalers (MDI) to improve intranasal medication delivery.

Method: Two crossover trials were conducted in post-FESS CRS patients and AR participants to assess the benefits of using the novel adaptor. Sixteen participants in each study sequentially used a standard nasal spray (fluticasone nasal spray 25 ug) for three weeks, neither device for one week, and a fluticasone MDI 125 ug with the adaptor for three weeks. The order of device was randomised, and doses were adjusted to be equivalent. Device preference was evaluated using CTPPQ questionnaires, and symptoms were measured using SNOT-22 and TNSS questionnaires.

Results: Both devices demonstrated similar symptom management. However, 70% of participants in both trials expressed a preference for the MDI with adaptor, mainly due to fewer unpleasant side effects. Participants answered that they would be more likely to comply with the MDI with adaptor compared to the nasal spray.

Conclusion: An MDI with a novel adaptor offers a superior experience for CRS and AR patients compared to a standard nasal spray. This may improve long-term compliance and therefore efficacy of topical corticosteroid therapy for these conditions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4317

A systematic literature review on the use of cryotherapy for rhinitis.

Shirwa Sheik-Ali[1], Steve Hayes[1], Tim Biggs[1]
[1]*Portsmouth Hospitals NHS University Trust*

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Background: Up to date guidance was released by NICE in September 2023, calling for cryotherapy as a treatment for rhinitis to only be administered in the research setting and for further research into its clinical application. In particular, differentiating according to which subset of rhinitis patients benefit from cryotherapy, its efficacy and its duration of effect. In light of this guidance, coupled with increasing usage of cryotherapy in the rhinology setting, it is important to understand the clinical effectiveness of this treatment.

Methods: We performed a systematic literature review using the PRISMA guidelines. Google Scholar,PUBMED and the Cochrane database were reviewed. Search terms were cryotherapy AND rhinitisAND allergic. Data were extracted regarding reported complications, treatment efficacy and follow up duration.

Results: A total of 74 studies were identified. Following screening, 7 studies were included in the final analyses. No serious adverse events were recorded. Obstructive symptoms reduced in a range of64-100% of patients following cryotherapy administration. Rhinorrhea reduced from 78%-100% of patients.

Conclusions: The use of cryotherapy for rhinitis appears to be both efficacious and safe and there is demonstrable improvement in patient reported symptoms. It is important to standardize and utilize validated metrics to allow for translation to evidence based recommendations.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4344

The role of airborne allergens monitoring with volumetric spore traps combined with real-time recording of symptoms and medications in patients with allergic rhinitis by using MASK-air® mobile application

Georgios Fotiadis[1], Theodora-Eleftheria Defteraiou[2], Petros Katsimpris[1], Konstantinos Chaidas[1], Georgios Fyrmpas[1], Michael Katotomichelakis[1]

[1]Department of Otorhinolaryngology, Medical School, Democritus University of Thrace, Alexandroupolis, Greece., *[2]Laboratory of Histology-Embryology, Medical School, Democritus University of Thrace, Alexandroupolis, Greece.*

Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Allergic rhinitis (AR) represents a common chronic disease with a prevalence of 10%-40%. The intensity of symptoms depends on aeroallergen circulation's density and exposure's duration. Regular use of a mobile application (MASK-air®) can support patients evaluating their symptoms and contribute to the optimal management of AR.

Materials & Methods: A 7-day continuously running volumetric trap (Burkard Spore Trap) was used to collect and count circulating pollen grains and fungi spores. Pollen taxa and fungi were counted as grains/m3 and average total grains and spores. The primary allergenic pollen season was identified, and their 10-day averages were measured overtime. Additionally, patients with AR visiting our Rhinologic Clinic were recruited and asked to use MASK-air® application daily for a one-year period.

Results: Pollen grains from nine pollen families were identified (five arboreal, two nonarboreal taxa, and spores from two fungi species). The most prevalent taxa were Oleaceae, Poaceae, Pinaceae, and Cladosporium in the fungi. Peak pollen concentrations were detected in April and May (daily average over 170 grains/m3). Poaceae presented the longest and Oleaceae the shortest pollen season (114 vs 36 days, respectively). Cladosporium was the fungus with the highest spore concentration. Seventy patients were participated in the study using MASK-air® application with a wide range in usage duration (1-365 days). Symptoms and medications used were recorded and analyzed.

Conclusions: Our study highlights the importance of the pollen and fungi map, as well as the clinical significance of MASK-air® application in the optimal management of patients with AR.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4345

The effects of environmental factors on incidences of allergic rhinitis and chronic rhinosinusitis: a comparative study

Xin Luo[1], Qintai Yang[1]
[1]*Third Affiliated Hospital of Sun Yat-Sen University*

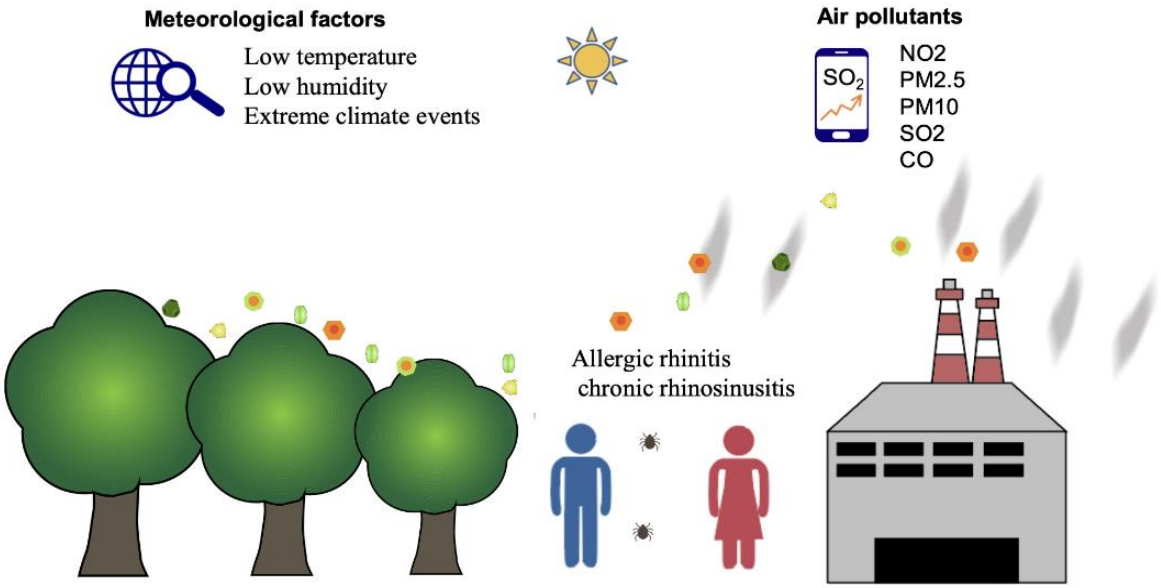
Allergic Rhinitis 2 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Existing evidence suggests that environmental factors were closely related to an elevated incidence of chronic upper airway inflammatory diseases. However, little is known about the effects of air pollutants and meteorological factors on allergic rhinitis (AR) and chronic rhinosinusitis (CRS) in Southern China.

Material & Method: To compare these factors, we retrospectively collected daily outpatient visits in AR and CRS (DAOV, DCOV), along with air pollutants and meteorological data spanning from 2014 to 2019 from two representative hospitals in Guangzhou, China. We used quasi-Poisson generalized additive model and distributed lag non- linear model with a quasi-Poisson distribution combined with the generalized linear model to analyze the data. In total, we recruited 135817 outpatient visits.

Results: The results showed that DAOV increased notably for every 10-unit increase in the concentrations of nitrogen dioxide (NO2), sulfur dioxide (SO2), particulate matters of sizes ≤2.5 and 10 μm (PM2.5 and PM10), and ozone (O3), specifically by1.71%, 3.28%, 1.52%, 1.63%, and 0.54%, respectively. Moreover, significant increments in DCOV were associated with elevated levels of NO2, SO2, PM2.5, PM10, and CO (by 3.16%, 6.36%, 2.72%, 1.83%, and 0.12%, respectively). AR patients were sensitive to cold effect, wet effect, and dry effect with RR of 1.52 (1.09, 2.10), 1.20 (1.03, 1.40) and 2.55 (1.71,3.79).

Conclusion: Our study revealed that patients with CRS were more susceptible to air pollution compared to patients with AR, while the latter appeared to be more affected by meteorological factors.





Rhinoplasty 2

4002

Efficacy of Tranexamic Acid in Reducing Intraoperative Blood Loss in Open Primary Rhinoplasty: A Randomized Double-Blind Study

Ana Raquel Andrade[1], Débora Gonçalves[3], Hugo Amorim[3], Miguel Campos Lopes[2], Luciana Rodrigues[3], Diogo Nascimento[3], Inês Gambôa[2], Paulo Gonçalves[2]

[1]ULS Entre Douro e Vouga, [2]Department of Otorhinolaryngology, Unidade Local de Saúde Entre o Douro e Vouga, Santa Maria da Feira, Portugal, [3]Otolaryngology department, ULS Entre Douro e Vouga, Santa Maria Da Feira, Portugal

Rhinoplasty 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Intraoperative bleeding during rhinoplasty can compromise the surgical field, extend operative time, and increase postoperative morbidity. Tranexamic Acid (TXA), a potent antifibrinolytic agent, has demonstrated efficacy in reducing blood loss across various surgical procedures. This study aims to assess the impact of intravenous TXA on minimizing intraoperative bleeding and improving surgical field visibility in patients undergoing primary open rhinoplasty.

Methods: Eighteen patients scheduled for primary open rhinoplasty at a secondary healthcare facility were randomized to receive either intravenous TXA (1000 mg diluted in 100 mL NaCl 0.9%), or a placebo (100 mL NaCl 0.9%). Blood loss was quantitatively assessed using the gravimetric method for weighing surgical gauze and fluid counting in suction devices, providing a comprehensive evaluation of total blood loss. Surgical field visibility was assessed using the Boezaart Bleeding Scale. Data was analyzed using IBM SPSS Statistics V. 30, with significance set at $p<0.05$.

Results: Patients treated with TXA showed a significant reduction in intraoperative blood loss, with a mean reduction of 157.53 mL ($p = 0.003$), compared to the placebo group. Improvements in the Boezaart Bleeding Scale were also significant, with a mean improvement of 1.33 points ($p = 0.016$), indicating enhanced surgical field conditions.

Conclusion: Intravenous TXA significantly reduces blood loss and improves surgical field visibility in primary open rhinoplasty. These findings advocate for the inclusion of TXA in surgical protocols to optimize outcomes, highlighting the need for further research to validate these results in larger and more diverse patient populations.



3737

Working more comfortably with fascia in rhinoplasty

Tatjana Bogdanova, Jegors Safronovs[1], Edward Yurshevich
[1]Riga Stradinsh University Hospital

Rhinoplasty 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: The fascia (temporalis, m. rectus abdominis) is very useful material in rhinoplasty for smoothing (camouflage) of nasal dorsum, nasal tip in patients with a thin skin or to prepare an implant for the nasal dorsum augmentation .There is an inconvenience working with the fresh harvested fascia, because it is very soft, slippery, disobedient material. It is necessary additionally fix the fascia and use a help of assistant during of measuring, cutting, putting in place or suturing process.

Methods: The fresh harvested fascia spreads out onto a sterile tray, wiped dry, the rest of the fat tissue (more typical for the fascia m. rectus abdominis) are removed with dermatome. Then the fascia is covered with a so thick layer of any dry sterile antibiotic (powder) for injections (according to allergic history of the patient). It is necessary to keep the powdered fascia under a lamp of incandescence at least for thirty minutes to dry it. If there is more surgical time for preparation of dried fascia, to use the lamp not necessary. Then the powder are maximally carefully removed from the fascia (shakes off, sweeps away) and it is ready to use. To economize the time of the surgery, a surgical nurse can prepare the dried fascia, while a surgeon continues to do the other stages of rhinoplasty.

Results: The dried fascia is more rigid, but not fragile, so elastic and very compliant in using. It easy to measure, cut, suture and put in place the dried fascia without of additional fixation and help of assistant. If the fascia had came out too dry, just a few drops of saline will help do it more elastic and softer. It is possibly to regulate a consistence of the fascia for the convenience to work with it.

Conclusion: Using dried by antibacterial powder and warming fascia in rhinoplasty, does the working process more comfortable. The rhinoplasty surgery is very difficult in itself, why not make it more comfortable for the surgeon!



3758

Concha bullosa media and hyperplasia of ostiomeathal complex - the ''blocking point'' for the nasal septum and bony pyramid in dorsum preservation rhinoplasty

Tatjana Bogdanova, Jegors Safronovs[1], Edward Yurshevich
[1]Riga Stradinsh University Hospital

Rhinoplasty 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Today, it is well-known fact that when treating a crooked nose using the dorsum preservation rhinoplasty techniques, it is necessary to evaluate and eliminate all ‘’blocking points’’, carrying out appropriate manipulations. Otherwise, the axis of the external nose may remain crooked. But also, when assessing computed tomography of the nose, it is necessary to pay serious attention to the condition of the middle turbinates and the ostiomeathal complexes. Concha bullosa media and hyperplasia of ostiomeathal complex can also play the role of the ‘’blocking point’’ when trying to straighten the perpendicular ethmoidal plate, that is curved in the opposite direction, which makes it very difficult to straighten the entire bony pyramid.

Method: In the treatment of concha bullosa media usually the lateral portion of the bullous middle concha is removed and the remaining portion is not aggressively lateralized. As for hyperplasia of the ostiomeathal complex, it is necessary to perform removing processus uncinatus, the anterior, vertical and horizontal walls of the bulla ethmoidalis, but not completely to avoid collapse of the middle turbinate and thus prevent dysfunction of the maxillary sinus. Gentle lateralization of the middle turbinate is performed at the end of the surgery.

Results: As a result of treatment of the crooked nose according to the principle of nasal dorsum preservation, taking into account all ‘’blocking points’’, and in particular concha bullosa media and hyperplasia ostiomeathal complex, all our operated patients had a consistent positive aesthetic and functional result (minimal follow up period 6 months, maximal 5 years). Pre- and postoperative photographs of patients were assessed, as well as the results of the patients interview.

Conclusions: Concha bullosa media and hyperplasia of ostiomeathal complex may be one of the ‘’blocking points’’ during the dorsum preservation rhinoplasty in treatment of the crooked nose.



3775

Evaluation of Complications and Surgical Outcomes in Asian Tip Plasty Using 3D-Printed Polycaprolactone Plates

Ji Yun Choi
Chosun University Hospital & College of Medicine

Rhinoplasty 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Tip plasty using a septal extension graft (SEG) is useful in the Asian population. However, complications such as decreased tip projection, infection, or deviation are noted post-surgery, and additional support using an SEG is often necessary. We aimed to transplant an additional 3D printed polycaprolactone (PCL) graft to the tip plasty using the SEG to reinforce the SEG.

Methods: The study included 43 patients (20 males and 23 females; mean age, 28.7 years; range, 17–58 years) who received rhinoplasties using the SEG method combined with a 3D printed PCL graft from November 2016 to August 2017. The mean observation period was 14.8 months (range, 12–20 months).

Results: Twenty-six patients rated their satisfaction level as excellent, 13 rated good, 3 rated fair, and 1 rated poor. In total, 28 patients did not exhibit tip drooping at the 1-year follow-up; 13 patients demonstrated mild to moderate tip drooping, and 2 patients demonstrated severe tip drooping. Thirty-one patients demonstrated “stiffness” of the nasal tip, of which 11 patients reported discomfort, and 20 patients reported none; two patients demonstrated deviation of the tip.

Conclusions: The main problem of tip plasty arises in Asians when not enough cartilage is used to raise the nasal tip, or if it is too weak; in these cases, it is difficult to raise the nasal tip sufficiently. A 3D-printed PCL graft to the tip plasty using an SEG to reinforce the SEG and provide additional support to the tip, as well as strengthening and straightening support to the SEG was proposed in this study. However, care needs to be taken to prevent complications such as tip stiffness, tip drooping, deviation, extrusion, and infection. Therefore a PCL graft designed by a 3D printing method can serve as a biocompatible, rhinoplastic, and facial plastic material in the future.



3776

Practical Approaches to the Diagnosis and Management of Nasal Valve Dysfunction

Ji Yun Choi
Chosun University College of Medicine

Rhinoplasty 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Objectives: A key aspect of rhinoplasty is integrity of nasal valves area because of its fundamental role in patent nasal airway. furthermore, nasal obstruction is a dominant feature in patient with nasal valves dysfunction (NVD) which can be devastating outcome after rhinoplasty.

Methods: Nonetheless, NVD has been widely investigated regarding their etiologies and management. However, it has been assumed that the anatomical complexity and interplay between its structures causing a confusion for a beginner surgeon to diagnose and treat NVD. This study was approved by the institutional review board of Chosun University Hospital, Gwangju, Korea (2022-11-005).

Results: To date, the lack of consensus on nasal valve pathologies and corrective procedures has led to its underestimations during analysis and management. As result, we proposed a classification system based on its affected anatomical part, location, and their management. Thus, implementing a classification system for NVD will help guide the practice of rhinoplasty and introduce a more structured approach.

Conclusion: This approach will prove useful in expanding our understanding of how important to locate the pathology of NVD and apply the most relevant management options, particularly for a beginner surgeons.



Smell and taste 2

3666

Long Term Outcomes of PRP Injections for Post-Viral Olfactory Loss: A Prospective Cohort Study

Maxime Fieux[1], Bruna R Castro[2], Sophie S. Jang[2], Carol H. Yan[2], Zara Patel[2]

[1]Hospices Civils de Lyon, Université Claude Bernard Lyon 1, [2]Stanford University School of Medicine, [3]University of California, San Diego School of Medicine

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Background: Platelet-rich plasma (PRP) injections have previously been shown to benefit COVID-19 induced smell loss. It is unknown if that benefit is stable over time. The aim of this study was to assess outcomes at one-year post-intervention.

Methods: Prospective cohort study. Sixteen patients (10 PRP and 6 placebo) from the original PRP RCT, and a further sixteen patients from smell clinic who were a year out from initial treatment (6 PRP patients and 10 non-PRP) were enrolled. University of Pennsylvania Smell Identification Tests (UPSITs) and Visual Analog Scale (VAS) subjective scores were compared to initial scores.

Results: There was no difference between groups with respect to age, gender, race, duration of smell loss prior to intervention, smoking or diabetes status, Charlson Comorbidity Index, presence of phantosmia or parosmia, or baseline UPSIT score. The PRP group had a significantly higher change in UPSIT score at one year (p=0.001), a higher number of patients who met the MCID for the UPSIT (87.5% vs 31.2%, p=0.004), and a significantly greater change in VAS at one year (p=0.001), compared to those who did not receive injections. On multivariate logistic regression analysis, no factors appeared to have a significant effect on these findings.

Conclusion: PRP injections into the olfactory cleft now have long-term data suggesting benefit in both subjective and psychophysical measures of smell, and improvements in both realms at 1 year are significantly higher than in those who do not receive the injections.



3823

Smell and Taste Disorder Impact on Eating Habits: a cross sectional observational study

Lois Camp[1], Duncan Boak, Carl Philpott[2]

[1]Norfolk and Norwich University Hospital, [2]UEA

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Background: Smell and Taste disorders (SATDs) are underreported. There is a wide range of aetiology but recently we have seen growing numbers related to Covid-19 infection. SATDs have broad implications for people's lives, including, a significant impact on nutritional intake and eating behaviours which we further explore here.

Methods: This was a cross sectional observational study using an online questionnaire to gather data. Questions covered aetiology of SATDs, impact on BMI, social eating habits and enjoyment of food.

Results: A total of 794 participants responded of which 75% were female and the majority (46%) 56-70 years. Since the onset of their SATDs: 46% reported no change in weight, 24% weight gain, 15% weight loss, 51% felt it impacted how healthily they ate, 59% dined out less or not at all anymore, 59% no longer enjoy preparing food at home, 58% do not enjoy eating out and 54% do not enjoy eating at the homes of friends/ family/ partners.

Conclusion: We have built on existing literature highlighting the impact SATDs have on nutritional intake of participants. Although there is clearly an impact on diet and social behaviours around food/ eating it is hard to know the full health and economic impact. Especially when we consider that poor nutritional intake has been linked to cognitive decline in this age group, it is an important area for further research and it may be beneficial for healthcare providers to offer nutritional advice upon diagnosis of SATDs.



3641

Predictive model for postoperative unrecovered olfactory function in CRSwNP patients with olfactory disorder

Jingyuan Chen[1]

[1]*The Second Affiliated Hospital, Guangzhou Medical University*

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Background: Olfactory disorder (OD) is a prevalent and challenging symptom in chronic rhinosinusitis with nasal polyps (CRSwNP). This study aims to investigate the risk factors and develop a predictive model for poor olfactory prognosis in CRSwNP patients with OD after endoscopic sinus surgery (ESS).

Method: Seventy-eight CRSwNP patients with OD who underwent ESS were enrolled. Preoperative and 6-month-postoperative olfactory function were assessed using Sniffin' Sticks. Receiver operating characteristics (ROC) curves were constructed to set the cutoff points. Risk factors were determined by logistic models. A power analysis was conducted to evaluate the sample size.

Results: Overall, 66.7% of CRSwNP patients had unrecovered olfaction after surgery. Patients with unrecovered olfaction displayed higher preoperative threshold-discrimination-identification (TDI) score, lower Questionnaire for Olfactory Disorders-Negative Statements (QOD-NS) score, lower total olfactory cleft score (TOCS), and fewer tissue eosinophils than those of the improved/recovered group. QOD-NS≤5.0(odds ratio [OR]=7.5, P=0.003), preoperative TOCS≤4.5(OR=3.7, P=0.046) and tissue eosinophil count≤8.3(OR=4.4, P=0.024) were independent risk factors for unrecovered olfaction. Based on these variables, a predictive model was developed. The area under the ROC curve for the model was 0.845, and the optimal cutoff value was 2.0 points, with a sensitivity of 82.7% and specificity of 80.8%.

Conclusions: Low levels of QOD-NS score (preoperative), TOCS (preoperative) and tissue eosinophil count are independent risk factors for short-term unrecovered olfaction in CRS patients with OD postoperatively. The predictive model developed here is practical and convenient for the early identification of poor prognosis of OD, enabling early additional intervention.



3800

Development, Reliability, and Validity Testing of the Flavor Perception Dysfunction Scale

Jianfeng Liu[1], Ruoqi Zhang[1], Yifan Li[1]

[1]China-Japan Friendship Hospital, [2]Department of Otolaryngology-Head and Neck Surgery, China-Japan Friendship Hospital

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Background: Flavor perception integrates taste, aroma, texture, and overall flavor, significantly influencing food evaluation and choice. Flavor perception dysfunction (FPD) is a chemosensory disorder characterized by the inability to identify food flavors, impacting eating pleasure and food selection. Despite its importance, no systematic assessment tool exists for FPD. This study aimed to develop and validate a scale for diagnosing and assessing FPD.

Methods: The Flavor Perception Dysfunction Scale was developed based on core dimensions: basic information, type and severity of FPD, impact on quality of life, and psychosomatic health. Expert consultations and iterative revisions were conducted to refine the scale. The final version was tested on 106 clinical participants, and reliability (Cronbach's alpha) and validity (content and structural) were evaluated.

Results: The scale comprises 40 items across three sections: basic information, FPD characteristics, and impacts on quality of life and psychosomatic health. Content validity was excellent, with item- and scale-level content validity indices (I-CVI and S-CVI) of 1.0. Internal consistency reliability was high (Cronbach's alpha = 0.979), and reliability for individual dimensions exceeded 0.8. Structural validity analysis showed a KMO coefficient of 0.839, significant Bartlett's test ($p < 0.05$), and an 87.25% cumulative variance contribution rate.

Conclusion: The Flavor Perception Dysfunction Scale demonstrated strong reliability and validity. It effectively assesses the severity of FPD and its impact on patients' physical and psychological health, providing a reliable tool for clinical diagnosis and management.



3834

Analyzing the role of respiratory mucosa in nasal odorant metabolism

Stephan Hackenberg[1], Maria Steinke[1], Jeanne Merignac-Lacombe[3]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Wurzburg, [2]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Würzburg, [3]Chair for Tissue Engineering, University Hospital Wurzburg

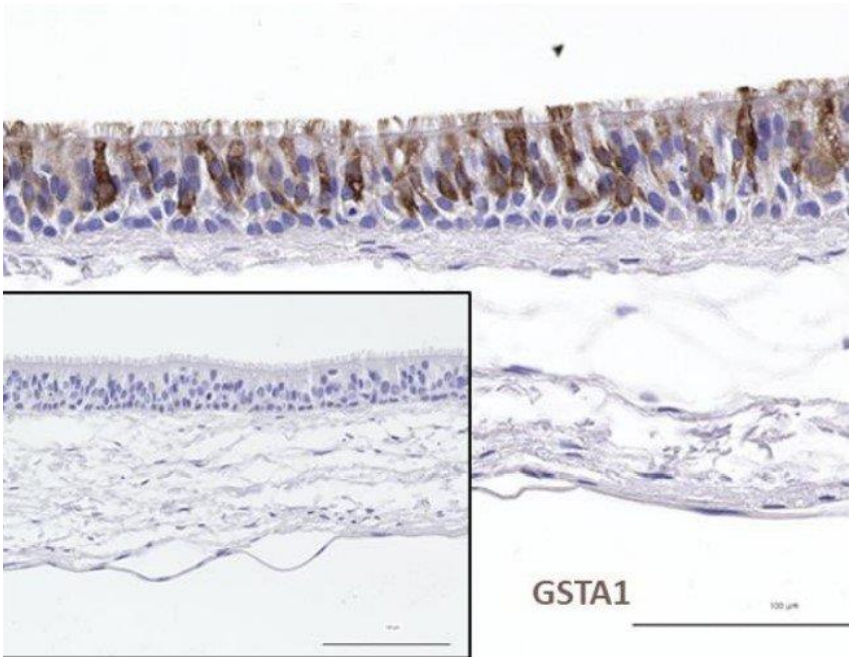
Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Introduction: Nasal xenobiotic metabolizing enzymes (XMEs) play a key role in olfactory peri-receptor events by metabolizing odorants and may also protect the mucosa against inhalable toxicants. Odorant metabolism is mandatory to modify molecules for receptor interactions. Since the majority of the human nasal cavity is lined by respiratory mucosa, we aim to analyze its contribution to odorant metabolism.

Material and Methods: A biological scaffold was used to create a 3D-tissue model of the human respiratory mucosa including primary nasal epithelial cells and fibroblasts. Single-cell RNA sequencing and RTqPCR were applied to study XME expression. Furthermore, we used immunohistochemistry and Western blot to confirm protein abundance. Tissue models were treated with defined odorants to assess XME metabolic activity, while metabolites were analyzed by gas chromatography–mass spectrometry, respectively.

Results: More than 50 phase I and phase II XME genes were identified in the tissue models. Exemplary, we selected the phase I XMEs dicarbonyl and L-xylulose reductase (DCXR), aldehyde dehydrogenase 1A1 (ALDH1A1) and ALDH3A1 for further analyses and verified their protein abundance in the tissue models. Our data indicate that our 3D-test system is capable of metabolizing substrates of these enzyme families, for instance, 3,4-hexanedione to 4-hydroxy-3-hexanone and benzaldehyde to benzyl alcohol and benzoic acid.

Discussion: Human respiratory tissue models express several functional XMEs and therefore they appear to contribute significantly to odorant metabolism. This is supported by metabolic activity towards representative aroma compounds. Future studies will address further XME families, such as aldo-keto reductases and glutathione S-transferases.





3911

Evaluation of olfaction in pediatric patients diagnosed with Multiple Sclerosis: Clinical assessment with UPSIT

Melis Demirag Evman[1], Merve Akcay[2], Omar Alomari[3], Hanife Gulden Duzkalir[4], Safiye Gunes Sagar[5], Emine Caliskan[7]

[1]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Otolaryngology Head and Neck Surgery Istanbul Turkey, *[2]University of Medical Sciences Darica Farabi Training and Research Hospital Department of Pediatrics Kocaeli Turkey*, *[3]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Istanbul Turkey*, *[4]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Radiology Istanbul Turkey*, *[5]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Pediatric NeurologyIstanbul Turkey*, *[6]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Otolaryngolgy Head and Neck Surgery Istanbul Turkey*, *[7]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Pediatric Radiology Istanbul Turkey*

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Background and Aim: Multiple sclerosis (MS) is an autoimmune neurological disorder causing central nervous system demyelination. Although rare in children, it can lead to significant disability. Olfactory impairment may be an early symptom but is often underdiagnosed. This study evaluates olfactory function and its relationship with pediatric MS.

Material and Methods: We included MS patients under 18 years followed by the pediatric neurology department. Demographic data, neurological and sensory symptoms, Expanded Disability Status Scale (EDSS) scores, and treatments were recorded. MRI scans were analyzed for olfactory bulb volume, plaque number, and localization. University of Pennsylvania Smell Identification Test (UPSIT) was conducted in both groups.

Results: Sensory and vision-related symptoms were most common, with vision disturbances in 54.5% (6/11) of patients. The smell score was similar between MS (22.18 ± 3.601) and controls (22.07 ± 4.19) (P=0.9452). Olfactory bulb volume was also comparable (MS: 9.22 ± 1.3, control: 9.47 ± 1.2; P=0.6082). EDSS score was 0 for all patients.

Conclusions: No significant olfactory dysfunction was found in pediatric MS patients, and no correlation was observed between olfactory bulb volume and dysfunction. This may be due to the early disease stage or prompt diagnosis and treatment. Long-term follow-up is necessary to determine potential changes over time.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3965

Olfactory Training with Multisensory Stimulation: Insights into Neural Crosstalk Between Sensory Networks

Yun-Ting Chao[1], Yin-Chun Liao[1]
[1]*Taipei Veterans General Hospital*

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Introduction: Olfactory dysfunction has emerged as a significant concern in post-COVID era. Among non-pharmacological interventions, olfactory training (OT) is recognized as a primary treatment modality. This study employs a neuroimaging approach to evaluate the benefits of multisensory stimulation during OT.

Material and Methods: Sixty-six patients with postviral olfactory dysfunction participated in a three-month OT program. Participants were randomly assigned to the multisensory stimulation group (MSOT; olfactory, visual and auditory stimuli during OT; n=34) and the unimodal olfactory training group (UMOT; n=32). Olfactory function was assessed using the Sniffin' Sticks Test pre- and post-OT. Resting-state functional MRI (fMRI) was performed on 32 participants (MSOT=17, UMOT=15) at baseline and post-training. Seed-based functional connectivity (FC) analysis, focusing on the olfactory network, was conducted to explore neuroplastic changes. Statistical thresholds were set at Puncorrected< 0.005, Cluster level P< 0.05.

Results: Both groups demonstrated significant post-training improvements in olfactory performance. Two-way ANOVA identified a significant interaction effect (session × group) in FC between the right orbitofrontal cortex (OFC, olfactory network) and the right superior/middle occipital gyrus (SOG/MOG, visual network). Specifically, pairwise analysis revealed a post-training reduction in FC between these regions favoring MSOT group, highlighting changes in sensory network interactions particularly under multisensory stimulation.

Conclusions: While both groups exhibited improved olfactory function, their underlying neurobiological mechanisms differed. Multisensory stimulation during OT is associated with reduced FC between olfactory and visual networks, suggesting cross-modal sensory adaptation that enhances olfactory function. Incorporating multisensory stimulation into OT may offer a more effective approach to olfactory rehabilitation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4006

The Impact of Olfactory Disorders on Sexual Life Quality

Luca Hoehn[1], Basile Landis[1], Julien Hsieh[1]
[1]*Rhinology-Olfactology Unit, Geneva University Hospitals (HUG), Geneva, Switzerland*

Smell and taste 2 | ROOM 13 – G15 - Level +1| Tuesday June 24, 2025

Introduction: Olfactory disorders affect a significant portion of the population and can negatively impact sexual life. This consequence remains largely unexplored. We sought assess the association between symptoms, degree of smell loss, etiologies with sexual life quality impairment.

Methods: We included 1,027 patients aged 16–94 years with various causes of olfactory disorders. We recorded clinical characteristics (demographics, symptoms, etiology) and quantified olfactory function using Sniffin' Sticks battery test. Patients provided self-reports on the impact of olfactory disorders on their sexual life using a Likert scale.

Results: Half of the patients indicated that the olfactory dysfunction affected their sexual life quality. Anosmic patients (complete loss of smell) reported significantly lower sexual life quality compared to those with hyposmia (decreased sense of smell) or normosmia (normal sense of smell) ($H(2) = 16.78$, $p < .001$). The presence of parosmia significantly decreased sexual life quality, even in normosmic subjects. The severity of smell loss and age significantly influenced sexual life quality ($F(5,1021) = 8.00$, $p < .001$). Patients with traumatic injury and upper respiratory tract infections demonstrated lowest sexual life quality compared to patients with other etiologies.

Conclusion: Smell loss and parosmia was associated with a significant decline in the quality of sexual life. We should not neglect this dimension of sufferance in patients with olfactory disorders.



Rhinology –Miscellaneous 3

3948

Predictors of recurrence of chronic rhinosinusitis after endoscopic sinus surgery

Liyona Kampel[1], Yahav Borodovsky[1], Yaniv Hadi[2], Leonor Leider Trejo[2], Forsan Jahshan[1], Narin N. Carmel[1], Avraham Abergel[1]

[1]Department of Otolaryngology Head and Neck Surgery, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel , [2]The Pathology Institute, Tel Aviv Sourasky Medical Center

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Recurrence of chronic rhinosinusitis (CRS) symptoms after endoscopic sinus surgery (ESS) is reported between 4% to 60%. This heterogenic rate indicate the wide spectrum of clinical and immunologic profiles of CRS. We aimed to identify predictors of recurrence.

Methods: The study included CRS patients who underwent ESS between 2022 and 2024. CRS subtype (with or without nasal polyps (CRSwNP vs CRSsNP), clinical characteristics, the 22-item Sinonasal Outcome Test (SNOT-22) and the Lund-Mackay score (LMS) were recorded. Recurrence, defined by ill mucosa or NP, together with bothersome symptoms, was recorded.

Results: Overall 138 patients, including 31 with CRSsNP and 107 with CRSwNP, were recruited. Patients with CRSsNP were younger (mean age 42±12 years vs. 50±17, p=0.049), had lower mean LMS (9.8±5.7 vs. 14.9±5.3, p<0.001), but comparable SNOT-22 scores. CRSwNP patients reported anosmia/hyposmia more frequently, and had higher rates of pre-operative corticosteroid dependence (88% vs. 35% , p=0.001 and 24.7% vs. 12.9%, p=0.004, respectively) .Ninty-eight patients were evaluated at ≥1.5 months after surgery, and were included in the recurrence analysis, with a median follow up of 7.8 months (range 1.5 – 32 months). Overall, 24 recurrences were documented. Recurrence rates were higher among anosmic patients (39% compared to 15% in hyposmic and 21% in patients with normal sense of smell, p=0.036), and those with comorbid asthma (35% vs 18%, p=0.027).

Conclusions: Anosmia is a predictive marker of recurrence regardless of the CRS phenotype. Patients with asthma had higher rates of recurrence, supporting the rationale for systemic treatment in patients with both conditions.



4268

Obesity: next game-changer of allergic airway diseases?

Wenlong Li[1], Marx Marx[2], Deyu Fang[2], Qintai yang[1], Yana Zhang[1]

[1]The Third Affiliated Hospital of Sun Yat-Sen University, [2]Northwestern University Feinberg School of Medicine

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Background & Aim: Obesity and allergic airway diseases, including asthma, allergic rhinitis, and chronic rhinosinusitis, are increasing in prevalence worldwide. Obesity is increasingly recognized as a significant comorbidity in individuals with allergic airway diseases, representing a distinct phenotype and endotype. This review aims to summarize the current knowledge of the impact of obesity on the prevalence, endotypes, clinical manifestations, and management of allergic airway diseases, while exploring potential therapeutic approaches.

Material & Methods: References for this review were identified through comprehensive searches of PubMed and Web of Science using predefined syntax. The search was conducted for articles published up to 2024. Relevant papers were also identified through citations of key articles.

Results: Obesity is associated with an increased prevalence of allergic airway diseases. Obesity could alter immune endotypes, shifting the classical type 2 inflammation to type 3-predominant response. Clinically, obese individuals with allergic airway diseases often present with more severe symptoms, impaired lung function, increased airway hyperresponsiveness, higher hospitalization rates, and poorer treatment outcomes. Obesity may also impair the efficacy of standard therapies, including corticosteroids, biologics, and endoscopic sinus surgery. Therapeutic regimen that involves weight loss by non-surgical and surgical interventions, gut microbiome-targeted treatment, glucagon-like peptide-1 receptor agonist, and other agents should be considered in this population.

Conclusions: In summary, obesity influence the prevalence, endotypes, clinical symptoms, and management of allergic airway diseases. Increased understanding of the implications of obesity may contribute to better treatment options for the obesity-related refractory airway inflammation, particularly in precision medicine.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4197

Allergic fungal rhinosinusitis leading to catastrophic multiple ischemic strokes: a case report

Francisco Teixeira Marques[1], Nuno Medeiros[1], Catarina Gomes Pinto[1], Francisco Monteiro[1], Nuno Lima[1], Pedro Oliveira[1]
[1] *Otorhinolaryngology Department of ULS Gaia e Espinho, Vila Nova de Gaia, Portugal*

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Allergic fungal rhinosinusitis (AFRS) is a non-invasive subtype of chronic rhinosinusitis (CRS) that occurs in immunocompetent individuals due to inflammatory and allergic reactions to fungal antigens. While typically presenting like CRS, AFRS can cause bone erosion with intracranial or intraorbital extension, leading to rare but severe complications. We report a fatal case of multiple ischemic strokes as a complication of AFRS.

Materials & Methods: Case report.

Results: A 38-year-old male presented with nasal obstruction and progressively worsening left fronto-temporal headaches for three months. Nasal endoscopy revealed nasal polyps with purulent rhinorrhea in the left nasal cavity and posterior ethmoidal edema in the right. CT and MRI showed a sphenoid sinus mass with expansion, anterior pituitary fossa erosion, and bilateral internal carotid artery compression (figure 1). Endoscopic sinus surgery revealed fungal debris and necrotic tissue, which were successfully removed. Four days postoperatively, the patient deteriorated, with CT angiography revealing acute ischemic strokes in multiple vascular territories. Lumbar puncture suggested meningitis. Histopathology confirmed AFRS with eosinophilic mucin, Charcot-Leyden crystals, and Aspergillus fumigatus in tissue culture. Despite systemic corticosteroids and voriconazole, further ischemic events - likely due to vasculitis - occurred, and the patient passed away 25 days after initial presentation.

Conclusions: While AFRS is non-invasive, its propensity for bone erosion increases the risk of severe complications. This case highlights the potential for fatal cerebrovascular involvement, emphasizing the need for early recognition and management.



4307

Ergonomics in Endoscopic Sinus Surgery - How far from perfect are we?

Joe Yapp, Sofia Anastasiadou[1], Warren Bennett[1]
[1]*University Hospitals Bristol*

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Background: Endoscopic Sinus Surgery (ESS) presents unique ergonomic challenges for ENT consultants, which can impact their physical comfort and health. This study evaluates the ergonomic experiences and physical health outcomes of ENT consultants performing ESS in the UK.

Methods: A survey was distributed to 50 ENT consultants not exclusively rhinologists but all performing ESS, gathering information on demographics, ESS workload, physical comfort, and employer support.

Results: Of the respondents, 80% were male and 42% were aged 40-50 years, highlighting a predominantly mid-career, male demographic in the field. Consultants with 10-20 years of experience formed the largest group (38%), primarily specializing in Rhinology (47%). On average, 47% perform 1-2 ESS cases weekly. Rhinologists reported a higher comfort level during operations, with 43% feeling comfortable compared to 22% of Non-Rhinologists. However, both groups experienced similar levels of post-operative discomfort, with 43% of Rhinologists and 41% of Non-Rhinologists sometimes experiencing discomfort. Key discomfort factors included awkward positions (47%) and monitor/screen placement (19%). Despite a high rate of physical activity (91% exercise regularly), only 30% felt their employer provided adequate support for their physical health.

Conclusions: The survey underscores the need for enhanced ergonomic practices and employer support to mitigate physical discomfort among ENT consultants. Addressing ergonomic issues and providing better support could improve both the physical well-being of surgeons and surgical outcomes. This survey can be expanded to all subspecialties to highlight the need for further support of ENT consultants' physical health.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4366

Pott Puffy Tumor - Retrospective Study of the Last 14 Years

Cláudia Rosa[1], Mariana Caetano[1], Maria José Lucas dos Santos[2], David Farinha[1], Rita Peça[1], Mariana Calha[1], César Silva[1], Vitor Oliveira[1], Tiago Eça[1], Leonel Luís[1]

[1]Unidade Local de Saúde Santa Maria, [2]ENT Departement, ULS Santa Maria

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Pott Puffy Tumor (PPT) is a rare condition characterized by a subperiosteal abscess associated with frontal bone osteomyelitis, usually secondary to frontal sinusitis, trauma, or surgery. PPT presents with tender forehead swelling, often accompanied by fever, headaches, nasal discharge, or signs of increased intracranial pressure. This study analyzes the experience of a tertiary hospital in diagnosing and treating PPT.

Methods: A retrospective review was conducted on all patients diagnosed with PPT who underwent surgical intervention between 2010 and 2024. Data collection included clinical records, imaging studies, and surgical video documentation.

Results: 14 patients were included (six children, mean age 12.3 years; eight adults, mean age 44.6 years). The primary etiologies were acute rhinosinusitis (7 cases), chronic rhinosinusitis (4 cases, including two with mucopyoceles), trauma (1 case), and complication following endoscopic nasal surgery (1 case). 5 (36%) patients presented with intracranial complications. Treatment included broad-spectrum antibiotic therapy for 6 to 8 weeks and surgical intervention, which included: endoscopic procedures in 10 patients (71% DRAF 2A), bicoronal approaches with craniectomy in 2, and combined approaches in the remaining 2. Surgical revision with DRAF 3 was necessary in 2 patients, one previously submitted to a combined approach and the other to a DRAF 2A. No postoperative sequelae or complications were observed.

Conclusions: There has been an increase in exclusively endoscopic approaches for PPT treatment, with external procedures reserved for cases with severe intracranial complications. Extensive frontal sinusotomy (DRAF 3), despite being more aggressive, should be considered as part of the initial therapeutic strategy to ensure complete clinical resolution and minimize recurrence rates.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4517

Frontal sinus reconstruction using Titanium mesh: A retrospective review

Maria José Lucas dos Santos[1], Vítor Oliveira[1], Rodrigo Serra-Franco[1], David Farinha[1], Mariana Caetano[1], Tiago Eça[1], Leonel Luís[1]

[1]*ENT Departement, ULS Santa Maria*

Rhinology – Miscellaneous 3 | ROOM 8 – G3 - Level +1| Tuesday June 24, 2025

Introduction: Advances in extended endoscopic frontal sinus (FS) surgery have reduced the need for external approaches. However, they remain essential for some complex cases. Precise reconstruction of the FS anterior wall is critical with titanium meshes being preferred for their resistance, biocompatibility, and ability to restore anatomical integrity.

Materials & Methods: Retrospective review of patients submitted to external FS surgery with anterior wall reconstruction using a titanium mesh, at a tertiary hospital (2019-2024).

Results: Four patients (2 male, mean age 55.25 years) were included. All patients had prior sinus surgery, three already via external approaches. The bicoronal approach was consistently used, either alone or in combination with FESS. Surgical indications were FS mucocele (n=3) and inverted papilloma (n=1). Two mucoceles caused orbital roof dehiscence due to lateral extension, while the third developed in a patient previously treated with a radical maxillectomy and muscle graft reconstruction. The frontal inverted papilloma caused an orbital roof and anterior FS wall dehiscence, requiring a combined approach.All patients underwent anterior FS wall reconstruction with a titanium mesh and pericranial flap, with no complications. Aesthetic outcomes were considered satisfactory. The mean postoperative follow-up was 32.3 months.

Conclusion: Despite advances in endoscopic techniques, external approaches to the FS remain a valuable option for select complex cases. Titanium meshes provide a safe and effective option for anterior wall reconstruction, ensuring minimal morbidity and excellent aesthetic outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







4082

Response to tezepelumab treatment among patients with severe, uncontrolled chronic rhinosinusitis with nasal polyps: results from the WAYPOINT study

Claire Hopkins[1], Joseph K Han[2], Brian J Lipworth[3], Martin Desrosiers[4], Stella E Lee[5], Joaquim Mullol[6], Oliver Pfaar[7], Andrew Foster[8], Ting Li[9], Claudia Chen[10], Gun Almqvist[11], Mary Kay Margolis[12], Julie McLaren[13], Shankar Jagadeesh[14], Vaishali S Mankad[9], Lila Bahadori[14], Sandhia S Ponnarambil[15]

[1]Department of Otolaryngology-Head and Neck Surgery, Guys and St Thomas' Hospital, London, UK, [2]Department of Otolaryngology, Head and Neck Surgery, Eastern Virginia Medical School, Norfolk, VA, USA, [3]Scottish Centre for Respiratory Research, Ninewells Hospital and Medical School, University of Dundee, Dundee, UK, [4]Division of Otolaryngology, Head and Neck Surgery, Centre Hospitalier de l'Université de Montréal, University of Montreal, Montreal, QC, Canada, [5]Division of Otolaryngology, Head and Neck Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [6]Rhinology Unit & Smell Clinic, Department of Otorhinolaryngology, Hospital Clinic Barcelona, IDIBAPS, CIBERES, University of Barcelona, Barcelona, Catalonia, Spain, [7]Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Marburg, Germany, [8]Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [9]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Durham, NC, USA, [10]Biometrics, Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [11]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden, [12]Patient-centered Science, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [13]Global Clinical Development – Medical, Amgen, Thousand Oaks, CA, USA, [14]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [15]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK

Best Abstract Presentation | ROUND TABLE 17 | ROOM 3 - F6 - Ground Floor | Tuesday, June 24, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is associated with high symptom burden and poor health-related quality of life (HRQoL). In the phase 3 WAYPOINT study (NCT04851964), tezepelumab significantly reduced nasal polyp size and improved nasal congestion severity and other sino-nasal symptoms versus placebo in adults with severe, uncontrolled CRSwNP after 52 weeks. This prespecified exploratory responder analysis evaluated the proportion of total nasal polyp score (NPS), nasal congestion score (NCS) and Sino-Nasal Outcome Test (SNOT)-22 score responders in WAYPOINT.

Methods: Eligible adults were randomized (1:1) to tezepelumab 210 mg or placebo subcutaneously every 4 weeks for 52 weeks. The proportion of responders for endoscopic total NPS, biweekly mean NCS and SNOT-22 total score were assessed at week 52. Responders were defined as patients with: ≥1-point or ≥2-point reduction in NPS (because there is no validated minimal clinically important difference [MCID]), ≥1-point reduction in NCS and ≥8.9-point reduction in SNOT-22 total score (both based on MCID).

Results: Patients received tezepelumab (n=203) or placebo (n=205). A greater proportion of patients receiving tezepelumab versus placebo were responders for NPS (≥1-point reduction, 79.3% vs 31.7%, respectively; ≥2-point reduction, 63.5% vs 19.0%, respectively), NCS (73.4% vs 33.2%, respectively) and SNOT-22 total score (82.8% vs 46.3%, respectively) (Table).

Conclusions: A greater proportion of tezepelumab than placebo recipients were responders across the endpoints assessed, indicating improvements in nasal polyp size, sino-nasal symptoms, and HRQoL with tezepelumab treatment. These data support the clinical meaningfulness of the WAYPOINT results and reinforce tezepelumab's efficacy in adults with severe, uncontrolled CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Biologics 4

4107

Mepolizumab Is Efficacious in Patients With Chronic Rhinosinusitis With Nasal Polyps (CRSwNP) With One or Multiple Prior Nasal Polyps (NP) Surgeries: SYNAPSE Outcomes

Joaquim Mullol[1], Joseph K. Han[3], Laura Walrave[4], Martin Wagenmann[7], Lingjiao Zhang[8], Ana R. Sousa[9], Peter Howarth[10], Claire Hopkins[11]

[1]Department of Otorhinolaryngology, Hospital Clínic Barcelona, [2]Department of Otorhinolaryngology, Hospital Clínic Barcelona, FRCB-IDIBAPS, Barcelona, Spain, [3]Eastern Virginia Medical School, Norfolk, VA, USA, [4]Global Medical, Specialty Care, GSK, Wavre, Belgium, [5]Department of Otolaryngology Head and Neck Surgery, Eastern Virginia Medical School, Norfolk, VA, USA, [6]Department of Otorhinolaryngology, Hospital Clínic Barcelona, FRCB-IDIBAPS, [7]Hals-Nasen-Ohren-Klinik, Heinrich-Heine-Universität Düsseldorf, Düsseldorf, Germany, [8]Respiratory Biostatistics, GSK, Collegeville, PA, USA, [9]Clinical Sciences, Respiratory & Immunology Unit, GSK, [10]Global Medical, Specialty Care, GSK, London, UK, [11]ENT Department, Guy's and St Thomas's NHS Foundation, London, UK

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: The Phase III SYNAPSE trial found mepolizumab significantly reduces risk of repeat sinus surgery in patients with CRSwNP. We compared mepolizumab's impact in patients with 1, versus >1, prior NP surgery.

Material & Methods: SYNAPSE randomized patients 1:1 to receive subcutaneous mepolizumab 100 mg, or placebo, alongside standard-of-care. Key patient-reported-outcomes and clinical endpoints were assessed post-hoc at Week-52 for patients with 1/>1 prior NP surgery.

Results: Overall, 189 and 218 patients had 1 and >1 prior surgery, respectively (108 and 98 received mepolizumab; 81 and 120 received placebo, respectively). In the 1 and> prior surgery subgroups, mepolizumab significantly improved mean change from baseline in NP score versus placebo: -0.71(p=0.002) and -0.84(p<0.001), respectively. In both subgroups, mepolizumab significantly improved mean change from baseline versus placebo in nasal obstruction visual analog scale (VAS) score (-1.52,p=0.002 and -1.82,p<0.001); smell VAS score (-1.37,p=0.006 and -1.31,p=0.001); overall symptom VAS score (-1.50,p=0.002 and -1.88,p<0.001), and Sino-Nasal Outcome-Test-22 (SNOT-22) score (-14.00,p<0.001 and -13.01,p<0.001).Mepolizumab reduced time-to-first-surgery by 73% and 39% versus placebo in the 1 and> prior surgery subgroups (hazard ratio [95% CI]: 0.27[0.10,0.69],p=0.006 and 0.61[0.30,1.23],p=0.168, respectively). Additionally, there was a 63% and 6% reduction in requiring ≥1 oral corticosteroid (OCS) course (odds ratio [95% CI]: 0.37[0.18,0.76],p=0.007 and 0.94[0.49,1.79],p=0.841, respectively).

Conclusions: Mepolizumab significantly improves outcomes in patients with CRSwNP with 1 or multiple prior NP surgeries, with more pronounced benefits in surgery risk and OCS use in patients with 1 prior surgery.Funding: GSK [205687/NCT03085797]Abstract previously presented at AAAAI 2025 (Poster #920)

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4115

Indication for biologics in a real-world cohort of dupilumab treated chronic rhinosinusitis with nasal polyps patients according to international recommendations: Evidence from the European CRS Outcome Registry (CHRINOSOR)

Geoffrey Mortuaire[1], Giulia Bettio[2], Carlo Cavaliere[3], Sietze Reitsma[4], Sven Schneider[5], Alexandros Adrianakis[6], Peter-Valentin Tomazic[6], Martin Wagenmann[7], Ciofalo Andrea[3], Zuzana Diamant[8], Julia Eckl-Dorna[5], Wytske Fokkens[4], marco de Vincentiis[3], Clemens Holzmeister[6], Gert Mariën[2], Simonetta Masieri[9], Josje Otten[4], Kathrin Scheckenbach[7], Aldine Tu[5], Claus Bachert[10], Sven Seys[11], de Kinderen Joost[2]

[1]Otorhinolaryngology-Head and Neck Department, Huriez Hospital, Centre Hospitalier Universitaire (CHU) Lille, Lille, France, [2]Galenus Health, Hasselt, Belgium, [3]Department of Sense Organs, Sapienza University, Rome, Italy, [4]Department of Otorhinolaryngology and head/neck surgery, Amsterdam University Medical Centre, University of Amsterdam, Amsterdam, The Netherlands, [5]Department of Otorhinolaryngology, Head and Neck Surgery, Vienna General Hospital (AKH), Medical University of Vienna, Vienna, Austria, [6]Department of General ORL, Head and Neck Surgery, Medical University of Graz, Graz, Austria, [7]Department of Otorhinolaryngology, Universitätsklinikum Düsseldorf (UKD), Dusseldorf, Germany, [8]Allergy and Clinical Immunology Research Group, Department of Microbiology, Immunology & Transplantation, KU Leuven, Belgium, [9]Department of Oral and Maxillofacial Sciences, Sapienza University, Rome, Italy, [10]Clinic for ENT diseases and Head and Neck Surgery, University Clinic Münster, Münster, Germany , [11]Hippo Dx, Hasselt, Belgium

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Background: Applied criteria for biologic treatment of uncontrolled severe chronic rhinosinusitis with nasal polyps (CRSwNP) differ across international recommendations and prescription of biologics further depends on national guidelines and reimbursement criteria. The CHRINOSOR registry offers an opportunity to analyse biologic indications in the real-world setting according to international recommendations.

Methods: CRSwNP patients who received dupilumab (n=752) in the ENT clinic of 6 tertiary centres (5 countries) were included. Baseline demographic and lifestyle factors, NP score, SinoNasal Outcome Test-22 score, visual analogue scale for sinus symptoms, and Asthma Control Test score were retrieved from the medical records. Biologic indication criteria according to EUFOREA 2021, and EPOS/EUFOREA 2023 recommendations were applied. Dupilumab effectiveness was assessed at baseline, 24 and 52 weeks in relation to these criteria. Results: 61.8% and 79.8% of patients met respectively the EUFOREA 2021 or the EPOS/EUFOREA 2023 indication criteria for biologic treatment. Dupilumab was effective in patients who met or did not meet international criteria for biologic indication. However, patients who met the indication criteria showed overall a more pronounced effect on most of the outcome parameters than patients who did not meet the criteria.

Conclusions: Real-world management of CRSwNP with biologics does not strictly follow the indication criteria established by international recommendations but depends on management criteria established by local authorities. These vary significantly and are either more or less stringent from one country to another. Significant effectiveness of dupilumab, whether these criteria are met or not, suggests that a broader CRSwNP population may benefit from dupilumab.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4163

Twice-Yearly Depemokimab Demonstrates Enhanced SNOT-22 Outcomes Among Patients with Baseline SNOT-22 Score ≥40 in the Phase III ANCHOR-1/2 Studies

Nesil Keles Turel[1], Martin Desrosiers[2], Oliver Pfaar[3], Philippe Gevaert[4], Richard Follows[5], Prerna Ranganathan[6], Laura Walrave[7], Peter Howarth[8], Joseph K. Han[9]

[1]Istanbul Faculty of Medicine, Department of Otorhinolaryngology, Division of Head and Neck Surgery, Istanbul University, *[2]University of Montreal Hospital Center and Research Center Surgery, Université de Montréal*, *[3]Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg*, *[4]Upper Airways Research Laboratory, Department of Head and Skin, Ghent University*, *[5]Clinical Sciences, Respiratory & Immunology Unit, GSK*, *[6]Biostatistics, Respiratory & Immunology Unit, GSK*, *[7]Global Medical, Specialty Care, GSK*, *[8]Global Medical Affairs, GSK*, *[9]Department of Otolaryngology Head and Neck Surgery, Eastern Virginia Medical School*

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Depemokimab is the first ultra-long-acting biologic with enhanced interleukin-5 binding affinity, high potency and an extended half-life, enabling sustained inhibition of type 2 inflammation and twice-yearly dosing. EPOS/EUFOREA 2023 indicate a SNOT-22 score ≥40 as significantly impacted quality-of-life and criterion for biologic treatment for CRSwNP. Here, we describe SNOT-22 outcomes among patients with inadequately controlled CRSwNP from the Phase III ANCHOR-1/2 trials.

Material & Methods: Adults were randomised to receive either depemokimab (100 mg subcutaneous) or placebo, each with standard of care, once every 26 weeks over 52 weeks. There was no baseline SNOT-22 inclusion criterion. Outcomes at Week 52 included mean change from baseline and mean/median treatment differences in change from baseline. Outcomes were assessed among subgroups with baseline SNOT-22 scores <0/≥40 in the integrated population and were post hoc.

Results: Overall, 517/528 patients had SNOT-22 data; 106 (depemokimab, n=58; placebo, n=48) and 411 (depemokimab, n=208; placebo, n=203) had baseline SNOT-22 scores of <0 and ≥40, respectively. Least squares mean changes (standard error) from baseline in SNOT-22 were greater among patients with baseline SNOT-22 ≥40 (depemokimab: -20.4 [2.44]; placebo: -10.3 [2.46]) than <0 (depemokimab: 6.3 [4.61]; placebo: 11.8 [5.09]), with corresponding mean (95% confidence interval; ≥40: -10.1 [-16.9, -3.3]; <0: (-5.6 [-19.0, 7.9]) and median treatment differences (≥40: -10.6 [-17.0, -4.3]; <0: (-4.1 [-13.9, 5.6]).

Conclusions: Greater improvements were seen in SNOT-22 scores among depemokimab-treated patients versus placebo at Week 52, with enhanced outcomes observed among patients with SNOT-22 baseline scores ≥40. Funding: GSK (217095/218079; NCT05274750/NCT05281523).



4156

Enhanced in vitro potency of depemokimab for interleukin-5 inhibition versus mepolizumab

Peter Howarth[1], David J. Jackson[3], Parmjit Bahra[4], Karen Affleck[4], James Zangrilli[5], Tricia Finney-Hayward[2], Dave Singh[6]

[1]Global Medical Affairs, GSK, Brentford, Middlesex, UK, *[2]Global Medical Affairs, GSK*, *[3]Guy's Severe Asthma Centre, School of Immunology & Microbial Sciences, King's College London*, *[4]Respiratory Immunology Biology Unit, GSK*, *[5]Clinical Science, GSK*, *[6]Medicines Evaluation Unit, University of Manchester, Manchester University NHS Foundation Trust*

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

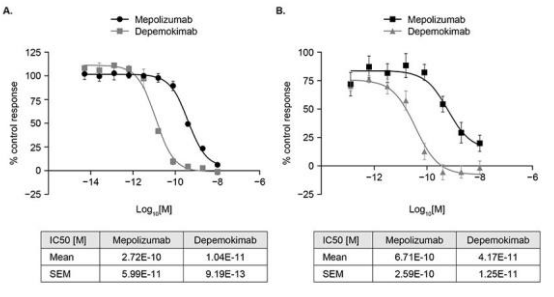
Introduction: Depemokimab is the first and only humanised anti-IL-5 antibody with enhanced binding affinity and high potency, resulting in an extended half-life, enabling 6-monthly dosing and sustained inhibition of broad inflammatory function. The aim of this study was to assess the relative potency of depemokimab and mepolizumab in vitro using 2 different cell types.

Material and methods: TF-1 cell (human erythroleukaemia cell line expressing IL-5R) proliferation and IgE receptor (IgER)-mediated degranulation of human blood basophils was assessed following incubation with submaximal concentration (EC80) of IL-5 complexed with increasing concentrations of mepolizumab or depemokimab.

Results: At submaximal IL-5 concentrations, depemokimab achieved a 24.9-fold (range 11.7–39.5) higher inhibition of IL-5-driven TF-1 cell proliferation and 31.0-fold (range 7.5–76.7) higher inhibition of IL-5-enhanced IgER-mediated basophil degranulation versus mepolizumab (Figure).

Conclusion: Depemokimab demonstrated substantially higher potency than mepolizumab for both inhibition of IL-5-mediated proliferation in a human cell line and IgER-mediated human basophil degranulation. Depemokimab's high affinity for IL-5 with resultant enhanced functional potency and prolonged half-life provide a mechanistic basis for understanding its clinical effects. The clinical implications are currently under investigation in randomised controlled trials.Funding: GSK Abstract previously presented at European Respiratory Society (ERS) 2024 congress. Eur Respir J. 2024; 64 (suppl 68): OA3644;10.1183/13993003.congress-2024.OA3644

Figure: (A) Inhibition of IL-5-driven TF-1 cell proliferation by depemokimab and mepolizumab versus submaximal IL-5*; (B) basophil degranulation (β-hexosaminidase release) versus sub-maximal IL-5*



IC50 [M]	Mepolizumab	Depemokimab
Mean	2.72E-10	1.04E-11
SEM	5.99E-11	9.19E-13

IC50 [M]	Mepolizumab	Depemokimab
Mean	6.71E-10	4.17E-11
SEM	2.59E-10	1.25E-11

*0.7 ng/ml;
(A) data are representative of n=6 experiments, mean ± SD. IC50 values are mean ± SEM (n=6); (B) data represent triplicate technical repeat measures per donor (n=3–4 donors), mean ± SEM. IC50 values are mean ± SEM (n=3–4).
IC50, half-maximal inhibitory concentration; SD, standard deviation; SEM, standard error of the mean.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4131

One Year Mepolizumab Outcomes In Severe, Uncontrolled CRSwNP: A Real-Life Study

Marco Corbò[1], Eugenio De Corso[1], Gabriele De Maio[1], Claudio Montuori[1], Leandro Maria D'Auria[1], Alberta Rizzuti[1], Rodolfo Mastrapasqua[2], Camilla Spanu[1], Serena Pisciottano[1], Giuseppe D'Agostino[1], Augusta Ortolan[3], Angela Rizzi[4], Jacopo Galli[5]

[1]1. Unit of Otorhinolaryngology and Head-Neck Surgery; "A. Gemelli" Hospital Foundation IRCCS, Rome, Italy., *[2]ENT Department, Rivoli Hospital, ASL TORINO 3, Torino, Italy, 10098*, *[3]Department of Rheumatology, Fondazione Policlinico Agostino Gemelli IRCSS, 00168 Rome, Italy*, *[4]UOSD Allergologia e Immunologia Clinica, Dipartimento Scienze Mediche e Chirurgiche, Fondazione Policlinico Universitario A. Gemelli IRCCS, 00168 Rome, Italy.*, *[5]1. Unit of Otorhinolaryngology and Head-Neck Surgery; "A. Gemelli" Hospital Foundation IRCCS, Rome, Italy*

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Mepolizumab is a targeted, humanized anti-IL-5 mAb that prevents interleukin (IL)-5 from binding to its receptor on eosinophils. This study aimed to evaluate the effectiveness of mepolizumab in the treatment of severe, uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP) as add-on therapy to intranasal corticosteroids (INCS) in a real-life setting over the first year of treatment.

Methods: We included 50 patients (28 males; mean age: 56.4 years, range 35-77) who received mepolizumab 100 mg every 4 weeks. The primary objective of this study was to evaluate the reduction in nasal polyp size and improvement in patients' quality of life, measured through symptom-based questionnaires. The secondary objective was to evaluate improvements in smell dysfunction, severity of comorbidities, blood eosinophilia, and the need for surgery or systemic steroids.

Results: After 12 months of treatment, the median nasal polyp score (NPS) decreased from 5 (interquartile range [IQR] 4-5.25) to 2 (IQR 4-1) ($p < 0.05$) and the mean sino-nasal outcome test-22 (SNOT-22) score decreased from 58.4.±21 to 26.1±17.5 ($p < 0.05$). Olfaction only slightly improved with a median VAS olfaction score decreasing from 10 (IQR 10-8.5) at baseline to 6 (IQR 9-2) at 12 months ($p < 0.05$). Seven patients (14%) required rescue treatment with systemic steroids for manage exacerbations and six patients (12%) required endoscopic sinus surgery.

Conclusions: The results support the use of mepolizumab as an effective option in the current standard of care for patients affected by severe, uncontrolled CRSwNP especially in decreasing nasal polyps' size and improving quality of live, although only a slightly impact was observed on recovery of smell.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4167

Characterization of PAPP-A patterns in chronic rhinosinusitis (CRS)

Afaf Ennahal[1], Vanessa Pesold[1], Olaf Wendler[1], Sarina Müller[1]
[1]ENT-Hospital, Head and Neck Surgery, Friedrich-Alexander University Erlangen-Nürnberg (FAU), Erlangen, Germany

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Previous findings from our group demonstrated high-level expression of the protein PAPP-A and the associated IGFBP/IGF cascade in CRSwNP, which is known to be involved in inflammatory diseases and cancer. The aim of this study was to localize PAPP-A in CRS, within inflammatory and different primary cells.

Methods: PAPP-A was localized by immunohistochemistry (IHC) in tissues of CRSwNP (n=59) and CRSsNP patients (n=12) as well as in controls (n=12). The data of eosinophil abundance in CRSwNP tissues was obtained from routine pathology. ELISA was used to quantify PAPP-A and ECP non-invasively in CRSwNP mucus (n=67). On a cellular level, PAPP-A was localized by immunofluorescence (IF) in immune and primary cells from CRSwNP (n=32).

Results: PAPP-A levels in CRSwNP tissue could be distinguished into three patterns, which was significantly correlated to the eosinophil abundance ($p<0.0001$). Moreover, ECP and PAPP-A proved a significant correlation in CRSwNP mucus ($p<0.0001$). In contrast, PAPP-A showed only minimal expression in CRSsNP and in control tissues. Analyzing different immune cells, PAPP-A was highly expressed in eosinophils, in unspecified subpopulation of T-cells and moderately in mast cells. IF showed a vesicular distribution shape of PAPP-A in the cytoplasm of epithelial and fibroblast cells from CRSwNP.

Discussion: Our work is the first to illustrate PAPP-A expression on a tissue and cellular level in CRS. The three distinct patterns of PAPP-A1 found in CRSwNP were significantly linked to the distribution of eosinophils. Consequently, targeting the PAPP-A/IGFBPs/IGFs-axis may be a potential new therapeutic approach for CRSwNP with high eosinophil abundance.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3858

Real-world effectiveness of mepolizumab in patients with chronic rhinosinusitis with nasal polyps (CRSwNP): Findings from CHRINOSOR

Sven Seys[1], Isam Alobid[2], Joost de Kinderen[1], Valerie Hox[4], Valérie Hox[5], Carlo Cavaliere[6], Alexandros Adrianakis[7], Adriana izquierdo[8], Xavier Gonzalez-Compta[10], Geoffrey Mortuaire[11], Laura Pardo[12], Peter-Valentin Tomazic[7], Sven Schneider[13], Martin Wagenmann[14], Giulia Bettio[1], Andrea Ciofalo[6], Zuzana Diamant[15], Julia Eckl-Dorna[13], Gert Mariën[1], Simonetta Masieri[16], Kathrin Scheckenbach[17], Aldine Tu[13], Camilo Rodriguez van Strahlen[2], Claus Bachert[18]

[1]Galenus Health, Genk, Belgium, [2]Rhinology Unit & Smell Clinic and Skull Base Surgery Unit, Otorhinolaryngology Department, Hospital Clinic Barcelona, Universitat de Barcelona, IDIBAPS, CIBERES, Barcelona, Catalonia, Spain, [3]Galenus Health, Hasselt, Belgium, [4]Department of Otorhinolaryngology, Head and Neck Surgery, Cliniques Universitaires St-Luc, Brussels, Belgium, [5]Cliniques Universitaires Saint-Luc, [6]Department of Sense Organs, Sapienza University, Rome, Italy, [7]Department of General ORL, Head and Neck Surgery, Medical University of Graz, Graz, Austria, [8]Otorhinolaryngology Department, Hospital Universitario de Terrasa, Barcelona, Spain, [9]Hospital Universitario de Terrasa, [10]Otorhinolaryngology Department, Bellvitge Hospital Universitari, Barcelona, Spain, [11]Otorhinolaryngology-Head and Neck Department, Huriez Hospital, Centre Hospitalier Universitaire (CHU) Lille, Lille, France, [12]Otorhinolaryngology Department, Hospital de Pujol, Barcelona, Spain, [13]Department of Otorhinolaryngology, Head and Neck Surgery, Vienna General Hospital (AKH), Medical University of Vienna, Vienna, Austria, [14]Department of Otorhinolaryngology, Universitätsklinikum Düsseldorf (UKD), Dusseldorf, Germany, [15]Allergy and Clinical Immunology Research Group, Department of Microbiology, Immunology & Transplantation, KU Leuven, Belgium, [16]Department of Oral and Maxillofacial Sciences, Sapienza University, Rome, Italy, [17]Düsseldorf University Hospital, Department of Oto-Rhino-Laryngology, [18]Clinic for ENT diseases and Head and Neck Surgery, University Clinic Münster, Münster, Germany

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Background: Phase III studies (SYNAPSE) with mepolizumab demonstrated clinically relevant improvements in nasal polyp score (NPS), symptom and quality of life scores in patients with chronic rhinosinusitis with nasal polyp (CRSwNP).Objective: We evaluated the effectiveness of mepolizumab in a real-world CRSwNP cohort from 10 European tertiary centres in 6 EU countries.

Methodology: Clinically relevant CRS outcome parameters were collected from hospital records and assessed at baseline, 24 and 52 weeks of mepolizumab treatment in 81 CRSwNP patients (83.9% comorbid asthma). Treatment response was evaluated according to EUFOREA 2021 criteria.

Results: NPS, SNOT-22 and symptom scores significantly at 24 and 52 weeks of treatment compared to baseline. Further improvement between 24 and 52 weeks was observed for each of these outcomes. ACT already showed a significant improvement at 24 weeks (57% with ACT20) . 81.1% and 80.6% showed an improvement to at least 1 criterion (change in SNOT-22 8.9, NPS 1, VAS total sinus symptoms 20, VAS nasal blockage 20, VAS loss of smell 20) at 24 and 52 weeks respectively. 10.9% and 52.6% reached all 4 of following more stringent criteria (SNOT-22 <0, NPS <4, VAS total sinus symptoms <0, VAS nasal blockage <0) at 24 and 52 weeks respectively.

Conclusions: A beneficial clinical response to mepolizumab treatment was found in over half of patients at 52 weeks. Notably, patient outcomes continued to improve between week 24 and 52, indicating that prolonged treatment provides additional benefits. Therefore, these findings support the importance of ongoing mepolizumab treatment and highlight the need to assess treatment response at 52 weeks.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4184

Significance of olfactory function in terms of quality of life in CRSwNP patients treated with dupilumab. Real life study.

Kristóf Péter Ludányi[1], Tünde Orosz[2], Balázs Liktor[2], Mária Matuz[3], Vivien Vass[4], Péter Hegyi[5], Eszter Erdélyi[2], Bálint Liktor[2], László Lujber[6], Tibor Szalóki[7], Zoltán Fent[8], Lili Lakatos[2], Gábor Forgács[7], Anna Bódi[2], Csenge Zsiros[9], Ágnes Szalenkó-Tőkés[2], László Tóth[6], Zsuzsanna Horváth[10], Ágnes Kiricsi[11], Zsolt Bella[12], Andor Hirschberg[6], Imre Dóka[7], Helga Kraxner[8]

[1]resident, Ph.D. student , [2]ENT Consultant, [3]Pharmacologist, [4]Register coordinator, [5]Dept. Head, [6]ENT consultant, Ph.D. Med. Habil, [7]assistant lecturer, [8]assistant professor, [9]family medicine resident, [10]ENT consultant, Department Head, [11]ENT consultant Ph.D., [12]ENT consultant Ph.D. Med. habil

CRS – Biologics 4 | ROOM 9 – G6 - Level +1| Tuesday June 24, 2025

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a persistent inflammatory condition of the nasal and sinus mucosa, often associated with significant olfactory dysfunction, profoundly impacting patients' quality of life. Studies indicate that olfactory impairment is one of the most influential disease-specific factors,. Dupilumab, a monoclonal antibody, has emerged as an effective treatment for CRSwNP. This study aims to evaluate the real-world efficacy of dupilumab treatment in terms of olfactory function and its influence on quality of life.

Data and Methods: This study included 24 patients with CRS who received Dupilumab between December 2021 and May 2024. Symptom severity was assessed using the SNOT-22 questionnaire, while olfactory function was evaluated with the Sniffin' Sticks Test (TDI scores) at baseline and follow-up visits. Data analysis focused on changes in SNOT-22 scores and olfactory performance over the treatment period.

Results: Patients were evaluated at multiple time points following Dupilumab treatment (categorized into 6, 12, 18, 24 months). At each visit, TDI scores and the five SNOT-22 domains were recorded. Significant correlation was revealed between TDI improvement and the smell score of SNOT-22 (R=-0.6 p=0.004) while no correlation with total nasal domain. Additionally, overall TDI improvement and its sub score threshold (T) component correlated with the reduction in facial/ear domain scores (R=0.53 p=0.014; R=0.47 p=0.031, respectively), while T score did also with sleep domain (R=0,44 p=0,046).

Conclusions: These findings highlight olfactory function as a key therapeutic target in CRSwNP management and support its role in QoL improvement with dupilumab in real-world clinical settings.



Diagnosis and Investigations 1

3621

Tissue Eosinophils Threshold and Its Association with Adult-Onset Asthma in Chronic Rhinosinusitis

Wirach Chitsuthipakorn[1], Patlada Kowatanamongkon[2], Kornkiat Snidvongs[3], Potjanee Korrungruang[1], Nutpacha , Chotikawichean[1], Dichapong Kanjanawasee[4], Kittichai Mongkolkul[1]

[1]Rajavithi Hospital, [2]Rangsit University, [3] Chulalongkorn University, , [4]Mahidol University

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Tissue eosinophil counts (TEC) might serve as a biomarker linking chronic rhinosinusitis (CRS) and the presence of adult-onset asthma. This study aimed to determine if TEC in nasal mucosa/polyps in CRS patients is an independent predictor of asthma and to identify its optimal cut-off point.

Methods: This cross-sectional study was conducted on primary CRS patients scheduled for surgery. All patients were assessed by a pulmonologist for asthma diagnosis. Tissues were collected during surgery and evaluated for TEC. Logistic regression and ROC analysis were used to determine significant predictors and the optimal cut-off points of TEC associated with asthma.

Results: A total of 103 CRS patients were included. Ten patients (9.7%) had underlying asthma, while thirteen (12.6%) were first diagnosed by the pulmonologist. TEC ≥ 40 cells per high-powered field (HPF) exhibited a significant correlation with asthma (area under the curve = 0.71, $p < 0.001$). The sensitivity of this cut-off point was 0.70 (95% confidence interval [CI] = 0.47 - 0.87), and specificity was 0.66 (95% CI = 0.55 - 0.76). Positive predictive value and negative predictive value were 0.37 and 0.88, respectively. The cut-off point significantly predicted asthma, with an adjusted odds ratio of 3.11 (95% CI = 1.06 - 9.10, $p = 0.04$), controlling for CRS phenotype.

Conclusion: TEC in CRS patients can be used to predict adult-onset asthma. Eosinophils ≥ 40 cells/HPF is the optimal threshold for predicting.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3679

BREATHE: A Machine Learning Algorithm For Accurate Prediction of Eosinophilic Chronic Rhinosinusitis

Lin Kao Tsung[1], Hou You-Ren[2], Yi-Tsen Lin[1], Lee Ming-Sui[2]
[1]National Taiwan University Hospital, [2]Department of Computer Science and Information Engineering, National Taiwan University

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: The diagnosis of eosinophilic chronic rhinosinusitis (ECRS) relies on invasive histological examination of sinonasal specimens. Clinically, predicting ECRS prior to biopsy is beneficial for establishing treatment strategy. To address this, we developed a machine learning algorithm, BREATHE, which analyzes CT imaging and hematologic markers to predict ECRS.

Methods: CT images were collected from 158 patients, including 102 ECRS and 56 non-ECRS patients. Hematologic markers, comprising eosinophil percentage (EOS%), eosinophil count (EOS#), and eosinophil-to-neutrophil ratio (EN ratio), were also obtained. The BREATHE (Boosted Rhinosinusitis Evaluation Algorithm Through Hematology and Ethmoid-Maxillary Analysis) algorithm was developed, and processed the CT images through the following steps: candidate image selection, bone extraction, orbit detection, and sinus segmentation. The difference in hyperdense area (i.e., obstruction ratio differences) between the ethmoid and maxillary sinuses was calculated and recorded as the ethmoid-maxillary subtraction (EMS). The predictive performance of the EMS, hematologic markers and the combination of these parameters were compared using different machine learning models, including logistic regression, support vector machines and random forest, to determine the best-performing parameters and models for the algorithm.

Results: The combination of the EMS and EN ratio achieved the highest predictive performance for ECRS, with an AUC of 0.901, sensitivity of 0.850, and specificity of 0.909, when using both the logistic regression and random forest models.

Conclusion: BREATHE is an innovative, machine learning-based algorithm for ECRS prediction by analyzing CT imaging and hematologic markers. This approach offers improved diagnostic accuracy and may facilitate clinical management of ECRS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3781

Primary ciliary dyskinesia: phenotype-genotype correlation for nasal polyps

Jean Francois Papon[1], Mihaela Dana Alexandru[2], Margaux Campion[1], Baptiste Grenier[1], Valentine Nicolas[1], Estelle Escudier[3], Farida Benoudiba[4], Rana Mitri-Frangieh[5], Bernard Maitre[6], Isabelle Honore[7], Bruno Crestani[8], David Montani[9], Antoine Beurnier[10], Marie Legendre[12]

[1]Department of Otorhinolaryngology, Bicêtre Hospital, Assistance Publique–Hôpitaux de Paris (AP–HP), Paris-Saclay University, 78, rue du Général-Leclerc, 94270 Le Kremlin-Bicêtre, France 2. UMR_S933 Childhood genetic diseases, INSERM, Sorbonne Université, Hôpital Armand-Trousseau, 75012 Paris, France. , [2]Department of Otorhinolaryngology, Bicêtre Hospital, Assistance Publique–Hôpitaux de Paris (AP–HP), Paris-Saclay University, 78, rue du Général-Leclerc, 94270 Le Kremlin-Bicêtre, France. UMR_S933 Childhood genetic diseases, INSERM, Sorbonne Université, Hôpital Armand-Trousseau, 75012 Paris, France. , [3]UMR_S933 Childhood genetic diseases, INSERM, Sorbonne Université, Hôpital Armand-Trousseau, 75012 Paris, France. , [4]Department of Neuroradiology, Bicêtre Hospital, Assistance Publique–Hôpitaux de Paris (AP–HP), Paris-Saclay University, 78, rue du Général-Leclerc, 94270 Le Kremlin-Bicêtre, France , [5]Department of Anatomy and Cytology Pathology, Intercommuncal Hospital of Créteil, 94010 Créteil, France, [6]Pneumology Department, Henri Mondor Hospital, Intercommuncal Hospital of Créteil, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris Est University, 94010 Créteil, France. Mondor Institute of Biomedical Research INSERM-UPEC UMR 955, CNRS ERL7000, 94010 Créteil, France., [7]Pneumology Department, Cochin Hospital, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris Cité University, 75014 Paris, France, [8]Rare Pulmonary Diseases (FHU APOLLO) Pneumology A Department, Bichat Hospital, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris Cité University, 75877 Paris, France. Laboratory of Excellence Inflamex, 75013 Paris, France. INSERM U1152, Paris Cité University, 75018 Paris, France, [9]Université Paris-Saclay, AP-HP, Service de pneumologie et soins intensifs respiratoires, Hôpital de Bicêtre, DMU 5 Thorinno, Inserm UMR_S999, Le Kremlin-Bicêtre, France., [10]Université Paris-Saclay, AP-HP, Service de physiologie et d'explorations fonctionnelles respiratoires, Hôpital de Bicêtre, DMU 5 Thorinno, Inserm UMR_S999, Le Kremlin-Bicêtre, France, [11]ENT Department, Bicêtre Hospital, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris-Saclay University, 94270 Le Kremlin-Bicêtre, France, [12]Molecular Genetics Laboratory, Sorbonne Université, Assistance Publique - Hôpitaux de Paris (AP-HP), Hôpital Armand Trousseau, Paris 75012, France. Sorbonne Université, INSERM, Childhood Genetic Disorders, Paris 75012, France.

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Background: Primary ciliary dyskinesia (PCD) is a rare genetic disorder that manifests as a sino-pulmonary syndrome. Ninety-five percent of adult patients present with chronic rhinosinusitis (CRS), accompanied by nasal polyps in 30%, (CRSwNP). To date, there has been no study that has characterized CRSwNP in PCD. We aimed to analyze the relationship between CRSwNP and the genes involved in PCD.

Methods: Data from PCD patients followed between June 2021 and January 2023 were collected retrospectively. Patients were classified according to the theoretical axonemal abnormality caused by the PCD gene involved.

Results: A total of 73 patients with a confirmed genetic diagnosis of PCD were included. Patients with CRSwNP had significantly more endoscopic sinus surgery history and a higher modified Lund-Mackay score. There was no difference in nasal symptoms or quality-of-life score. A multivariate logistic regression analysis showed that patients with genotypes causing dynein arms defect had significantly more CRSwNP than the others.

Conclusions: This study showed a correlation between the gene involved and the rhinologic phenotype of patients with PCD. Patients with dynein arms defect have a higher risk of developing CRSwNP. However, CRSwNP is usually moderate and does not significantly impact quality of life. Our results provide a better understanding of the pathophysiology of nasal disease in PCD, paving the way for personalized therapy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3622

Fluctuation of Tissue Eosinophils in Chronic Rhinosinusitis with Nasal Polyp

Wirach Chitsuthipakorn[1], Kunjira Sombutpiboonphon[2], Kornkiat Snidvongs[3], Saranath Lawpoolsri[4], Nutpacha Chotikawichean[5], Patlada Kowatanamongkon[5], Kittichai Mongkolkul[5]

[1]College of Medicine. Rangsit University., *[2]Center of Excellence in Otolaryngology, Head & Neck Surgery. Rajavithi Hospital, Bangkok, Thailand; Rangsit University*, *[3]Chulalongkorn University*, *[4]Department of Tropical Hygiene, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand*, *[5]Rajavithi Hospital*

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Tissue eosinophil count (TEC) is recommended for defining type 2 CRSwNP. TEC is usually assessed by a one-time polyp biopsy. Since TEC may change over time, its reliability for diagnosing type 2 CRSwNP has not been previously assessed. This study aims to explore whether TEC fluctuates across different time points.

Methods: Adult patients with CRSwNP were prospectively recruited. Participants who had used any form of steroids within 4 weeks were excluded. Polyps were taken for TEC evaluation upon recruitment and repeated at 3 and 6 months. Participants were assessed using SNOT-22, LKES, serum eosinophil count, and its percentage at each time point.

Results: Thirty-seven participants were enrolled. The medians (quartile 1-3) of TEC were 17 (4-53.5), 19 (5-47.5), and 21 (4.5-51) cells/high-powered field at 0, 3, and 6 months, respectively. Friedman's two-way ANOVA showed no statistical differences across the three time points for TEC ($p=0.53$), serum eosinophil counts ($p=0.61$), serum eosinophil percentages ($p=0.23$), SNOT-22 ($p=0.21$), or LKES ($p=0.23$). TEC significantly correlated with serum eosinophil counts at 0 and 3 months and with serum eosinophil percentages at 0, 3, and 6 months (all $p<0.05$).

Conclusion: The study showed that TEC did not significantly fluctuate over time, aligning with serum eosinophil levels, SNOT-22, and LKES. This stability within the 6-month period supports the reliability of TEC from a single biopsy for clinical use in managing CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3645

Cross-Cultural Validation of the Chronic Rhinosinusitis Patient-Reported Outcomes (CRS-PRO) Questionnaire in Portuguese

Andre Sousa-Machado[1], Castanheira Antonio[1], Fernandes Rafaela[1], Mariana Cascao[1], Leigh Sowerby[2]

[1]ULSTMAD, [2]University of Western Ontario

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Chronic rhinosinusitis (CRS) presents with different clinical patterns with variable responses to treatment. Clear criteria for specifying disease severity and assessing symptom control are lacking in the current literature. We aimed to perform a cross-cultural adaptation of the chronic rhinosinusitis patient-reported outcomes (CRS-PRO), creating a Portuguese version to use as a routine questionnaire in the evaluation of patients with CRS.

Methods: The CRS-PRO questionnaire was translated according to the recommendations of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) through a three-step procedure including a backward translation.

Results: After translation completion, the questionnaire was evaluated in 40 participants (23 men) who completed the questionnaire on two separate occasions in 1.4 minutes (SD 0.615). Twenty of them were patients with CRS (60% with polyps), and the other 20 were healthy subjects who were considered a control group. The average age of the study participants was 43 years old (SD 16). The intraclass correlation coefficient (ICC) values for the CRS with nasal polyps (CRSwNP) group ranged from 0.65 to 0.89, indicating good to excellent reliability across the 12 items. All ICC values were statistically significant ($p < 0.01$).

Conclusion: This study presents the Portuguese version of the CRS-PRO questionnaire, an adapted, validated, and well-accepted instrument for evaluating CRS symptoms in the Portuguese-speaking population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3661

Development and validation of the Sinonasal Endoscopic Score (SiNES) for chronic rhinosinusitis

Bader Alim[1], Amin Javer[2], Saad Alsaleh[3], Juan Carlos Hernaiz[2]

[1]Department of Rhinology Endoscopic Sinus and Skull Base Surgery, Price Mohammed Bin AbdulAziz Hospital, Medina, Saudi Arabia, *[2]Department of Rhinology Endoscopic Sinus and Skull Base Surgery, University of British Columbia, Canada*, *[3]Department of Rhinology Endoscopic Sinus and Skull Base Surgery, King Saud University Medical City, Saudi Arabia*

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Background: Although there are several endoscopic grading systems for chronic rhinosinusitis (CRS), they are limited in their range and applicability. In this study, we developed a SiNonasal Endoscopic Score (SiNES) that builds upon the strengths of previous systems while directly addressing their limitations.

Methods: The SiNES system was developed by consensus after multiple rounds of guided discussions. Face, content, and convergent validity were investigated. The system was validated using an independent sample of 79 CRS individuals from two referral centres from September 2021 to February 2022. Each patient underwent a sinonasal endoscopy and filled out multiple PROM questionnaires. Videos were graded using the SiNES and modified Lund-Kennedy (MLK) scores by three independent rhinologists. Inter-rater and test-retest reliability were assessed via the intraclass correlation coefficient (ICC). SiNES and MLK scores were correlated with PROMs using a Spearman correlation.

Results: The resulting SiNES system evaluates independent sinonasal anatomical spaces regarding edema, discharge, and scarring. Face, content, and convergent validity were deemed satisfactory by the study authors and an independent panel of Otolaryngologists. Inter-rater reliability was excellent for the SiNES (ICC [95% CI]: 0.91 [0.87 to 0.94]) and good for the MLK score (ICC [95% CI]: 0.82 [0.73 to 0.88]). Test-retest reliability was excellent for both systems (ICC>.9 for all reviewers). No correlation was seen between endoscopic scores PROMs.

Conclusions: The SiNES system is an accurate and reliable grading framework applicable to any type of CRS. It can be utilized in clinical and research settings and improves upon previously published systems.



3719

Clinical and microbiological quantitative PCR analysis of confirmed odontogenic sinusitis of endodontic origin with and without oroantral communication.

Marta Kwiatkowska[1]

[1]Department of Otolaryngology and Oncological Laryngology with Division of Cranio-Maxillo-Facial Surgery; Military Institute of Medicine – National Research Institute, Warsaw, Poland

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: Odontogenic sinusitis (ODS) is a subtype of chronic sinusitis caused by dental infections. Typically involves maxillary sinus (MS) and presents unilaterally. Microbiological profiles of ODS using advanced molecular methods like polymerase chain reaction (PCR) and high-throughput sequencing was rarely studied. The aim of the study was to investigate the correlations between bacterial load in sinus' and periapical lesion's samples with demographic, clinical, endoscopic and radiological variables, and to assess the influence of oroantral communication on microbial concordance between PAL and MS, by focusing on molecular-level analysis.

Material and Methods: 28 included patients were evaluated by both otolaryngologist and dental specialist. Samples for the PCR analysis (sinus mucosal biopsy and tooth socket scrapings) were collected during endoscopic sinus surgery (ESS) with the extraction of causative tooth. Both samples were immediately stored in vials, previously filled with DNAgard Tissue and Cells under sterile conditions. Primer pairs were designed to amplify 16S rRNA.

Results: Total MS opacification was significantly associated with Streptococcus (anginosus or constellatus or intermedius) detection ($p = 0.001$). Fusobacterium nucleatum and Porphyromonas endodontalis, showed trends towards higher prevalence in patients with more severe radiological findings, though these were not statistically significant. Purulent discharge was associated with Fusobacterium nucleatum ($p = 0.026$), Porphyromonas endodontalis ($p = 0.005$) and Streptococci group ($p = 0.001$).

Conclusions: In polymicrobial ODS dominated by anaerobes, specific bacteria correlate with clinical severity markers like purulent discharge and sinus opacifications. Microbial profiling supported by PCR could enhance diagnostic accuracy and guide targeted therapeutic interventions.



3865

Eustachian tube dysfunction symptoms in chronic rhinosinusitis with nasal polyps

Rasads Misirovs[1], Richard Green[2], Brian Lipworth[3]

[1]1. Department of Otorhinolaryngology, Edinburgh, Scotland, EH3 9EN, United Kingdom 2. Department of Doctoral Studies, Riga Stradins University, LV-1007 Riga, Latvia, *[2]Ninewells Hospital & Medical School, Dundee, Scotland, DD1 9SY, United Kingdom*, *[3]Scottish Centre for Respiratory Research, School of Medicine, University of Dundee, Ninewells Hospital, Dundee, DD1 9SY, United Kingdom*

Diagnosis and Investigations 1 | ROOM 10 – G7 - Level +1| Tuesday June 24, 2025

Introduction: While Eustachian tube dysfunction (ETD) is a known comorbidity of chronic rhinosinusitis with nasal polyps (CRSwNP), the prevalence of ETD symptoms in this population is poorly understood. We aimed to identify the prevalence and severity of ETD-associated symptoms in CRSwNP and compared it to a control group.

Methods: Retrospective analysis of patient-reported sinonasal (SNOT-22) and ear (ETDQ-7) symptoms with type-2 markers (peripheral blood eosinophils and total IgE), nasal polyp score (NPS) and Lund-Mackay score (LMS) on computed tomography (CT) in CRSwNP (study group) and non-CRS patients (control group). The control group were patients presenting with symptoms of CRS and ETD with normal endoscopy and CT sinus scan. ETDQ-7 score of ≥14.5 was applied as indicative of ETD as per current evidence.

Results: A total of 94 patients were included in the study – 53 in the CRSwNP group and 41 in the control group. The difference in various demographic variables, type 2 markers, SNOT-22 and ETDQ-7 scores and proportion of ETD between the groups is reported in Table 1. There was no significant difference in SNOT-22, ETDQ-7 and the proportion of patients with ETD between the groups. SNOT-22, SNOT-5, SNOT-22 ear domain and NPS correlated significantly with ETDQ-7 in CRSwNP patients. The SNOT-22 ear domain score is a good predictor for ETD (ETDQ ≥14.5) AUC = 0.76 (95% CI 0.63-0.89), sensitivity of 0.67, specificity of 0.73. The SNOT-22 ear domain score of ≥4 was associated with a greater likelihood for ETDQ score ≥14.5: (OR=1.57 (95% CI 1.18-2.09), p=0.002).

Conclusions: The clinical relevance of the ETDQ-7 questionnaire in CRSwNP is debatable as our findings reveal the presence of elevated scores not only in CRSwNP but also in the control group. Likely ETDQ-7 is not particularly helpful in evaluating ETD symptoms in patients with high SNOT-22 scores. ETDQ-7 without tympanometry is not sufficient to diagnose ETD in patients with CRS symptoms.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Facial Pain – Facial Plastic Surgery Beyond the Nose

3667

The effectiveness of sphenopalatine ganglion block and its assessment to the quality of life in patients of chronic migraine.

Hemanth Vamanshankar[1], Zahra Jaafar Abdulla Ahmed Rashed[1], Hasan Abdulhadi Isa Ali Saeed[1]
[1]*Al Hilal Multispeciality Hospital, Bahrain.*

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Background: Migraine is a multifactorial disorder in which headaches usually last from 4 to 72 hours. Sphenopalatine ganglion blockage (SPGB) has been used as a minimal invasive method for alleviating pain in severe headaches. Aim: We discuss our technique of performing SPGB and assessment of pain relief, before and after its application. We have also made an effort to study the prevalence of depression and quality of life by scoring patients of chronic migraine and assess how SPGB helps to reduce the incidence of depression and quality of life.

Material and methods: Observational and interventional clinical study. Pain scores were recorded using the numeric rating score (NRS) prior to and 15 minutes after SPGB. Patients were also assessed for prevalence of depression and quality of life – based on 2 questionnaires (PHQ-9 and WHO-5) – before and 2 weeks after performing SPGB.

Results: After intervention by SPGB, there was a statistically significant (p value <0.001) reduction of pain, the mean scores reduced from 7.41 +/- 2 to 2.02 +/- 1.57. Improvement in quality of life and a statistically significant reduction of depression scores after intervention were seen. The prevalence of depression significantly decreased after SPGB.

Conclusion: SPGB is a minimally invasive, effective, focused and practical treatment for migraines. Improved quality of life and likelihood of reduction of depressive symptoms after SPGB will also alter the overall well-being of these patients.



4187

Surgeon measures in managing post-operative pain in endoscopic sinus surgery - A systematic review.

Emma Gabriela Mitriu[1], Mads Guldager[1], Christian von Buchwald[1]
[1]*Department of Otolaryngology, Head and Neck Surgery, Rigshospitalet, Copenhagen University Hospital, Denmark*

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Endoscopic sinus surgery (ESS) is a commonly performed procedure, often associated with postoperative pain. Multiple peri-operative pain management strategies exist, but no review has systematically evaluated these different options. This review aims to describe perioperative interventions for pain management in ESS.

Methods: A systematic review was conducted across the databases: PubMed, Embase, Ovid, and Cochrane. Across 451 identified studies, 38 met the inclusion criteria. The studies eligibility for inclusion, and data-extraction was performed by two reviewers using Covidence.

Results: Nasal Packing: Eighteen randomized controlled trials (RCTs) and two observational studies evaluated various packing materials. The studies found that FloSeal and Guardcel reduced discomfort compared to packing with Merocel. Modified Merocel packs (e.g., Manuka honey-coated) made the removal less painful, though overall postoperative pain reduction remained inconsistent. Medications: Topical (levo-)bupivacaine and combined topical-intravenous analgesics significantly reduced pain and diminished the need for postoperative rescue analgesics. Nerve Blocks: Sphenopalatine ganglion blocks provided early pain relief, while maxillary nerve blocks were effective for up to 24 hours postoperatively.

Conclusion: Several perioperative strategies show promise in reducing postoperative pain following ESS. However, heterogeneity in study design and methodologies limits definitive comparisons and conclusions. Future research should focus on standardizing study protocols to enhance comparability and clinical applicability.



3634

Complications and management of tip plasty using 3D Printed Polycaprolactone Plate in Asian

Ji Yun Choi[1]

[1]*Chosun University Hospital & College of Medicine*

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Tip plasty using a septal extension graft (SEG) is useful in the Asian population. However, complications such as decreased tip projection, infection, or deviation are noted post-surgery, and additional support using an SEG is often necessary. We aimed to transplant an additional 3D printed polycaprolactone (PCL) graft to the tip plasty using the SEG to reinforce the SEG.

Methods: The study included 43 patients (20 males and 23 females; mean age, 28.7 years; range, 17–58 years) who received rhinoplasties using the SEG method combined with a 3D printed PCL graft from November 2016 to August 2017. The mean observation period was 14.8 months (range, 12–20 months).

Results: Twenty-six patients rated their satisfaction level as excellent, 13 rated good, 3 rated fair, and 1 rated poor. In total, 28 patients did not exhibit tip drooping at the 1-year follow-up; 13 patients demonstrated mild to moderate tip drooping, and 2 patients demonstrated severe tip drooping. Thirty-one patients demonstrated “stiffness” of the nasal tip, of which 11 patients reported discomfort, and 20 patients reported none; two patients demonstrated deviation of the tip.

Conclusions: The main problem of tip plasty arises in Asians when not enough cartilage is used to raise the nasal tip, or if it is too weak; in these cases, it is difficult to raise the nasal tip sufficiently. A 3D-printed PCL graft to the tip plasty using an SEG to reinforce the SEG and provide additional support to the tip, as well as strengthening and straightening support to the SEG was proposed in this study. However, care needs to be taken to prevent complications such as tip stiffness, tip drooping, deviation, extrusion, and infection. Therefore a PCL graft designed by a 3D printing method can serve as a biocompatible, rhinoplastic, and facial plastic material in the future.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4238

Electrosurgery and CO2 Laser for Rhinophyma Treatment: An Effective Strategy

Bárbara Rodrigues[1], Gonçalo Quadros[1], Márcia Mourão[1], Miguel Silva[1], Miguel Carvalho[1], André Gonçalves[1]
[1]Department of Otorhinolaryngology, Unidade Local de Saúde de Viseu Dão-Lafões, Portugal

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Rhinophyma is an advanced stage of rosacea, characterized by excessive nasal tissue growth, leading to nasal obstruction and deformity of the nasal aesthetic units. Given the limited role of medical treatment, surgical removal is the main approach, with various techniques described. The objective of our study was to describe our treatment strategy based on the combination of electrosurgery and carbon dioxide (CO2) laser.

Material and Methods: An analysis was conducted on 6 cases of rhinophyma treated at our center between 2019 and 2023. The surgical technique involved monopolar diathermy (wire loop tip) for debulking, followed by CO2 laser sculpting. Patients were classified based on the severity of their condition. Objective outcomes were assessed before and after treatment, along with photographic records, while subjective outcomes were evaluated through patient satisfaction questionnaires.

Results: All 6 cases were male, with an average age of 65.7 years (range: 55–77). A history of alcoholism was identified in 4 cases. The surgical wound was cleaned and protected with antibiotic-impregnated gauze daily during the first two weeks. Re-epithelialization occurred within 3–4 weeks by secondary intention. No recurrences were observed during the follow-up period of about 2 years. Patient satisfaction was very high.

Conclusions: The combination of electrosurgery and CO2 laser provides an effective approach, allowing for volume reduction, enhanced nasal contour, and hemostasis. This strategy ensures a clean surgical field, reduces surgery time, and results in excellent aesthetic and functional outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3774

Advancements in Skull Bone Reconstruction Using 3D-Printed patient-specific Titanium Implants

Lujber László[1], Bozsányi Lajos[2], Pásztor Zsolt[3], Kónya János , Szabó Árpád[4] , Marada Gyula[4], Tóth Péter[5], Horváth Zsolt[4], Kövér Zsanett[4]

[1]ENT, H&N Surg. dept. of Pécs University ,[2] Dent-Art-Technik Kft , [3] Premet Kft , [4]Dept. Maxillo Facial Surg., University Pécs, Dept. Neurosurgery Univ. Pécs[5,]

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: Skull bone reconstruction presents a significant challenge in craniofacial surgery, particularly in cases of trauma, congenital deformities, or tumor resection. Traditional approaches involving autologous bone grafts and prefabricated implants often face limitations such as poor fit, donor-site morbidity, and extended surgical times. The advent of 3D printing technology has revolutionized this field, offering a promising solution for personalized and precise cranial reconstruction.

Material & Methods: This presentation explores the application of laser 3D-printed titanium implants in skull bone reconstruction. Titanium was favored for its excellent biocompatibility, corrosion resistance, and mechanical strength, which closely mimic the properties of natural bone. The use of computer-aided design (CAD) and 3D printing enabled the creation of patient-specific implants with unparalleled precision, ensuring a perfect anatomical fit and reducing operative time. Additionally, porous structures and surface modifications was incorporated into the design to promote osteointegration and reduce the risk of implant rejection. The author presents series of cases, demonstrating the process of planning, design, and production of the custom-made implant. The aesthetic and functional outcomes of the surgeries are detailed highlighting innovative modifications.

Results: Authors demonstrate the efficacy and safety of these implants, reporting high patient satisfaction and low complication rates. However, challenges remain, including the high cost of production and the need for long-term follow-up studies to assess durability and integration. Ongoing advancements in 3D printing technologies, material science, and surgical techniques are planned to further refine this approach, making it more accessible and effective.

Conclusions: In conclusion, 3D-printed titanium implants represent a significant leap forward in skull bone reconstruction, offering a customized, durable,

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3964

Nasal skin subunits: are the dermatologists speaking the same language as the rhinologist?

Mihai Dumitru[1], Maria Moga[2], Adrian Costache[3], Crenguta Serboiu[4], Daniela Vrinceanu[1]

[1]ENT Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, [2]Dermatology Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, [3]Pathology Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, [4]Molecular Biology and Histology Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Introduction: There is an increasing incidence and prevalence of skin tumors at the level of the nose. Interdisciplinarity is key to personalized medicine. Therefore, successful management of such cases should gather the input of dermatologists, rhinologists, plastic surgeons, pathologists, and other allied specialists.

Material and Methods: We queried PubMed database for the key words:" Nasal" and "Skin" and "Subunits". Subsequently we followed the steps of performing a scoping review according to PRISMA guidelines.

Results: Initially 287 prospective titles in the subject resulted. We further refined the research to free full text manuscripts resulting in 70 articles. Of these 34 manuscripts were included also in MEDLINE. Limiting the research to English language the number reduced to 33 articles. 27 manuscripts included human subjects. Further manual check excluded 11 articles. The final database analyzed comprised 16 manuscripts.

Conclusions: There is still a level of variability regarding the subunit division of the nasal region. Older classifications included 6 regions (roof, dorsum, lateral side wall, tip, alar lobule, columella), while other divisions include dorsum, sidewall, tip, ala, soft triangle, columella. Newer research reduces the number of subunits to 5: the older roof region is included in the dorsum, and the soft triangle is part of the tip. However, from the articles included in the present scoping review only 5 included dermatologists among the authors. There is a need to establish a common subunit system across specialties that will further clarify the border between lesions that can be successfully managed with or without reconstructive flaps.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4368

Efficacy and Safety of Septoplasty with Inferior Turbinate Reduction: A Systematic Review and Meta-Analysis

Khaled Moghib[1], Gamal Eldin H. Kandil Kandil[1]
[1] *Kasr Alainy School of Medicine, Cairo University*

Facial Pain – Facial Plastic Surgery Beyond the Nose 1 | ROOM 11 – G10 - Level +1| Tuesday June 24, 2025

Background: A deviated nasal septum often leads to compensatory hypertrophy of the inferior turbinate on the opposite side, occupying the additional space in the contralateral nasal cavity. This hypertrophy may result from mucosal thickening or bony expansion. While some surgeons believe septoplasty alone is sufficient to address this issue, others argue that hypertrophy does not resolve spontaneously and requires concurrent surgical correction.

Aim: To evaluate the efficacy and safety of septoplasty with inferior turbinate reduction (ITR) versus septoplasty alone.

Methods: This systematic review and meta-analysis followed PRISMA guidelines. PubMed, Cochrane Central, Scopus, and Web of Science were searched up to February 2023. Data from eligible RCTs were extracted, and the risk of bias was assessed. The primary outcomes included improvements in nasal obstruction using the Nasal Obstruction Symptom Evaluation (NOSE) scale and Visual Analog Scale (VAS). Analyses were performed using R programming software.

Results: Fourteen RCTs with 1134 participants were included (follow-up: 1–48 months). Seven RCTs (768 participants) showed significant improvement in NOSE scores for septoplasty with ITR versus septoplasty alone (SMD = -1.24, 95% CI: -1.39 to -1.08, $p < 0.0001$). Subgroup analysis indicated the largest improvement with turbinectomy (SMD = -1.81) and ablation (SMD = -1.51). VAS scores from three RCTs (376 participants) showed a trend toward improvement (SMD = -0.67, $p = 0.08$) but were not statistically significant.

Conclusion: Septoplasty with ITR significantly improves nasal obstruction compared to septoplasty alone, particularly with turbinectomy and ablation techniques. Further RCTs are needed to confirm these findings

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Septal and Turbinate Surgery 2

4062

The effects of nasal packing on respiratory function in post-nasal surgery patients: a systematic review and meta-analysis.

Kate Liang[1], Masoud Haghighi[1], Gabriel Osie[1], Rhea Darbari Kaul[1], Blake Lindsay[1], Janet Rimmer[1], Christine Choy[1], Larry Kalish[1], Raewyn Campbell[1], Raymond Sacks[2], Richard Harvey[1]

[1]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia , [2]Faculty of Medicine, University of Sydney, Australia

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Nasal packing is often utilized after nasal surgery for many reasons from hemostasis to wound healing. The influence of nasal packing on the nasal airway and subsequent clinical effect on respiratory function is often debated. This study aims to analyse the acute impact of post-surgical nasal packing on cardiopulmonary function.

Methods: A systematic review was performed for any original research assessing pulmonary function in patients with nasal packing. Only studies with both preoperative and bilateral packed postoperative assessments were included. The primary outcomes were oxygen saturation (SpO2) and arterial blood gas parameters: PaO2 (mmHg), PaCO2 (mmHg), pH, and HCO3- (mM). A search of MEDLINE, EMBASE, Web of Science, Scopus, and CINAHL was performed from their foundation to 13th September 2023. A randomised effects model was used to predict pooled mean differences in patients with and without packing with 95% confidence intervals.

Results: Of the 9133 identified studies, 9 studies were included. There were 304 patients assessed (34 years, 38% female). Packing resulted only in a minor decrease in oxygenation compared to baseline (ΔSpO2: -1.24% [-2.14, -0.34]. There were no other significant changes in respiratory parameters: PaO2 (Δ = -1.84mmHg [-5.69, 2.01]), PaCO2 (Δ = -0.88 mmHg [-3.98, 2.22]), HCO3- (Δ = -0.38 mmHg [-2.44, 1.67]), and pH (Δ = 0 [-0.02, 0.01]).

Conclusion: Even in the setting of bilateral nasal packing, patients experience only a small decrease in SpO2 without any other changes to pulmonary measures.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4157

Quality Of Life Outcomes Following Septoplasty Under Local Versus General Anesthesia: A Prospective Comparative Study

Filipe Jacinto[1], Diana Ribeiro[1], Luís Freitas[1], Ilídio Gonçalves[1]
[1]*Department of Otorhinolaryngology, Local Health Unit (ULS) of Algarve, Portugal*

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Nasal obstruction due to deviated nasal septum is commonly treated with septoplasty. This study compares the efficacy of septoplasty under local anesthesia (LA) versus general anesthesia (GA) for treating deviated nasal septum.

Material and Methods: A prospective study was conducted on 90 patients (45 in each group) undergoing septoplasty under GA or LA in the Department of Otorhinolaryngology, Local Health Unit (ULS) of Algarve, Portugal, between 2023 and 2024. Quality of life questionnaires (NOSE, SNOT-22, VAS) were completed before and 3 months after surgery. Efficacy was evaluated by comparing mean scores between groups. Patient satisfaction and pain associated with LA septoplasty were also assessed.

Results: Both groups showed significant improvements in quality of life measures. The GA group experienced reductions of 75% in NOSE (71.4 vs. 18.0; $p<0.0001$), 68% in SNOT-22 (49.2 vs. 15.5; $p<0.0001$), and 75% in VAS scores (7.6 vs. 1.9; $p<0.0001$). The LA group showed reductions of 67% in NOSE (72.4 vs. 23.6; $p<0.0001$), 63% in SNOT-22 (56.4 vs. 21.0; $p<0.0001$), and 69% in VAS scores (7.5 vs. 2.3; $p<0.0001$). No statistically significant differences were found between groups in postoperative scores. The mean pain score for LA septoplasty was 2.4/10 ± 2.0, with 89% of patients reporting pain intensity below 5/10. Patient satisfaction was high for both groups (GA: 8.3/10 ± 2.1, LA: 8.1/10 ± 2.5).

Conclusion: Septoplasty under local anesthesia proved to be an effective, safe, and satisfactory alternative to general anesthesia for treating deviated nasal septum. Both approaches resulted in significant improvements in quality of life measures, with no statistically significant differences in outcomes. The LA protocol implemented in our department was minimally painful and highly satisfactory for patients, offering a viable option for outpatient septoplasty.



4305

Endoscopic septoplasty versus conventional septoplasty for nasal septum deviation: a systematic review and meta-analysis of randomized clinical trials

Sumaiya Muathen[1], Omar Abu Suliman[1], Bayan Besharah[2], Hussain Alharbi[3], Hazem Althobaiti[3], Ahmed Mogharbel[3]

[1]King Abdullah Medical City, [2]King Abdullah medical complex, [3]King Abdulaziz University

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Background: Although conventional septoplasty is widely used to treat nasal septum deviation, it increases morbidity due to poor visualization, poor illumination, the need for nasal packing, and difficulty in evaluating of the exact pathology. These drawbacks are also encountered in endoscopic septoplasty. Our study aimed to compare the treatment and complication outcomes of conventional and endoscopic septoplasty.

Methods: The authors searched five electronic databases for relevant clinical trials. The records were screened for eligibility. Data were extracted from the included studies. Outcomes were pooled as risk ratios (RR) or mean differences with 95% CIs using RevMan ver.5.4.

Results: Our study included 13 randomized clinical trials with 735 patients. Our analysis revealed that endoscopic septoplasty was significantly ($P<0.05$) superior to conventional septoplasty for postoperative nasal obstruction relief, intraoperative and postoperative hemorrhage, and mucosal adhesion and synechiae across both long-term and short-term follow-ups. The following pooled RR values were found in short-term follow-up periods: [RR=1.20, 95% CI:= (1.09,1.32)]; [RR= 0.27, 95% CI =(0.14,0.54)]; and [RR= 0.16, 95% CI =(0.08,0.32)], respectively. Regarding persistent septal deviation and septal tear, endoscopic septoplasty had the upper hand only in short-term follow-up periods [RR=0.30, 95% CI= (0.17,0.53)] and [RR=0.26, 95% CI=(0.15,0.46)], respectively.

Conclusion: Our analysis revealed that endoscopic septoplasty was significantly superior to conventional septoplasty in postoperative nasal obstruction relief rate and reducing the risk of intraoperative and postoperative hemorrhage, mucosal adhesion and synechiae, persistent septal deviation, septal tear, and surgery duration.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4039

Does the size really matter? Factors influencing success rate in septal perforation repair

Carolina Garcia van Schaik[1], Thomas Breuer[3]

[1]*Department Otorhinolaryngology, Head and Neck surgery*, [2]*Department of Otorhinolyryngology, Head and Neck Surgery*, [3]*Otorhinolaryngology*

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Nasal septal perforation (NSP) can occur after nasal surgery, epistaxis treatment, removal of neoplasms, trauma or be related to autoimmune diseases, infection or specific medication. The main purposes of this study were to characterize the patients presenting for surgical repair of the NSP in a tertiary hospital in Germany and to identify demographic and technical factors influencing treatment outcome.

Materials and methods: Prospective study comprising 41 symptomatic consecutive adult patients presenting for surgical repair of NSP between 2020 and 2024, after applying the exclusion criteria. Demographics, causes, size and location of the NSP, patient reported outcome measures and surgical technique were gathered. Follow up minimum of 4 months. Analysis was performed with SPSS 28, a p value of 0.05 was admitted.

Results: The study population divided in 20 female and 21 male patients. Age ranged from 18 to 64 years, mean 39,2 and-SD 13.4. The NSP was localized in Cottle region 1 to 3, size from 4mm to 25mm. The main causes for NSP were iatrogenic after surgery or cauterization in 29% and nasal trauma in 19,5% of the patients. Nose picking estimated to 12% . Advancement flaps were used predominantly, with vascularization from the nasoseptal or anterior ethmoidal arteries. Conchal cartilage was taken in about 1/5 of the cases. For larger NSP fascia lata or temporalis muscle fascia were used. Overall complete closure rate was 78 %. For NSP >= 2 cm the rate of complete repair was 25 %. Rate of repair for NSP < 2cm was above 80 (p 0,025). Smoking status or age and utilization of cartilage between layers in the surgery did not reach significancy.

Conclusion: Our study shows that perforations larger than 20mm have a smaller rate for complete successful closure. Other demographic factors such as advancing age and smoking status did not have a negative effect. These findings are important for counselling patients before a surgery is advised.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4090

15-year efficacy of medial flap inferior turbinoplasty, compared to submucosal electrocautery and submucosal powered turbinate reduction.

Blake Lindsay[1], Larry Kalish[1], Richard Harvey[1], Raymon Sacks[1], Henry Barham[2], Raymond Sacks[5]

[1]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia , [2]1. Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia . American Rhinologic Society, [3]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia, Faculty of Medicine, University of Sydney, Australia, [4]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia, St Vincent's Centre for Applied Medical Research, University of New South Wales, Sydney, Australia, Australian School of Advanced Medicine, Macquarie University, Sydney, Australia , [5]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia, Australian School of Advanced Medicine, Macquarie University, Sydney, Australia, Sydney Medical School, University of Sydney, Sydney, Australia

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Background: Inferior turbinate hypertrophy is a common cause of nasal obstruction, often requiring surgical intervention when medical therapy fails. While short- and medium-term outcomes of turbinate surgery have been well studied, long-term efficacy remains under-explored. This study presents 15-year follow-up data on medial flap inferior turbinoplasty, submucosal electrocautery, and submucosal powered turbinate reduction.

Methods: This study is a randomized, double-blinded trial assessing long-term outcomes of different turbinate reduction techniques. One hundred patients with persistent nasal obstruction underwent a randomized allocation of turbinate reduction techniques on each nasal cavity. Follow-up was performed at 12, 60, and 180 months postoperatively. The primary outcome was subjective nasal obstruction, measured on a 5-point ordinal scale. Secondary outcomes included the need for revision surgery and clinician-blinded nasal airway assessments taken at 12 months.

Results: At 15 years, patients who underwent medial flap turbinoplasty reported superior long-term outcomes, with 64.9% achieving symptom resolution without decongestants, compared to 25% in the submucosal group and none in the electrocautery group ($p < 0.05$). The revision rate was significantly lower for turbinoplasty, with 18.6% of these patients requiring revision compared to 91.1% in the submucosal and 95.7%% in the electrocautery groups. Revision turbinoplasty resulted in symptomatic improvement comparable to primary medial flap turbinoplasty. No late-onset complications were observed.

Conclusion: Medial flap inferior turbinoplasty demonstrates superior long-term efficacy and durability compared to submucosal electrocautery and submucosal powered reduction. Given its low revision rate and sustained symptom relief, medial flap turbinoplasty should be considered the preferred technique for long-term management of inferior turbinate hypertrophy.



4216

Genetic Associations with Deviated Nasal Septum

Zacharias Kalentakis[1], Yiannis Vlastos[2], Yiannis Dritsas[1], Effrosuni Papatheodorou[1]

[1]*Sismanogleio General Hospital of Attiki*, [2]*Enavgelismos General Hospital of Athens*

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Introduction: Nasal septum deviation (NSD) occurs due to an uneven development of the cartilage and bone of the nasal septum, or a facial injury. While traumatic causes are common, genetics can play a significant role in the development of NSD, especially in cases where no clear external factors are present. This study highlights genetic pathways of association with NSD.

Material & Methods: We perform a thorough analysis of the National Genomics Data Center platform. Our data was extracted by the thirty top rated biological databases according to their z-index. Moreover, the databases studied should belong to the above categories: 1) gene genome and annotation, 2) health and 3) medicine and genotype phenotype and variation. Obviously, the species of investigation were Homo sapiens.

Results: Several genes have been associated with the development of NSD due to their roles in craniofacial development and cartilage formation, however, the key genes implicated in NSD according to the National Genomics Data Center are: COL2A1, SOX9, PAX1 and PAX9, FGFR1 and FGFR2, CREBBP, EP300, NF1, PAH. The genetic route of NSD can also be associated with certain genetic syndromes as the following: Marfan (FBN1 Gene), Stickler (COL2A1 Gene), 22q11.2 Deletion Syndrome, Apert (FGFR2 Gene), Crouzon (FGFR2 Gene), Saethre–Chotzen (TWIST1 Gene). Although these genes are associated with NSD, it is of outstanding importance to note that nasal septum scoliosis is often multifactorial. Multiple genes may contribute to small effects that collectively increase the risk. Environmental factors can interact with genetic predispositions.

Conclusion: The genetic exploration of NSD opens doors to a deeper understanding of craniofacial development. The integration of genetics into personalized medicine is on the horizon, promising more tailored and effective approaches even in less important medical entities as NSD.



4527

Functional Turbinoplasty: Dos and Don'ts for a Healthy Nasal Airway During Rhinoplasty

Mohsen Naraghi[1]

[1]*Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery*

Septal and Turbinate Surgery 2 | ROOM 12 – G11 - Level +1| Tuesday June 24, 2025

Correction of functional problems in the nasal airway is a crucial step in every nasal surgery. There are many causes of nasal obstruction in patients before surgery. Turbinates play an essential role in regulating airflow through the nose. Clinical and modern simulation studies have revealed the critical role of turbinates in nasal physiology. Anatomic variations and inflammatory conditions could affect the normal physiology of the nose. Therefore, correcting the pathologic conditions of the inferior and middle turbinates is crucial in restoring nasal function in endoscopic surgery and rhinoplasty. A better understanding of the delicate physiology of the turbinates and advances in minimally invasive surgery have persuaded us to be much more conservative in manipulating these vital structures. Less traumatic approaches provide maximal preservation of the turbinate mucosa while modifying airway resistance. The nasal valve is responsible for more than half of total upper airway resistance. The inferior turbinate is an important structure in the nasal valve region, and its enlargement can cause exponential increases in airway resistance. A thorough functional assessment of aesthetic rhinoplasty candidates is necessary to diagnose, make a proper plan, and prevent flaring of symptoms related to a pre-existing functional problem. Failure to diagnose and treat the problem may cause the persistence of obstructive symptoms in a large group of patients and even flare-up of symptoms in another group. Even minor modifications in nasal airflow during different steps of rhinoplasty, such as hump removal, tip surgery, lateral osteotomy, or alar base reduction, could uncover inferior and middle turbinate problems resulting in a considerable nasal obstruction that was not diagnosed preoperatively. In this presentation, I will discuss a variety of procedures to correct turbinates and share personal experiences.



4425

Objective detection of endonasal inflammation using parameters of the nasal cycle

Achim Beule[1], Inga Nierkamp[2], Claudia Rudack[3]

[1]Department of ENT, University Hospital of Münster, [2]Department of ENT, university Hospital of Münster, [3]Department for ENT, University Hospital of Münster

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Introduction: The nasal cycle is a physiological adaptation process the enable alternating humidification of nasal airflow. It can be measured using long-term rhinoflowmetry (LRM). Pathological changes have been reported in patients with central regulating changes including obstructive sleep apnoea. Aim of this study was to verify the potential to detect endonasal inflammation in parameters of the nasal cycle.

Methods: 115 subjects (34 healthy, 81 rhinologic patients; 42 ♂, 73 ♂; age 34,8 ± 15,3 years) were subjected to a standardized, prospective evaluation including nasendoscopy, objective rhinological diagnostics and long-term rhinoflowmetry. Several software-based filters were developed and applied to the raw data obtained. Graphical presentations were assessed by three independent, blinded observers using 6 different parameters to evaluate best signal-noise ratio.

Results: Significant differences were obtained comparing healthy subjects and rhinologic patients via parameter such as nasal breathing volume during the night ($p<0.046$) nasal peak flow on the right ($p<0.045$) and the characterization of nasal peak flow ($p< 0.005$). Duration of the measurement (8/6/4/2 hours), physical activity and time of measurement (day versus night) resulted in additional but smaller changes in these parameter.

Conclusion: The nasal cycle as obtained via LRM is able to differentiate sick from healthy noses. The effect is most easily measured during the night. This diagnostic tool may be a future healp in patients with unclear nasal complaints. Disclaimer: Research was supported by a grant of the Germany Ministry of Economy and their center for innovation (ZIM; Projektträger: AIF Projekt GmbH).

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4081

Proteomic Profiling and Machine Learning for Predicting Endotypes in Chronic Rhinosinusitis

Julia Eckl-Dorna[1], Tina Bartosik[1], Nicholas Campion[1], Katharina Gangl[1], Victoria Stanek[1], Aldine Tu[1], Mohammed Zghaebi[1], Sven Schneider[1], Christina Morgenstern[1], Karina Bayer[1], Florian Frommlet[1], Fana Alem Kidane[1], Linda Liu[1], Klaus Schmetterer[1], Klemens Ungersbäck[1]

[1]Medical University of Vienna, [2]Department of Otorhinolaryngology, General Hospital and Medical University of Vienna, Vienna, Austria

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Background: Chronic rhinosinusitis (CRS) is a prevalent and heterogeneous inflammatory disorder of the upper airways, affecting approximately 12% of the population. It is classified into two primary phenotypes: CRS with nasal polyps (CRSwNP) and without nasal polyps (CRSsNP). CRSwNP includes non-steroidal anti-inflammatory drug-exacerbated respiratory disease (N-ERD), a severe subtype associated with asthma and NSAID hypersensitivity. Despite its clinical burden, the pathophysiological mechanisms of CRS remain poorly understood, necessitating novel biomarkers for diagnosis and treatment.

Objective: This study aimed to identify type-specific biomarkers for CRS diagnosis, prognosis, and therapeutic monitoring using targeted proteomics, bioinformatics, and Machine Learning.

Methodology: Nasal secretions from 80 patients (20 each of CRSsNP, CRSwNP, N-ERD, and disease controls) were analyzed using Olink® Immune Response and Inflammation panels. Serum samples underwent Olink® Explore panel analysis, alongside clinical assessments of polyp and smell test scores.

Results: Distinct protein expression patterns emerged: an upregulated, pro-inflammatory, type 2 cytokine-driven profile in CRSwNP and N-ERD, and a downregulated pattern linked to innate immunity across disease severity. Functional enrichment analyses confirmed these findings, while differential expression analysis and Machine Learning identified a biomarker panel, including the glial cell line-derived neurotrophic factor GDNF and Charcot-Leyden crystal protein CLC, with diagnostic potential.

Conclusions: These findings provide novel insights into CRS pathophysiology and highlight potential biomarkers for precision diagnosis and treatment, particularly in severe cases such as N-ERD.



4124

Microbiological and Radiological Characteristics of Paranasal Sinus Fungus Ball: a retrospective analysis of 235 cases.

Sveva Introini[1], Domenica Giunta[2], Bogdan Nacu[1], Roberto Sannasardo[2], Michele Demaria[2], Anna Ferrauto[2], Nicolò De Faveri[2], Andrea Zerilli[2], Fabio Sovardi[3], Fabio Giuseppe Pagella[2]

[1]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; University of Pavia, Pavia, Italy;, [2]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy; University of Pavia, Pavia, Italy;, [3]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Introduction: Paranasal sinus Fungus Ball (FB) is the most common non-invasive mycotic rhinosinusitis. It most frequently affects the maxillary and sphenoidal sinuses and the treatment of choice is the Endoscopic Sinus Surgery (ESS). Although this pathology has been widely investigated throughout the years, some questions still remain unanswered. This study concentrates on assessing radiological and microbiological characteristics by examining a large number of cases treated in our centre.

Materials and methods: 235 cases of FB who underwent ESS in Fondazione I.R.C.C.S. Policlinico San Matteo di Pavia in the period comprised between January 2000 and May 2020 were collected. The surgical report, microbiological culture, histological report and preoperative Computed Tomography were analysed.

Results: FB was confirmed to affect more commonly the female population (68.22%). The maxillary (69.78%) and sphenoidal sinuses (27.23%) were the most frequent localizations. Interestingly, the microbiological reports showed different growth patterns as positive cultures from maxillary FB were reached in 21,52% of cases, while from sphenoidal FB in 45,76%. Different mycotic populations were found: Aspergillus Fumigatus was isolated in 33 FB specimens, of which 63.3% in the maxillary sinus, while Aspergillus Flavus was isolated in 10 specimens, of which 80% in the sphenoid sinus (p=0,017 and p=0,039 respectively). Radiologically, heterogeneous soft tissue density at sinus cavity (p=0,029) was more represented in patients with positive culture.

Conclusion: This study analyzed a large population and demonstrated differences in the growth pattern and subpopulation of fungi between differently localized FB underlining a new characteristic of this pathology.



4160

Dupilumab Treatment is Associated with Clinical Improvement and a Shift towards a health-associated Nasal Passage Microbiota in Diffuse Type 2 Chronic Rhinosinusitis

Fabio S. Ryser[1], Markus Hilty[3], Tomas Demeter[4], Michael B. Soyka[5], Urs C. Steiner[6], Silvio D. Brugger[4], Judith Bergada Pijuan[4], Catrin Brühlmann[5], Tina Mauthe[5]

[1]2. Department of Rheumatology and Immunology, University Hospital Inselspital Bern, Bern, Switzerland, [2]Department of Rheumatology and Immunology, University Hospital Bern, University of Bern, Bern, Switzerland, [3]Institute for Infectious Diseases, University of Bern, Bern, Switzerland, [4]Department of Infectious Disease and Hospital Epidemiology, University Hospital Zurich, University of Zurich, Zurich, Switzerland, [5]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich, University of Zurich, Zurich, Switzerland, [6]Department of Rheumatology and Immunology, University Hospital Inselspital Bern, Bern, Switzerland

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Background: Nasal microbiota composition of patients with diffuse type 2 chronic rhinosinusitis with nasal polyps (CRSwNP) is altered compared to healthy individuals. Dupilumab, an anti-IL-4Rα-mab, modulates type 2 inflammation but the effect on microbiota composition in CRSwNP is unknown. The aim of this study was to investigate longitudinally the effect of dupilumab on the nasal and gastrointestinal microbiota in patients with diffuse type 2 CRSwNP.

Methods: Twenty-seven patients with diffuse type 2 CRSwNP treated with dupilumab 300mg subcutaneously every two weeks, 10 untreated patients with CRSwNP and 10 healthy controls were included. Nasal and stool samples were collected at day 0, 28, 90, and 180 post-treatment, and were analysed using 16S rRNA gene amplicon sequencing. Clinical scores and laboratory parameters were assessed at the different time points.

Results: The most abundant genera in nasal passage microbiota were Corynebacterium and Staphylococcus. Increased abundances of Cutibacterium, Lawsonella and decreased abundances of Lactobacillus were observed in dupilumab treated individuals versus controls. Microbial diversity of the gastrointestinal microbiota in CRSwNP was significantly higher than in healthy controls. The genus Ruminococcus was less abundant in CRSwNP patients compared to healthy stool samples. Dupilumab treatment was not associated with changes in the composition of the gastrointestinal microbiota.

Conclusion: Dupilumab treatment was associated with a shift in the nasal passage bacterial microbiota towards that of healthy controls, whereas the composition of gastrointestinal microbiota did not change. These findings suggest that nasal mucosa microbial composition is influenced by the underlying inflammatory endotype.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4390

Exploring cytokines levels in nasal lavages as biomarkers of sinonasal heath in cystic fibrosis patients with chronic rhinosinusitis

Alberto Minzoni[1], Elisabetta Bigalgli[3], Miriam Todaro[4], Pietro Orlando[1], Luca Mazzetti[1], Giandomenico Maggiore[1], Cristina Luceri[4]

[1]Department of Otorhinolaryngology, Careggi University Hospital, University of Florence, Florence, Italy., *[2]2Department of Otorhinolaryngology, Careggi University Hospital, University of Florence, Florence, Italy.*, *[3]Department of Neuroscience, Psychology, Drug Research and Child Health (NEUROFARBA) Section of Pharmacology and Toxicology, University of Florence, Florence, Italy.*, *[4]Department of Neuroscience, Psychology, Drug Research and Child Health (NEUROFARBA) Section of Pharmacology and Toxicology, University of Florence, Florence, Italy*

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Background and objective: Chronic rhinosinusitis (CRS) is a pervasive comorbidity that affects up to 90% of patients with cystic fibrosis (CF) impacting multiple aspects of quality of life, including cognitive and social functioning, and general health status. This study aimed at investigating whether inflammatory cytokines measured in nasal lavages reflect sinonasal status and may therefore serve as noninvasive biomarkers for managing these patients and in the implementation of personalized medicine. Material and

Methods: 42 adult CF patients with CRS were enrolled in this study. Nasal lavages were collected at enrolment and the levels of IL-13, IL-4 and IL-8 were measured and correlated with the Meltzer NPS Score, modified Lund–Kennedy Score (mLKS), Lund–Mackay Score (LMS), Sinonasal Outcome Test 22 (SNOT-22), and olfactory function by Sniffin' Sticks Identification Test (SSIT).

Results: IL-13 and IL-4 levels were significantly and positively correlated with Meltzer NPS Score ($p<0.05$) with the mLKS ($p<0.05$) and with the LMS ($p<0.01$). IL-8 levels were positively correlated with LMS ($p<0.05$) while IL-4 was inversely associated with the olfactory function ($p<0.05$).

Conclusions: These data indicate that nasal lavages represent a useful biofluid to non-invasively monitor sinus health and that IL-4, IL-8 and IL-13 are promising peripheral markers for monitoring these patients and their response to current pharmacological strategies and in particular, to the recently introduced monoclonal antibody against IL-4 and IL-13.



4414

Body mass index's effect on nasal polyps extends to immune endotype and recurrence

Yana Zhang[1], Wenyi Chen[1], Qintai Yang[1]
[1]*The Third Affiliated Hospital of Sun Yat-sen University*

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Background & Aim: Elevated body mass index (BMI) has been recognized as an important contributor to corticosteroid insensitivity in chronic rhinosinusitis with nasal polyps (CRSwNP). We aimed to delineate the effects of elevated BMI on immunological endotype and recurrence in CRSwNP individuals.

Material & methods: A total of 325 patients with CRSwNP undergoing FESS were recruited and stratified by BMI. H&E staining was employed for histological evaluation. Characteristics of inflammatory patterns were identified by immunohistochemical staining. The predictive factors for recurrence were determined and evaluated by multivariable logistic regression analysis and the receiver operating characteristic (ROC) curves across all subjects and by weight group.

Results: In all patients with CRSwNP, 26.15% subjects were classified as overweight/obese group across BMI categories and exhibited a higher symptom burden. The upregulated eosinophil/neutrophil-dominant cellular endotype and amplified type 2/ type 3 coexisting inflammation was present in overweight/obese compared to underweight/normal weight controls. Additionally, a higher recurrent proportion was shown in overweight/obese patients than that in underweight/normal weight cohorts. Multivariable logistic regression analysis identified BMI as an independent predictor for recurrence. The predictive capacity of each conventional parameter (tissue eosinophil and CLCs count, and blood eosinophil percentage) alone or in combination was poor in overweight/obese subjects.

Conclusions: Overweight/obese CRSwNP stands for a unique phenotype and endotype. Conventional parameters predicting recurrence are compromised in overweight/obese CRSwNP, and there is an urgent need for novel biomarkers that predict recurrence for these patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3999

Multiple time point and multiple site sampling of the sinonasal microbiome reveals its temporal and spatial heterogeneity

Joanna Szaleniec[1], Valentyn Bezshapkin[2], Aldona Olechowska-Jarząb[3], Tomasz Gosiewski[4], Tomasz Kościółek[5]

[1]Department of Otolaryngology, Faculty of Medicine, Jagiellonian University Medical College, Kraków, Poland, [2]Eidgenössische Technische Hochschule Zürich, Switzerland, [3]Department of Pharmaceutical Microbiology, Faculty of Pharmacy, Jagiellonian University Medical College, Kraków, Poland; Microbiology Department, University Hospital, Krakow, Poland, [4]Department of Molecular Medical Microbiology, Faculty of Medicine, Jagiellonian University Medical College, Kraków, Poland, [5]Sano Centre for Computational and Personalized Medicine, Krakow, Poland

CRS – Pathophysiology 1 | ROOM 13 - G15 - Level +1 |Thursday, June 26, 2025

Introduction: For most scientific and clinical purposes, the sinonasal microbiome is sampled from a single site at a single time point. The middle nasal meatus is considered a reasonable proxy for the entire sinonasal complex. Recently, 16S rRNA amplicon sequencing has provided new insights into the sinonasal microbiome but has failed to answer fundamental questions regarding its role in the pathophysiology of chronic rhinosinusitis (CRS).In our research, we compared the microbiome across various sites within the sinonasal cavity and analyzed the middle meatus microbiome over multiple time points to assess its spatial and temporal stability.

Methods: For spatial analysis (A), microbiome samples were obtained from the middle nasal meatus, maxillary sinus, and frontal sinus in 50 patients with CRS during ESS. For longitudinal temporal analysis (B), 50 patients with CRS and 30 healthy volunteers were prospectively followed and sampled at 2–8 time points. Microbial testing included culture, 16S rRNA Illumina sequencing (A), and 16S rRNA Oxford nanopore sequencing (B).

Results and Conclusions: Considerable differences between the middle nasal meatus and the underlying sinuses were observed in some individuals, even in the absence of anatomical separation of the sampled subsites. The microbiome composition varies significantly between individuals and may change over time. These changes occur naturally, without interventions such as surgery or medical treatment. The recent introduction of long-read nanopore sequencing in sinonasal microbiome studies has the potential to provide a more in-depth understanding of the pathophysiology of CRS. The authors acknowledge the support of the NCN project 2023/51/D/NZ5/01206.



3681

ALOX15+ M2 macrophages contribute to epithelial remodeling in eosinophilic chronic rhinosinusitis with nasal polyps

Liu Chang[1], Sun Yueqi[1]

[1]Department of Otolaryngology, the Seventh Affiliated Hospital of Sun Yat-sen University. No.628, Zhenyuan Road, Guangming District, Shenzhen, Guangdong, 518107, China

Best Abstract Presentation | ROUND TABLE 15 | ROOM 1 - (F1-F2-F3) - Ground Floor | Wednesday, June 25, 2025

Introduction: Epithelial remodeling is a prominent feature of eosinophilic chronic rhinosinusitis with nasal polyps (eCRSwNP), and infiltration of M2 macrophages plays a pivotal role in the pathogenesis of eCRSwNP, but the underlying mechanisms remain undefined. We aimed to investigate the role of ALOX15+ M2 macrophages in the epithelial remodeling of eCRSwNP.

Methods: Digital spatial transcriptome and single-cell sequencing analyses were used to characterize the epithelial remodeling and cellular infiltrate in eCRSwNP. Hematoxylin and eosin staining, immunohistochemical and immunofluorescent staining were used to explore the relationship between ALOX15+ M2 macrophages and epithelial remodeling. A co-culture system of primary human nasal epithelial cells (hNECs) and the macrophage cell line THP-1 was used to determine the underlying mechanisms.

Results: Spatial transcriptomics analysis showed that upregulation of epithelial remodeling-related genes, such as VIM and MMP10, and enrichment of epithelial-mesenchymal transition (EMT)-related pathways, in the epithelium areas in eCRSwNP, with more abundance of epithelial basal, goblet and glandular cells. Single-cell analysis identified ALOX15+, rather ALOX15-, M2 macrophages were specifically highly expressed in eCRSwNP. CRSwNP with high ALOX15+ M2 macrophages had more obvious epithelial remodeling features and increased genes associated with epithelial remodeling and integrity of epithelial morphology versus that with low ALOX15+ M2 macrophages. IL-4/13-polarized M2 macrophages upregulated expressions of EMT-related genes in hNECs, including VIM, TWIST1, Snail, and ZEB1. ALOX15 inhibition in M2 macrophages resulted in reduction of the EMT-related transcripts in hNECs. Blocking CCL13 signaling inhibited M2 macrophage-induced EMT alteration in hNECs.

Conclusion: ALOX15+ M2 macrophages are specifically increased in eCRSwNP and may contribute to the pathogenesis of epithelial remodeling via production of CCL13.



CRS – Surgical Management 3

3623

Carolyn's Window Approach for Frontal Sinus Surgery in Asian Noses

Wirach Chitsuthipakorn[1], Vorachai Pooldum, Juthaporn Phetpong[2], Minh Hoang[3], Kornkiat Snidvongs[4]

[1]College of Medicine. Rangsit University., *[2]Center of Excellence in Otolaryngology, Head & Neck Surgery. Rajavithi Hospital, Bangkok, Thailand; Rangsit University*, *[3]Hue University of Medicine and Pharmacy. Vietnam*, *[4]Chulalongkorn University*

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Background: The recently introduced "Carolyn's Window Approach" (CWA) involves axillectomy and drilling through the radix, eliminating the need for an angled endoscope in frontal sinus surgery. This method achieves 100% frontal sinus patency but may present challenges for Asian noses due to structural differences.

Method: Electronic records from July 2023 to December 2024 were retrospectively reviewed. The study included adult patients (≥18 years) who underwent the CWA at Rajavithi Hospital in Bangkok. The primary outcomes were surgical success and frontal sinus patency at 3 and 6 months. Secondary outcomes included early (<0 days) and late (≥90 days) surgical morbidities.

Results: A total of 46 procedures in 37 patients were included. All frontal sinus surgeries were successfully performed via the CWA using a 0° endoscope. At the 3-month postoperative follow-up, 44 frontal sinuses (95.7%) remained patent. By the 6-month follow-up, patency was maintained in 41 frontal sinuses (89.1%). Among all procedures, the most common early morbidities included pain in 5 patients (10.9%) and periorbital edema in 5 patients (10.9%). Other morbidities included postoperative bleeding in 3 patients, crusting in 2 patients, and synechiae in 1 patient.

Conclusion: The CWA is a feasible technique that provides patent frontal sinus cavities in Asians, achieving patency rates of approximately 89-96% across all procedures. Early surgical morbidities include bleeding, pain, and periorbital edema.



3698

Relevance of the LOEM classification in chronic rhinosinusitis management: a retrospective analysis of surgical outcomes.

Meritxell Clari-Comes[1], Daniel Martin-Jimenez[1], Ramon Moreno-Luna[2], Miriam Gonzalez-Garcia[3], Juan Maza-Solano[3], Serafin Sanchez-Gomez[3]

[1]Department of Otolaryngology, Head and Neck Surgery, Alava University Hospital, 01009 Alava, Spain, *[2]Rhinology Unit, Department of Otolaryngology, Virgen Macarena University Hospital, Dr Fedriani Av. 3, E-41071 Seville, Spain.* , *[3]Rhinology Unit, Department of Otolaryngology, Head and Neck Surgery, Virgen Macarena University Hospital, 41009 Seville, Spain*

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Background: The lack of a standardized framework for defining endoscopic sinus surgery (ESS) in chronic rhinosinusitis (CRS) has led to ambiguity and inconsistency in surgical descriptions. This study evaluates the recently described Lamella Ostium Extent Mucosa (LOEM) classification's usefulness, aiming to solidify its role in enhancing clinical decision-making and the reproducibility of surgical studies.

Methods: A non-randomized retrospective study compared CRS patients who underwent ESS, categorized into four groups based on LOEM. Baseline characteristics, disease severity and QoL were compared at baseline and 2-years post-surgery. Predictors of clinically meaningful improvements in QoL were assessed using linear and logistic regression models, analyzing changes in the Sinonasal Outcome Test (SNOT)-22. Additionally, a subgroup analysis evaluated QoL outcomes specific to different clinical phenotypes and the ESS type (t) performed.

Results: 305 patients were analyzed, with significant baseline differences across ESS groups, showing increasing disease severity and comorbidities from t1 to t4 surgeries. The t4 ESS showed the greatest postoperative improvements in SNOT-22, nasal polyp score and Lund Mackay scale. Multivariate regression confirmed t4 ESS as a significant predictor of greater QoL improvements and higher responder rates (OR=8.49, p=0.036). Subgroup analyses found prior ESS negatively impacted outcomes, while t4 ESS was more effective across CRS phenotypes, except in exclusive atopy, where t3 ESS proved superior.

Conclusions: The LOEM classification correlates surgical complexity with disease burden. The t4 ESS demonstrated superior clinical outcomes, particularly in severe CRS phenotypes. These findings underscore the importance of personalized surgical planning and the potential utility of the LOEM system in optimizing patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4137

Association Between Revision Endoscopic Sinus Surgery and Postoperative Debridement Patterns After Initial Surgery

Christopher Roxbury, Max Hyman[1], Christopher Low[2], Jayant Pinto[2]

[1]Center for Health and Social Sciences, *[2]University of Chicago*, *[3]Cleveland Clinic Foundation*

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Introduction: Postoperative debridements (PDs) are part of standard postoperative care in endoscopic sinus surgery (ESS). However, there is little evidence regarding whether PDs can limit revision ESS (rESS). Therefore, we sought to utilize a large national sample to evaluate the association between PDs and rESS.

Methods: The Merative™ MarketScan® Commercial Database was used to identify ESS patients from 2003-2022. The first claim for each patient was considered the index ESS (iESS). ESS coded within 30 days of iESS was considered reoperation. ESS coded beyond 30 days of iESS was considered rESS. Patients <8 years old, with sinonasal cancer, or with autoimmune/systemic diseases were excluded. A multivariable Cox proportional hazard model analyzed the association between number/timing of PDs after iESS and rESS, adjusting for bilaterality, septoplasty, nasal polyps, intranasal/oral steroid use, reoperation, asthma, diabetes, smoking, Charlson Comorbidity Index, age, sex, geography and insurance type.

Results: There were 363,971 patients included (204,204 (56.1%) bilateral ESS, 195,143 (53.6%) septoplasty, 97,413 (26.8%) with nasal polyps). The overall rESS rate was 6.5%. Nasal polyps were associated with higher risk of rESS (8.1%, HR 1.48, p<0.001), while septoplasty was associated with lower risk (HR 0.58, p<0.001). Patients undergoing 1 PD were at lower risk of rESS (HR 0.93, p<0.001) while those with> PDs (HR 1.26, p<0.001), and those with first PD> days after iESS (HR 1.16, p<0.001), were at higher risk of rESS.

Conclusion: Undergoing 1 PD within 14 days of iESS may reduce the risk of rESS. Nasal polyps, higher numbers of PDs, and first PD at> days may predict higher risk of rESS. Further studies are required to determine if number of PDs is reflective of surgical technique or patient factors, and to determine if reducing delays to first PD may result in reduced rESS rates.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3694

The Role of Prolonged Postoperative Silastic Stenting in Enhancing Sinus Surgery Outcomes: Safety and Efficacy Analysis

Richard Mageto[1], Abhiram Cherukupalli[2], Anas Gomati[2], Arif Janjua[2]

[1]Faculty of Medicine, University of British Columbia, Vancouver, BC, [2]Division of Otolaryngology – Head and Neck Surgery, Department of Surgery, University of British Columbia

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Introduction: Silastic stent use after endoscopic sinus surgery (ESS) prevents adhesions and maintains sinus drainage. Literature reports stenting durations of mostly 1-2 weeks postoperatively, ranging to 73 months, with no standardized guidelines. Our tertiary rhinology practice routinely stents for 4–12 weeks, depending on the clinical situation. This study aimed to assess the safety of 4–12 week postoperative stenting and compare frontal sinus patency after drilling and 12-week stenting with published data reporting rates of 79–86%.

Material & Methods: A single-institution retrospective chart review analysed 157 patients who underwent ESS between 29 August 2023 and 29 February 2024. Postoperative emergency department visits, hospitalizations, and follow-up notes were reviewed to identify stent complications. A subgroup of 55 patients (90 sinuses) who underwent frontal recess drilling and silastic stenting for 12 weeks, were evaluated for ostial patency at 12 weeks post-operatively.

Results: There were 12 emergency department visits for epistaxis (5), facial pain (3), infection (2), and sore throat (2). None required otolaryngologic intervention or early stent removal. No significant difference in adverse outcomes was found between the 4- and 12-week stent groups (P = 0.528). Among the 90 frontal sinuses drilled and stented for 12 weeks, only 4 (4.4%) scarred closed after stent removal.

Conclusion: Prolonged stenting (4–12 weeks) after ESS is safe and effective, particularly in challenging cases involving frontal recess drilling. The>% frontal sinus patency with 12-week stenting matches or exceeds published rates, despite higher scarring risk in drilled sinuses. Further multicentre studies are recommended to validate these findings.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3807

A Randomized Clinical Trial Evaluating Postoperative Outcomes of Absorbable POCISEP vs. Non-Absorbable Silicone Middle Meatal Packing After Endoscopic Sinus Surgery

Roni Vass[1], Avraham Abergel[1]

[1]Otolaryngology Department, School of Medicine, Tel Aviv University, *[2]Otolaryngology, School of Medicine, Tel Aviv University*

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Background: This randomized controlled trial aimed to assess the efficacy of absorbable POCISEPnasal packing compared to non-absorbable silicone packing as middle meatal spacersin promoting healing after endoscopic sinus surgery (ESS).

Methods: In this prospective study, 53 patients undergoing functional endoscopic sinus surgery(FESS) were randomly assigned to two groups: Group A received POCISEP packing(n=24), while Group B received silicone packing (n=29). Patients were evaluated based on four key parameters: the Visual Analog Scale (VAS) for pain assessment, the Sino-Nasal Outcome Test (SNOT-22) for symptom severity, the NasalObstruction Symptoms Evaluation (NOSE) questionnaire for the impact of nasalobstruction, and the Lund-Kennedy score for endoscopic findings. Assessments were conducted pre-operatively, at 10 days post-operatively, and at 2 months post-operatively.

Results: Patients in the silicone group exhibited significantly lower rates of post-operativesynechiae compared to the POCISEP group ($p < 0.05$). The POCISEP group demonstrated substantial advantages in other areas of postoperative recovery. At the2-month follow-up, patients reported a significant reduction in nasal symptoms and decreased sleep dysfunction. Among those with chronic rhinosinusitis with nasalpolyps (CRSwNP) and nasal obstruction, the POCISEP group showed betterimprovement in VAS scores at the 10-day assessment. Additionally, patients in thePOCISEP group without a history of ESS reported enhanced nasal symptoms at 10days post-operation and exhibited better edema results in the middle meatus at the 2-month follow-up.

Conclusions: While silicone packing is associated with lower rates of synechiae, POCISEP packing offers significant benefits in terms of improving patient comfort and overall symptom relief. These findings highlight the need for personalized treatment strategies, especially for patients with chronic rhinosinusitis and nasal obstruction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3854

Six-Month Outcomes from a European Real-World Registry to Assess Corticosteroid-Eluting Implants in Patients with Chronic Rhinosinusitis

Jan Gosepath[1], Hesham Saleh[3], Achim Beule[4], Rainer Weber[5], Tanja Hildenbrand[6], Nina Wenda[1], Andreas Leunig[7], Amir Minovi[8], Claudia Rudack[9], Jonas Park[10], Armin Steffen[11]

[1]Helios HSK Wiesbaden Germany, Department of Otolaryngology, Head and Neck Surgery, [2]Helios HSK Wiesbaden Germany, [3]Imperial College Healthcare NHS Trust – Charing Cross Hospital London , [4]University Hospital of Münster, Department of Otolaryngology, Head and Neck Surgery, [5]Städtisches Klinikum Karlsruhe GmbH, Department of Otolaryngology, Head and Neck Surgery, [6]University Hospital of Freiburg, Department of Otolaryngology , [7]HNO-Praxis & Rhinologie Zentrum Munich, Germany , [8]Saint Elisabeth Hospital Köln-Hohenlind , Germany, Department of Otolaryngology, Head and Neck Surgery, [9]Department of ENT, University Hospital of Münster, [10]St. Josefs-Hospital, Catholic Hospital of Hagen, Germany Department of Otolaryngology, Head and Neck Surgery, [11]University Hospital Schleswig-Holstein Campus Lübeck, Germany, Department of Otolaryngology, Head and Neck Surgery

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Background: While corticosteroid-eluting implants improve clinical outcomes after functional endoscopic sinus surgery (FESS) for chronic rhinosinusitis (CRS) patients, real-world evidenceon long-term patient-reported outcomes (PROs) is needed.

Methods: This prospective, real-world registry is the first to evaluate 12-month outcomes in adult patients with CRS undergoing FESS followed by placement of PROPEL® family implant(s). The primary endpoint is change in SNOT-22 score from baseline to 6-month, with a pre-specified performance goal of at least an 8.9 mean reduction.

Results: The complete 6-month data will be reported at ERS. By 11 December 2024, 198subjects (mean age 46.6 years, 63.1% male, 44.5% prior FESS, 52% history or presence of nasal polyps, 33.3% allergic rhinitis, and 29.8% asthma) met the primary endpoint analysis criteria. On average, each patient received two implants, all were placed successfully without complications:122 PROPEL Contour and 20 PROPEL Mini implants in the frontal sinus ostium and 64 PROPEL Mini and 26 PROPEL implants in the ethmoid sinus.The SNOT-22 total score and QoL (EQ-5D-5L index score) change from baseline to 6-month was -29.7 ± 18.5 (N=152) and 0.1 ± 0.2 (N=156), respectively. Endoscopic grading significantly improved by 6-month as seen in the Table and post-operative oral steroid or surgical interventions were low (<3.0%). Overall, the AE rate (including one infection SAE) was 4.5%with the most common AE being sinusitis (2.5%).

Conclusion: Preliminary 6-month data demonstrates substantial and sustained improvements in PROs following FESS with corticosteroid-eluting implants and a low rate of post-operative interventions, suggesting effective disease management in routine clinical practice.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3810

Skull Base Reconstruction with Polydioxanone (PDS) Framework: Effectiveness Across Etiologies and Radiotherapy

António Andrade[1], Pedro Barros[1], Ricardo Vaz[3], Manuel Mendes Leal[4], Gil Coutinho[1]

[1]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; Department of Surgery and Physiology, Faculty of Medicine of University of Porto, Porto, Portugal, *[2]Department of Otorhinolaryngology, Unidade Local Saúde Department of Surgery and Physiology, Faculty of Medicine of University of Porto, Porto, Portugal de São João, Porto, Portugal;* , *[3]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; Unit of Anatomy, Department of Biomedicine, Faculty of Medicine of University of Porto, Porto, Portugal; CINTESIS - Centro de Investigação em Tecnologias e Serviços de Saúde, University of Porto, Porto, Portugal*, *[4]Department of Otorhinolaryngology, Hospital CUF Trindade, Porto, Portugal*

CRS – Surgical Management 3 | ROOM 8 - G3 - Level +1 | Tuesday, June 24, 2025

Introduction: Endoscopic repair of cerebrospinal fluid (CSF) leaks has evolved with various techniques achieving high success rates. This study characterizes patients undergoing cranial base reconstruction using polydioxanone (PDS).

Material & Methods: A retrospective cohort study included patients treated with endoscopic repair using PDS between 2020 and 2024. Demographic, clinical, surgical, and follow-up data were analyzed, complemented by surgical imaging and videos.

Results: Fourteen patients were analyzed, with a mean age of 54.3 (±17.3) years, including one pediatric case (10 years old). Most patients were female (57.1%, eight cases). Sinonasal cancer comprised of six cases, whereas iatrogenic and congenital meningoencephaloceles represented one case each. Spontaneous fistulas, which could be a sign of incracranial hypertension, were responsible for six cases. Defects were predominantly located in the ethmoidal roof and olfactory cleft (12 cases). Among the eight cases with measured defect sizes, most ranged from 2 to 2.5 cm, with the largest measuring 4 × 1 cm. Reconstruction applied a multilayered approach with PDS framework underlay in all cases. Nasoseptal was the most frequent flap (nine cases), followed by middle turbinate (two cases) and inferior turbinate free flaps, mucosal grafts, and extended nasoseptal flaps (one case each). Synthetic dural substitutes were used in 12 cases, and fat grafts in one case. During a mean follow-up period of 24.9 (± 19.8) months, no recurrences were observed. Radiotherapy was performed in two neoplasic cases without complications or recurrence of the CSF leak.

Conclusions: Polydioxanone may offer a reliable framework for skull base reconstruction across diverse etiologies and defect sizes. It may also support successful outcomes even in more challenging cases, such as idiopathic intracranial hypertension and those treated with radiotherapy, highlighting its versatility and effectiveness.



Snoring and OSA 1

3687

Preoperative daytime sleepiness negatively impacts adherence to use of hypoglossal nerve stimulation in patients with obstructive sleep apnea

Haralampos Gouveris[1], Katharina Ludwig[1], Johannes Pordzik[1], Christian Ruckes[2], Christoph Matthias[1]

[1]Department of Otorhinolaryngology, University Medical Center Mainz , [2]Interdisciplinary Center for Clinical Trials, University Medical Center Mainz

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Introduction: Adherence to hypoglossal nerve stimulation (HGNS) therapy is usually more than 5 h / night. Adherence to HGNS therapy is a major determinant of success of this kind of therapy. The aims of this study were to investigate 1) details regarding therapy adherence under HGNS therapy and 2) the possible association between age, insomnia, daytime sleepiness, polysomnography (PSG) -based metrics, neurostimulation parameters and HGNS-therapy adherence.

Materials & Methods: Fourty three consecutive patients with detailed information about therapy adherence time were included. A PSG without any in-lab titration was performed 225 ± 191 days after implantation. Adherence was assessed by interrogating the impulse generator's data at that time. Patient-reported insomnia was assessed using the insomnia severity index (ISI) and the Epworth Sleepiness scale (ESS) was used to assess excessive daytime sleepiness (EDS) before and after HGNS treatment.

Results: An increased adherence in a real-world setting with 48.72 ± 14.74 hours per week (6.96 hours per night) was found. A strong negative correlation between preoperative ESS score and adherence time ($r = -0.43$; $p<0.005$) was found.

Conclusions: In this patient cohort, average adherence was much higher than previously reported. Pre-operative excessive daytime sleepiness may seriously impair adherence to HGNS therapy. Therefore, EDS should be carefully considered before HGNS implantation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3745

Revealing positional effects on airway obstruction: insights from DISE

Michaela Mladoňová[1], Adéla Kondé[2], Pavel Komínek[1], Petr Matoušek[1], Ondřej Jor[3]

[1]Department of Otorhinolaryngology and Head and Neck Surgery, University Hospital Ostrava, Ostrava 70800, Czech Republic, *[2]Department of Applied Mathematics, Faculty of Electrical Engineering and Computer Science, VSB-Technical University of Ostrava, Ostrava 70800, Czech Republic*, *[3]Department of Anesthesiology, Resuscitation and Intensive Medicine, University Hospital Ostrava, Ostrava 70800, Czech Republic*

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Introduction: Obstructive sleep apnea (OSA) is characterized by upper airway obstruction, with the tongue base playing a key role in its pathophysiology. This study investigates the impact of positional changes on airway obstruction patterns during drug-induced sleep endoscopy (DISE) and aims to identify regions most responsive to positional therapy.

Material & Methods: A prospective study was conducted in patients with OSA from June 2021 to June 2024. DISE evaluations in supine and lateral positions were used to simulate positional therapy effects. Obstruction patterns were analyzed using the VOTE classification system.

Results: DISE was performed on 186 patients with a median Apnea-Hypopnea Index (AHI) 19.3. Complete obstructions were identified in the supine position at the soft palate (88.2%), oropharynx (33.3%), tongue base (53.2%), and epiglottis (15.6%). Lateral positioning notably reduced obstructions, especially at the tongue base, where obstruction resolved in 94.9% of cases (94/99). This reduction was significantly higher at the tongue base than in other regions ($p < 0.001$).

Conclusions: DISE provides valuable insights into the responsiveness of airway regions to positional changes, offering potential guidance for positional therapy in OSA management. As tongue base obstruction is a major contributor to airway collapse in OSA, this improvement highlights a practical and non-invasive treatment approach. However, these findings demonstrate an acute association between lateral positioning and reduced obstruction. Further research is warranted to assess the long-term outcomes of positional therapy in clinical practice.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3757

Collapse Patterns in Drug-Induced Sleep Endoscopy: A Comparative Analysis Between Obese and Non-Obese Patients

Constanca Oom[1], João Barbosa[1], Filipa Morgado[1], João Rainha Fernandes[2], Inês Delgado[2], Alberto Santos[1], Carlos Macor[1]

[1]Hospital Beatriz Ângelo, *[2]Hospital Beatriz Ângelo, Otorhinolaryngology Department, Lisboa, Portugal*

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Introduction: Drug-induced sleep endoscopy (DISE) is a diagnostic tool for evaluating upper airway collapse in patients with obstructive sleep apnea (OSA). Obesity is a major risk factor for OSA and is associated with altered upper airway anatomy and increased soft tissue deposition, which may contribute to more complex patterns of airway collapse. This study aims to compare DISE-determined collapse patterns between obese and non-obese OSA patients.

Material and Methods: This retrospective study included adult OSA patients classified as obese (BMI ≥ 30 kg/m²) or non-obese (BMI <0 kg/m²). Patients underwent DISE, whose findings were assessed using the VOTE classification. Multilevel collapse and demographic factors were also examined. Statistical significance was determined using p-values.

Results: 91 patients were included in the study (31.9% obese, 68.1% non-obese).Obese patients exhibited significantly higher rates of complete oropharyngeal collapse (p = 0.0091) and multilevel collapse (p = 0.0307), indicating more complex airway obstruction. Velum collapse rates were similar (p = 0.3978), with a nonsignificant tendency toward concentric collapse in obese patients and anteroposterior collapse in non-obese patients. Tongue base (p = 0.8311) and epiglottis collapse (p = 0.1515) were slightly lower in obese patients but without statistically significant. No significant associations were observed between collapse patterns and demographic variables such as age or gender.

Conclusion: Obese patients with OSA exhibit distinct upper airway collapse patterns, characterized by higher rates of oropharyngeal and multilevel collapse. These findings highlight the need for personalized treatment strategies in these patients, considering their more complex obstruction patterns.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3762

Influence of sleep stages on determining positional dependency in patients with obstructive sleep apnea

Sang-Wook Kim[1], Sue Jean Mun[2]

[1]Gyeongsang National University College of Medicine, *[2]Pusan National University Yangsan Hospital*

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Introduction: Supine sleep position and rapid eye movement (REM) stage are widely known to aggravate the severity of obstructive sleep apnea (OSA). In general, position-dependent OSA is defined as an apnea-hypopnea index (AHI) at least twice as high in the supine position as in other sleep positions, but it can be misdiagnosed if a certain sleep stage, REM or NREM, is dominant in a specific sleep position. In this study, we investigated the influences of the sleep stages on positional dependency.

Materials & Methods: The polysomnographic data from 111 OSA patients aged ≥ 18 years (AHI > five events/hour) who slept in both supine and non-supine positions (each ≥ 5% of the total sleep time) were retrospectively analyzed. The overall ratio of non-supine AHI/supine AHI (NS/S AHI ratio) during the entire sleep was compared between specific sleep stages, i.e., REM or NREM sleep. Additionally, the weighted NS/S AHI ratio reflecting the proportion of each sleep time was created and compared with the original NS/S AHI ratio.

Results: The mean value of the NS/S AHI ratio did not differ between the entire sleep and the specific sleep stages. However, those ratios in the individual patients showed poor agreement of the NS/S AHI ratios between the entire sleep and the specific sleep stages. The weighted NS/S AHI ratio also demonstrated poor agreement with the original NS/S AHI ratio, mainly due to the discrepancy in mild to moderate OSA patients.

Conclusion: The weighted NS/S AHI ratio might help assess precise positional dependency.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3838

Improving Sleep in Severe CRSwNP: The Effect of Mepolizumab and FESS on OSA, Sleep disturbances and Quality of Life

Anne-Sophie Homøe[1], Eva Kirkegaard Kiaer[1], Jens Even Tidemandsen[2], Kasper Aanaes[1], Poul Jørgen Jennum[3], Vibeke Backer[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery and Audiology, Rigshospitalet, University of Copenhagen, [2]Centre for Physical Activity Research, Rigshospitalet, University of Copenhagen. University of Copenhagen, [3]Department of Clinical Neurophysiology, Copenhagen University Hospital (Rigshospitalet), Glostrup

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) often results in poor sleep quality and fatigue, with many patients also at risk for obstructive sleep apnea (OSA) or sleep disturbances. This study examines the effects of mepolizumab and functional endoscopic sinus surgery (FESS) on sleep quality, objective sleep parameters (AHI and ODI), and OSA severity in patients with severe uncontrolled CRSwNP.

Methods: In this randomized controlled trial, 58 patients received either mepolizumab alone or in combination with FESS. Sleep quality was assessed using the Functional Outcomes of Sleep Questionnaire (FOSQ), the Epworth Sleepiness Scale (ESS) and Sleep Domain of the SNOT-22 questionnaire, while OSA severity was measured by the apnea-hypopnea index (AHI) through home sleep apnea tests (HSAT).

Results: At baseline, 70% of participants had OSA (AHI ≥ 5), with 34.6% exhibiting moderate-to-severe OSA. After six months, both treatment groups showed significant improvements in sleep quality (SNOT-22, FOSQ, ESS), but no change in objective OSA parameters (AHI, ODI). Patients with mild OSA showed a reduction in severity, while those with moderate-to-severe OSA did not experience significant improvement.

Conclusions: Mepolizumab, with or without FESS, improved patient-reported sleep quality and reduced daytime fatigue but had no impact on objective OSA severity. These findings suggest that while treatment helps alleviate sleep disturbances, it does not fully address underlying OSA, particularly in patients with moderate-to-severe disease.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4126

Outcomes of Patients with OSAS Receiving TORS Tongue Base Resection versus Radiofrequency Tongue Base Reduction

Yu-Hsiang Hung[1], Pei-Shao Liao[1], Chien-Jen Chiu[1], Yung-An Tsou[1]
[1]*China Medical University Hospital, Department of Otolaryngology*

Snoring and OSA 1 | ROOM 9 - G6 - Level +1 | Tuesday, June 24, 2025

Introduction: The mainstay of treatment for OSAS is CPAP. For those intolerable to CPAP use, alternative treatment should be considered. The aim of surgical intervention is to deal with obstruction of nasal, retropalatal, retroglossal, hypopharyngeal regions. Tongue-base reduction procedures include TORS tongue base resection, radiofrequency tongue base reduction, coblation endoscopic lingual lightening and genioglossus advancement. The aim of this study is to compare outcomes in patients with OSAS receiving TORS tongue base resection versus radiofrequency tongue base reduction.

Material & Methods: This is a retrospective single center study. The medical charts were reviewed for patients diagnosed of OSAS in recent five years. Patients with Friedman tongue position class III or IV and grade I or II tonsil who were intolerable to CPAP therapy, and received either TORS tongue base resection or radiofrequency tongue base reduction were analyzed. Pre-operative and post-operative apnea-hypopnea index, lowest saturation, Epworth sleepiness score were compared.

Results: A total of 54 patients were included, of which 28 patients received radiofrequency tongue base reduction, and 26 patients received TORS tongue base resection. Surgical success rate (post-operative AHI<0 and drop of AHI>50% from baseline) were 29% and 50%, respectively. Average AHI reduction were 11.1 and 18.4, and average ESS reduction were 2.1 and 2.5. Average improvement of lowest saturation were 0.1 and 7.4.

Conclusions: TORS tongue base resection exhibit superiority over radiofrequency tongue base reduction in terms of success rate, average AHI and ESS reduction, and there was significant difference in average improvement of lowest saturation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3736

Expert consensus on surgical management of primary diffuse type 2 dominant chronic rhinosinusitis

Manon Blauwblomme[1], Christos Georgalas[2], Ahmed Shahzada[3], Isam Alobid[4], Paolo Battaglia[5], Paolo Castelnuovo[6], Jannis Constantinidis[7], Iacopo Dallan[8], Anne-Sophie Eeckels[1], Marco Ferrari[9], Philippe Gevaert[1], Jessica Grayson[10], Richard Harvey[11], Philippe Herman[12], Iordanis Konstantinidis[7], Darlene Lubbe[13], Cem Meco[14], James Palmer[15], Zara M. Patel[16], Agnieszka Strzembosz[17], Benjamin Verillaud[18], Bradford A. Woodworth[10], Thibaut Van Zele[1]

[1]Department of Otorhinolaryngology, Ghent University Hospital, Ghent, Belgium, [2]Department of Otorhinolaryngology Head and Neck Surgery, University of Nicosia Medical School, Nicosia, Cyprus; Endoscopic Skull Base Centre Athens, Hygeia Hospital, Erythrou Stavrou 4, Maroussi Athens, Greece, [3]Department of ENT and Skull Base Surgery,Birmingham Hospital, Birmingham, UK, [4]Rhinology and Skull Base Unit, ENT Department, Hospital Clínic de Barcelona, Universitat de Barcelona, August Pi i Sunyer Biomedical Research Institute, CIBERES, Barcelona, Spain, [5]Department of Otolaryngology Head and Neck Surgery, Department of Biotechnology and Life Sciences, ASST Lariana, Ospedale Sant'Anna, University of Insubria, Italy; Head and Neck Surgery and Forensic Dissection Research Center (HNS&FDRc), Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy, [6]Department of Otorhinolaryngology Head and Neck Surgery, Ospedale di Circolo e Fondazione Macchi, department of Biotechnology and Life Sciences, ASST Sette Laghi, University of Insubria, Varese, Italy; Head and Neck Surgery and Forensic Dissection Research Center (HNS&FDRc), Department of Biotechnology and Life Sciences, University of Insubria, Varese, Italy, [7]Department of Otorhinolaryngology Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece, [8]ENT Unit, Azienda Ospedaliero-Universitaria Pisana, [9]Otolaryngology Section, Department of Neurosciences DNS, University of Padova, Padova, Italy., [10]Department of Otolaryngology, University of Alabama Birmingham, Birmingham, Alabama, USA, [11]Rhinology and Skull Base Research Group, St Vincent's Centre for Applied Medical Research, University of New South Wales, Sydney, Australia; Department of Otolaryngology, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia, [12]Department of Head and Neck Surgery, Université Paris Cité, Lariboisière Hospital, Paris, France, [13]Division of Otolaryngology, University of Cape Town Faculty of Health Sciences, Cape Town, South Africa, [14]Department of Otolaryngology Head and Neck Surgery, Ankara University Medical School, Ankara, Turkey 18 Department of Otolaryngology Head and Neck Surgery, Salzburg Paracelsus Medical University, Salzburg, Austria 19 Department of Otolaryngology Head and Neck Surgery, Weill Cornell Medical College, Cornell University, New York, NY, USA 20 Department of Clinical Anatomy, Institute of Health Sciences, Ankara University, Ankara, Turkey, [15]Department of Otolaryngology Head and Neck Surgery,Hospital of the University of Pennsylvania, Philadelphia, PA, [16]Department of Otolaryngology Head and Neck Surgery, Stanford University School of Medicine, Stanford, California, USA, [17]Otorhinolaryngology Division, Department of Surgery, Medicover Hospital, Warsaw Poland, [18]Department of Head and Neck Surgery Hôpital Lariboisière, AP-HP U1141 - Université Paris Cité, [19]1) Ankara University Medical School Department of ORL-HNS, Ankara, Turkey: 2) Salzburg Paracelsus Medical University, Department of ORL-HNS, Salzburg, Austria: 3) Cornell University, Weill Cornell Medical Collage, Department of Otolaryngology-HNS, New York, NY, USA

Best Abstract Presentation | ROUND TABLE 4 | ROOM 4 - F7 - Ground Floor | Sunday June22, 2025

Background: Chronic rhinosinusitis (CRS), particularly type 2 dominant CRS, presents significant challenges in surgical decision-making due to the lack of clear guidelines. This study focuses on surgical approaches for primary diffuse type 2 dominant CRS, with an emphasis on preoperative and intraoperative strategies.

Methods: An international panel of experts from Europe, the United Kingdom, Australia, South Africa, North and South America was assembled. Using a modified Delphi method, 67 statements were developed following a literature review. One additional statement was added during the second iteration. The recommendations were finalized at a consensus meeting held in Santorini, Greece, in October 2023.

Results: Consensus was achieved on 45 out of 68 proposed statements. Of these, 34 statements received a median score of 7 (strongly agree), and 11 achieved a median score of 6 (agree). Key recommendations highlight the indications, timing, and extent of surgery, along with intraoperative management strategies. Emphasis is placed on complete sinus surgery, which involves creating a neo-sinus cavity by removing bone partitions in the ethmoid and opening the frontal and sphenoidal sinuses as needed. Adequate primary and revision surgery includes clearing all nasal polyps and diseased mucosa while ensuring ideal conditions for topical therapy. Additionally, there was consensus on performing complete sinus surgery before considering monoclonal antibody therapies, unless contraindicated.

Conclusion: These 45 consensus statements, derived from both current evidence and expert opinion, provide valuable guidance for clinicians in the surgical management of primary diffuse type 2 dominant CRS.



Skull Base Surgery 3

4441

Free Flap Reconstruction in Severe Radiation-Induced Skull Base Osteoradionecrosis Following Nasopharyngeal Cancer Radiotherapy: A Single-arm Clinical Study

Zhaohui Shi[1], Jin Ye[2]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University, *[2]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Third Affiliated Hospital of Sun Yat-sen University*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Severe radiation-induced skull base osteoradionecrosis is a major cause of treatment failure and mortality in nasopharyngeal cancer, occurring in 10% of patients after primary radiotherapy and 30% after re-irradiation. Surgical debridement is the only curative option, but reconstructing extensive necrosis remains challenging, often resulting in failure due to limited treatment choices. This study evaluates the outcomes and factors affecting the success of free flap reconstruction in severe radiation-induced skull base osteoradionecrosis after nasopharyngeal cancer radiotherapy.

Material & Methods: This study included 12 patients with severe radiation-induced skull base osteoradionecrosis who underwent free flap reconstruction at the Department of Otolaryngology-Head and Neck Surgery, Third Affiliated Hospital of Sun Yat-sen University, between April 2024 and January 2025. Preoperative variables, including necrosis extent, clinical presentation, surgical approach, flap type, mucosal healing, survival, quality of life, and complications, were analyzed. The study prospectively assessed the impact of free flap reconstruction on nasopharyngeal, oropharyngeal, and skull base defects, with a focus on key technical considerations.

Results: Twelve patients were included in the analysis, with necrosis classified as follows: L1D2W3 (2 cases), L1D2W4 (4 cases), and L2D2W3 (6 cases). L1 represents necrosis confined to the nasopharynx, L2 indicates extension to the oropharynx, W3 refers to unilateral parapharyngeal space involvement, and W4 denotes bilateral parapharyngeal space involvement. Free flaps used included 3 forearm flaps, 4 anterolateral thigh fascial flaps, and 5 anterolateral thigh skin flaps. The anastomotic vessels included the superior thyroid artery in 8 cases and the facial artery in 4 cases. The flap routes were through the parapharyngeal tunnel in 7 cases and via the anterior border of the masseter muscle and infratemporal fossa tunnel in 5 cases. Flap survival was achieved in 11 patients, with 1 case of necrosis due to oropharyngeal fistula successfully repaired with a pedicled latissimus dorsi muscle flap, which later healed. One patient died from internal carotid artery rupture, leading to multiple organ failure. Follow-up duration ranged from 3 to 8 months, with all other patients surviving and complete resolution of necrosis. Postoperative complications were minimal, primarily consisting of wound infection. According to the LDW classification system for nasopharyngeal cancer necrosis, patients whose free flap reconstruction adhered to the recommended classification showed significantly improved survival, quality of life, and mucosal healing, with reduced postoperative complications and reoperation rates.

Conclusions: Severe radiation-induced skull base osteoradionecrosis significantly contributes to treatment failure and mortality in nasopharyngeal cancer. Free flap reconstruction improves treatment success rates. For nasopharyngeal skull base defects, an endoscopic approach with forearm flaps and masseter muscle anterior border tunnel is recommended. For oropharyngeal defects, a mandibular split approach with parapharyngeal tunnel access and direct wound closure is preferred. Proper surgical indications, thorough necrotic tissue debridement, and careful management of the internal carotid artery are essential for successful reconstruction and optimal outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4446

The Effect of Iodine Concentration on Smell Function in Endoscopic Transsphenoidal Surgery Patients

Chia Hsing Lin[1], Ying-Piao Wang[2]

[1]attending of otorhinolaryngology department in mackay memorial hospital, *[2]Chairman, Department of Otorhinolaryngology Head & Neck Surgery, Mackay Memorial Hospital, Taipei, Taiwan*, *[3]Department of Otorhinolaryngology Head & Neck Surgery, Mackay Memorial Hospital, Taipei, Taiwan*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Endoscopic endonasal transsphenoidal surgery is a safe and effective approach for treating sella lesions. Olfactory outcome is a significant concern for these patients. This is the first study to demonstrate the concentration of povidone-iodine used during presurgical antisepsis has an impact on postoperative smell recovery.

Material & Methods: We included patients with sellar tumors who underwent endoscopic endonasal transsphenoidal surgery at Mackay Memorial Hospital between August 2015 and March 2022. Seventeen patients received a commercial aqueous 10% povidone-iodine (PVP-I) solution, while a diluted 1% PVP-I solution was used in other 52 patients. Olfactory outcomes were evaluated using the validated Taiwan Smell Identification Test.

Results: The average Taiwan Smell Identification Test result for the 10% PVP-I group three-month after surgery was 31.3, showing a significant decline from baseline (mean:-9.8, SD:± 12.8; P =. 01). In contrast, the 1% PVP-I group demonstrated no significant change from baseline (mean: -2.1, SD: ± 2.6, P = .13). Smell function in the 10% PVP-I group returned to the preoperative level after six months (mean: -1.8, SD:± 4.8, P = .22)

Conclusion: Olfactory function in the 1% PVP-I group is expected to return to pre-operative level after three-month recovery. However, it takes six months to return in the 10% PVP-I group. It is reasonable to use diluted 1% PVP-I solution during surgery without compromising the olfactory recovery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4052

Skull base reconstruction with multilayer pericranial flap after cranioendoscopic sinonasal adenocarcinoma resection: how to achieve a radiotherapy-proof closure

José Alberto Fernandes[1], António Andrade[2], Carolina Santos Silva[3], Pedro Alberto Silva[3], Pedro Valente[4], Ricardo Vaz[5], Manuel Leal[6], Gil Coutinho[4]

[1]Department of Otorhinolaryngology, Unidade Local de Saúde São João, Porto, Portugal / Unit of Otorhinolaryngology, Department of Surgery and Physiology, Faculty of Medicine, University of Porto, Porto, Portugal / Department of Otorhinolaryngology, Unidade Local de Saúde Trás-os-Montes e Alto Douro, Vila Real, Portugal, *[2] Department of Otorhinolaryngology, Unidade Local de Saúde São João, Porto, Portugal / Unit of Otorhinolaryngology, Department of Surgery and Physiology, Faculty of Medicine, University of Porto, Porto, Portugal*, *[3]Department of Neurosurgery, Unidade Local de Saúde São João, Portugal*, *[4]Department of Otorhinolaryngology, Unidade Local de Saúde São João, Porto, Portugal / Unit of Otorhinolaryngology, Department of Surgery and Physiology, Faculty of Medicine, University of Porto, Porto, Portugal*, *[5]Department of Otorhinolaryngology, Unidade Local de Saúde São João, Porto, Portugal / Unit of Otorhinolaryngology, Department of Surgery and Physiology, Faculty of Medicine, University of Porto, Porto, Portugal / Unit of Anatomy, Department of Biomedicine, Faculty of Medicine, University of Porto, Porto, Portugal / NeuroGen Research Group, Center for Health Technology and Services Research (CINTESIS), Porto, Portugal / CINTESIS@RISE, Faculty of Medicine, University of Porto, Porto, Portugal.*, *[6]Department of Otorhinolaryngology, Hospital CUF Trindade, Porto, Portugal*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Combined cranioendoscopic approaches play a role in the treatment of selected locally advanced sinonasal tumors even with the advent of the expanded endonasal techniques. To achieve a successful skull base reconstruction, multilayer pericranial flap has proved to be reliable when the nasoseptal flap is not feasible.

Materials and Methods: A retrospective analysis was conducted on patients diagnosed with locally advanced intestinal-type sinonasal adenocarcinoma and significant intracranial invasion treated with a combined cranioendoscopic approach and anterior skull base reconstruction with multilayer pericranial flaps. Cases where nasoseptal flap harvest was viable were excluded.

Results: Thirteen male patients treated with a combined cranioendoscopic resection and with a mean age of 58 years were included. All cases were staged as T4a or T4b. In the radiological evaluation, the skull base defect area was measured for every patient, yielding a median value of 793 mm² (IQR 692).

Conclusion: Our findings suggest that skull base reconstruction can be successfully achieved in the most challenging cases with significant defects when the nasoseptal flap is unavailable. Moreover, the multilayer pericranial flap has proved to be a reliable option after irradiation.



4104

Endoscopic Transnasal Transpterygoid Approach – a minimally invasive technique for deep medial fossa lesions

Beatriz Rodrigues[1], Filipe Correia[1], Joana Guincho[1], Kaamil Gani[1], Pedro Escada[1]
[1]Department of Otorhinolaryngology, Unidade Local de Saúde de Lisboa Ocidental

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: The endoscopic transnasal transpterygoid approach (ETTA), as we aim to describe it here, is a valuable technique for treating complex skull base lesions, with significant advantages in minimizing complications and preserving critical neurovascular structures.

Materials and Methods: Review of the ETTA, through the discussion of a clinical case of a right Meckel's cave tumor with atypical features.

Results: A 53-year-old woman presented with a one-month history of right hemifacial numbness, on the territory of the maxillary (V2) and mandibular (V3) branches of the trigeminal nerve. Imaging revealed an expansive extra-axial lesion centered at the base of the right greater wing and pterygoid processes of the sphenoid, extending to the right cavernous sinus and Gasserian ganglion cistern. The differential diagnosis included meningioma or metastatic tumor. An ETTA was performed to provide a specimen for histological analysis. The procedure included ethmoidectomy, subtotal middle turbinectomy and mega-antrostomy on the right side. The posterior wall of the maxillary sinus was then removed, allowing access to the pterygopalatine fossa. The right sphenopalatine, descending palatine and vidian arteries were ligated for hemorrhagic control. The pterygoid canal and foramen rotundum, along with respective nerves, were identified and the base of the pterygoid process was drilled until the lesion was found and biopsied. Histopathological analysis confirmed the suspicion of a meningioma with dural and osseous invasion.

Conclusion: This case review illustrates ETTA's anatomical challenges and key surgical steps with procedural photos and videos, showcasing its effectiveness in safely reaching deep skull base lesions while preserving vital structures.



4227

Frontal sinusotomy Draf IIB without drill - how we did it

Morais Catarina[1], Castelhano Luis[1], Rodrigues Beatriz[1], Gani Kaamil[1], Pereira André[1], Cabral Rui[1], Escada Pedro[1]
[1]*Otolaryngology department of Hospital de Egas Moniz, ULSLO, Lisbon*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Extended endoscopic approaches (EEA) offer improved exposure of the frontal sinus and many advantages when compared to external approaches. The Draf IIb procedure is an extension of the Draf IIa in the medial direction. It usually implies drilling, which is associated with postoperative ostial stenosis. The goal of this work is to present a case of this approach without the use of powered instruments.

Material and methods: Clinical case presentation with surgical video illustration.

Results: 54 years-old male, with history of epilepsy and meningitis, was referred to a tertiary center for intraoperative suspicion of CSF leakage. The patient presented with unilateral transparent rhinorrhea that started after the resolution of the meningitis. Nasal endoscopy revealed unilateral pulsatile hydrorrhea from the middle meatus. CT scan showed dehiscence of the posteroinferior wall of the left frontal sinus. The patient underwent an EEA for the defect correction after intrathecal fluorescein administration. CSF opening pressure was 24 mmHg. A full house FESS was performed, with a Draf IIB approach to the left frontal sinus with a frontal sinus Kerrison punch. An osseous defect of the posterior table of the frontal sinus with extension to the lateral recess and active fluorescein leakage was identified. The mucosa around the defect was removed, and the defect was sealed. There were no surgical complications. 6 months postoperatively CT scan showed defect closure and good endoscopic control.

Conclusion: In our work we show that, in patients with adequate anatomy, it is possible to reduce stenosis risk by avoiding drilling.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4278

Spheno-tubercular-planum meningiomas with vision changes – importance of optic nerve decompression in optic canal

Salman Ali[1], Fernando Vale[1]
[1]*Medical College of Georgia at Augusta University*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Spheno-tuberculum-planum (STP) meningiomas usually present with vision changes due to optic nerve (ON) compression due to hyperostosis of bony optic canal (BOC). It is critical to decompress BOC to help preserve or improve vision. Methods: 3 cases were identified with STP meningiomas with vision changes in past 3 months.

Results: 1sr patient underwent a staged transcranial and endoscopic endonasal approach for removal of the majority of soft tumor at an outside hospital. Unfortunately, a layer of tumor was left along the parasellar carotids and optic canal and no bony decompression was performed. Patient presented with tumor progression and worsening vision. She underwent expanded endoscopic endonasal approach (EEA) for resection of residual tumor and bilateral ON decompression and sheath fenestration. 2nd patient presented with STP meningioma and vision changes and found to have a large tumor with significant anterior clinoid hyperostosis, narrowing of BOC, intra-orbital soft tumor and involvement of middle cranial fossa. A transcranial approach was adopted at the OSH but no bony decompression was performed and intra-orbital portion of the tumor left. Patient presented with progressively worsening vision loss and tumor recurrence. She underwent redo transcranial approach for anterior clinoidectomy along with resection of soft tumor from the orbit. 3rd patient presented with STP meningioma with significant BOC and soft tissue compressing the cisternal segment of ON. She underwent her naive EEA for soft tissue resection in sphenoid sinus, tuberculum and planum. Further, extensive BOC decompression was performed along with sheath fenestration. All patients resported subjective improvement in vision. 2/3 patients had objective improvement on neuro-ophthalmological exam.

Conclusion: Patients presenting with STP associated with BOC narrowing due to bone hyperostosis, bony optic canal decompression is necassary to preserve and improve vision.



4304

Reconstructive endoscopic surgery to restore the internal structures of the nose after endoscopic neurosurgical operations on the skull base

Olena Kvasha[1], Dmytro Zabolotnyi[1]
[1]*Institute of Otolaryngology named after Prof. O.S. Kolomiychenko of the National Academy of Medical Sciences of Ukraine.*

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: After endoscopic neurosurgical operations on the skull base with taking of naso-septal flaps and large areas of nasal mucosa, patients have significantly disturbed anatomy of the internal structures of the nose. Because of this, they have a large number of adhesions, choanal pseudoatresia, empty nose syndrome, large perforations of the nasal septum when bilateral naso-septal flaps are taken.

Objective of the paper is to develop the techniques for reconstructing the structures of the internal nose and restoring nasal breathing. 3 cases are presented. The first case. Boy, 11 years old. Craniopharyngioma was removed endoscopically and endonasally. During the neurosurgical operation, bilateral naso-septal flaps were taken. When the patient was referred to the ENT doctor, he had bilateral choanal pseudoatresia, bilateral purulent maxilloethmoiditis due to dysfunction of the sinus ostiae. A surgical intervention was performed, splints were installed for 1 month, nasal breathing was completely restored. The second case. Male, 35 years old. The condition after the removal of the tumor of the anterior cranial fossa. On examination, empty nose syndrome on one side. The inferior concha, middle concha, and medial wall of the maxillary sinus were absent. An operation was performed - reconstruction of the front part of the inferior conchae using an autograft - cartilage of the septum of the nose, in the postoperative period - injection of hyaluronic acid into the area of the formed inferior conchae. Nasal breathing is restored. The third case. Woman, 52 years old, condition after endoscopic endonasal removal of breast cancer metastasis in the basal part of the frontal lobe. During the examination, there was significant hyperfunction of the vidian nerve, which led to a significant decrease in the patient's quality of life. Bilateral cauterization of the inferior conchae and injection of hyaluronic acid into the area of the cavernous bodies of the inferior conchae were performed. The patient's quality of life improved significantly, the symptoms of neural rhinitis caused by the hyperfunction of the vidian nerve decreased.

Conclusion: Patients with disturbed anatomy of the internal structures of the nose after endoscopic endonasal neurosurgical interventions should have an individualized approach to surgical treatment, which will restore nasal breathing and improve the quality of life.



4399

Money Box Approach" As An Alternative Technique For Reconstruction Of Anterior Skull Base Defects

David Farinha[1], Vítor Oliveira, Mariana Calha, César Silva, Rodrigo Franco, Maria José Santos, Rita Tomás, Mafalda Oliveira[1], Claudia Rosa, Mariana Caetano, António Nicolau-Fernandes, Leonel Luís

[1]ENT Department - Unidade Local de Saude de Santa Maria

Skull Base Surgery 3 | ROOM 10 - G7 - Level +1 | Tuesday, June 24, 2025

Introduction: Reconstruction of the anterior skull base (ASB) is a surgical challenge, especially in cases of large dural defects or patients lacking options of intranasal flaps. The use of vascularized flaps is essential to ensure proper tissue healing and adhesion. When endonasal flaps are unavailable, a pericranial flap can be a viable alternative. The "money box" technique enables its transposition to the ASB via an external frontal sinusotomy.

Material and Methods: We present two consecutive cases of ASB reconstruction using the "money box" technique.

Results: Case 1: A 47-year-old female with sinonasal adenocarcinoma, with four prior sinonasal surgeries, presented with a recurrence in the olfactory groove. She underwent endoscopic craniectomy with complete lesion resection and ASB reconstruction using an inlay fascia lata graft and a pedicled pericranial flap via an external frontal sinusotomy. The postoperative period was uneventful. Case 2: A 34-year-old male with small-cell sinonasal carcinoma underwent emergency orbital decompression and tumor debulking via midfacial degloving, extended medial maxillectomy, and septectomy. He later developed an active cerebrospinal fluid leak (CSFL) requiring ASB reconstruction with a pedicled pericranial flap via the "money box" approach. A low-output CSFL was observed postoperatively and resolved with conservative treatment.

Conclusions: Endonasal flaps were unavailable in these two cases due to prior nasosinusal surgeries. In their absence, pedicled pericranial flaps using the "money box" approach proved to be a safe and effective option for reconstructing large ASB defects.



Training 1

4180

Technical skills of endoscopic sinus surgery for performance assessment using the Delphi methodology

Mads Guldager[1], Jacob Melchiors[1], Emmanuel Prokopakis[3], Claire Hopkins[4], Christian von Buchwald[1], Steven Arild Wuyts Andersen[5]

[1]Department of Otolaryngology, Head and Neck Surgery, Rigshospitalet, Copenhagen University Hospital, [2]Department of Otolaryngology, Head and Neck Surgery. Rigshospitalet, Copenhagen University Hospital, [3]Department of Otorhinolaryngology-Head and Neck Surgery, School of Medicine, University of Crete, Greece, [4]ENT Department, Guy's Hospital, London, United Kingdom, [5]Department of Otolaryngology, Head and Neck Surgery, Rigshospitalet, Copenhagen University Hospital, Denmark, [6]Department of Otolaryngology, Head and Neck Surgery. Rigshospitalet, Copenhagen University Hospital, Denmark

Training 1 | ROOM 11 - G10 - Level +1 | Tuesday, June 24, 2025

Background: In surgical residency, competence has traditionally been defined by the number of surgical procedures performed. However, advances in medical education and surgical fellowships have rendered this approach outdated. It is now recognized that systematically defining skill sets for competency-based assessment is essential in surgical training curricula.

Methodology: We conducted an international Delphi study with panelists from the European Rhinologic Society, representing 27 countries. Over four rounds, the panel reached a consensus on the phrasing of a tool to assess essential technical skills for performing endoscopic sinus surgery.

Results: Thirty-seven panelists accepted the invitation to participate, and 30 participated throughout the study. The median age of the panelists was 54 years (range: 31-66 years), with a median experience of 25 years (range: 6-40 years). All participants were experts in the field of endoscopic sinus surgery. Consensus was achieved, resulting in a final assessment tool comprising 21 items with descriptive anchors.

Conclusion: The assessment tool, named the European Endoscopic Sinus Surgery – Technical Skills Assessment (EE-TSA), facilitates a competency-based approach to acquiring and maintaining essential technical skills in endoscopic sinus surgery. The international Delphi panel ensures the tool's global applicability. Further research should gather validity evidence for the EE-TSA, enhancing the assessment of endoscopic sinus surgery by establishing a pass/fail standard and ultimately improving surgical outcomes and patient safety.



4318

How to improve the ENT residents surgical skills in Rhinosurgery

Jaime Sanabria[1], Gonzalo Diaz Tapia[2], Sara Zaldivar[3], Daniela Paez[1], Luz Lopez Florez[1], Jose Miguel Villacampa[1]

[1]ENT Department, FJD, Universidad Autónoma Madrid, Spain. , [2]ENT Department, Villalba, Universidad Alfonso X el Sabio, Madrid, Spain. , [3]ENT Department, FJD, Universidad Francisco de Vitoria Madrid, Spain.

Training 1 | ROOM 11 - G10 - Level +1 | Tuesday, June 24, 2025

Introduction: The actual and most universal training system for developing surgical skills for ENT residents is to start in dissection room supervised by Rhinology senior staff and practicing later on some parts of the nose surgeries guided by experienced surgeons. We decided around 15 years ago to change our training system trying to improve the surgical results of our residents in their academic 4-year period of time. We noticed that the junior residents had difficulties in achieving initial good results because the training system in septal surgery is based on observing behind the shoulder of a senior ENT. We changed this system by start using the microscope for all septal surgeries.

Material & Method: We performed 300 septal microsurgery, with double vision by using the lateral lens like in ear surgery, let the resident to gain a better view and improved the understanding of the surgical procedure, thus accelerating the transition to be placed as first surgeon while the experienced one is located as supervisor with the lateral eyepiece.

Results: This training rhino microsurgery program showed very good results since the beginning and was even improved with the use of standard TV monitors so the controllers and counsellors in the OR were not just the one in the lateral eyepiece. The learning curve for the experienced staff members to start with the microscope instead of the the headlamp, was quick enough to be accepted easily. And the learning curve for the novel surgeons change dramatically with two important trends;- improved safety and results- Less surgical time than in the headlamp system.

Conclusions: We strongly advocate to think about revisiting the rhino septal surgery program to a more screen-oriented system in your institutions. Many video-mini-clips will be presented as examples.



4203

Enhancing clinical decision-making in Rhinology through E-Learning

Ra'ed Al-ashqar[1], Marios Stavrakas[2], Yazan Kanaan[2], Alicia Wong[3], Hisham Khalil[2]

[1]Derriford Hospital, University Hospitals Plymouth NHS Trust, UK, *[2]Consultant ENT surgeon -University Hospitals Plymouth NHS Trust*, *[3]University Hospital Plymouth*, *[4]Consultant ENT Surgeon -University Hospitals Plymouth NHS Trust*

Training 1 | ROOM 11 - G10 - Level +1 | Tuesday, June 24, 2025

Background and Aim: Clinical reasoning and decision-making skills in the rhinology clinic context depends on two systems, System I, pattern recognition, and System II, the hypothetical deductive model. These skills are important for all clinicians dealing with patients with sinonasal disorders. Recognizing the need for structured, accessible and standardized training to enhance these skills among all grades in the department, we developed an e-learning package in Rhinology that covers evidence-based practice in relation to urgent and emergency care, rhinosinusitis, red flags in Rhinology, and disorders leading to nasal obstruction. Each section included an introduction with case-based scenarios, as well as several assessments integrated within each section to reinforce learning and prompt a process for clinical reasoning and decision-making.

Methods: The E-learning package was presented in the departmental meeting with Initial feedback provided by staff members. All participants who completed the e-learning package were given the opportunity to give written feedback and obtain a certificate.

Results: Preliminary data from trainee feedback, across varying years of experience and exposure to rhinology patients, highlights the package's value in enhancing confidence in managing patients in the nasal disorders clinic, with the content utilizing effective and engaging teaching methods, and overall being highly relevant to their field of work.

Conclusion: The inclusion of a rhinology E-learning package in the induction process can help enhance the clinical reasoning and decision-making skills of doctors managing patients with nasal disorders, fostering improved quality of care. Further refinement based on trainee feedback will ensure continued relevance and effectiveness.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4230

Rhinologic surgical emergencies: what procedures should I be comfortable with?

Morais Catarina[1], Kaamil Gani[1], André Pereira[1], Luís Castelhano[1], Pedro Escada[1]
[1]*Otolaryngology department of Hospital de Egas Moniz, ULSLO, Lisbon*

Training 1 | ROOM 11 - G10 - Level +1 | Tuesday, June 24, 2025

Introduction: The goal of our work is to characterize the epidemiology of rhinologic emergencies requiring intervention under general anesthesia, and identify the most common procedures that every otolaryngologist, regardless of subspecialization, should be comfortable in performing.

Materials and methods: Retrospective study in a tertiary center in Southern Europe. Emergency surgery records were reviewed between 2014 and 2024. Patients with rhinologic pathology were included. Data collected included demographics, diagnosis, intervention, success of intervention, complications and mortality.

Results: We included a total of 70 interventions in 66 patients, 35% of which were female. Mean age at time of intervention was 47.6 years old. The most common indications for intervention were epistaxis (37%), acute or chronic sinusitis with orbital complications (17%) and nasal bone fractures (9%). The most common interventions included endoscopic maxillary sinusotomy (56%) and ethmoidectomy (37%), followed by endoscopic approaches to the frontal (27%) and sphenoid sinuses (23%). It was necessary to ligate the sphenopalatine artery in 19% of surgeries. Approaches to the orbit (endoscopic or external) were necessary in 13% of surgeries. Success rate was 83%, with a complication rate of 9% and mortality rate of 1%.

Conclusion: With this work we aim to raise awareness to the most common indications for surgical intervention and required skills in rhinological procedures, so that they can be taken into consideration during medical training.



4309

Development and pilot of an endoscopic rhinology lab box simulator for junior trainees

Harrypal Panesar[1], Ramkishan Balakumar
[1] *NHS Great Western Hospital*

Training 1 | ROOM 11 - G10 - Level +1 | Tuesday, June 24, 2025

Introduction: Rhinological surgical procedures require a detailed knowledge of anatomy and technical expertise. Simulation based training has become increasingly important due to factors such as lack of surgical opportunities, complexity of procedures and ethical considerations. The aim of this project is to develop a lab box rhinology simulation model for junior trainees to improve confidence in identifying nasal anatomy and performing basic components of rhinology surgery.

Methods: A model of the nose was designed and 3D printed from hardshell plastic and silicone. Using a modelling compound a prototype cassette mimicking internal nasal structures was created. A pilot simulation experience was set up consisting of completion of a simple task within the 3D printed model. Doctors within the ENT department at Great Western Hospital were asked to fill in a 5-point Likert scale questionnaire describing their simulation experience.

Results: Doctors (n=17) ranging from SHO to consultant took part in the pilot simulation experience. All doctors were right-handed (n=15). N=8 doctors had performed 0 FESS operations, n=4 had performed 10-30, n=2 performed 30-100 and n=3 had performed> who were all consultants. Questionnaire domains of anatomical accuracy, improving surgical confidence, mimicking real surgical experiences and contribution to overall education and training in surgery received average responses of 3.4, 3.5, 3.1 and 3.9.

Conclusion: Simulation in training is a valuable adjunct to traditional surgical education. There remains a gap in simulation models for junior trainees to have an inexpensive way improve their confidence of rhinological surgical procedures. Creation of a simplistic 3D printed lab box may help bridge that gap.



Imaging and Investigations 2

4379

Imaging Differential Diagnosis and Development of a Diagnostic-Therapeutic Protocol for Unilateral Nasal and Maxillary Sinus Lesions

Xia Jiao[1]

[1]*Beijing Friendship Hospital, Capital Medical University, China*

Imaging and Investigations 2 | ROOM 12 - G11 - Level +1 | Tuesday, June 24, 2025

Objective: Unilateral nasal and maxillary sinus opacities observed on sinus CT are a common clinical imaging finding. Establishing a standardized diagnostic-therapeutic protocol for these lesions is critical to optimize clinical management and outcomes. This study summarizes key imaging discriminators for differential diagnosis, develops a diagnostic algorithm, and validates its sensitivity and specificity.

Methods: A retrospective study was conducted on surgically and pathologically confirmed unilateral nasal and maxillary sinus lesions at our institution from December 2019 to December 2021. Demographic data, imaging characteristics, and clinical management were analyzed by diagnostic category. A three-step imaging algorithm was formulated based on these findings and validated using cases from January 2022 to May 2024 to assess diagnostic accuracy.

Results: Among 220 non-contrast CT cases (2019–2021), lesions were classified as inflammatory (64.5%), benign masses (30%), and malignancies (4.1%). Malignancies predominantly exhibited erosive bone destruction of multiple sinus walls, while benign lesions demonstrated bone remodeling. Nasal soft-tissue morphology offered additional diagnostic value. The proposed algorithm incorporated three CT criteria: (1) erosive bone destruction, (2) bone remodeling, and (3) sinonasal soft-tissue features (Figure 1). Validation on cases from 2022–2024 demonstrated high sensitivity (92.3%) and specificity (98.1%) for malignancy detection.

Conclusion: A systematic evaluation of CT imaging features, including erosive bone destruction, bone remodeling, and sinonasal soft-tissue morphology, enables the accurate differentiation of unilateral nasal and maxillary sinus lesions and guides targeted clinical interventions.



4515

Differential diagnosis of isolated sphenoid sinus lesions: radiological challenges

Beatriz Rodrigues[1], Filipe Correia[1], Luís Batista[1], Kaamil Gani[1], Carlota Sousa[1]
[1]*Department of Otorhinolaryngology, Unidade Local de Saúde de Lisboa Ocidental*

Imaging and Investigations 2 | ROOM 12 - G11 - Level +1 | Tuesday, June 24, 2025

Introduction: Multiple causes can underlie isolated sphenoid sinus diseases, often presenting with nonspecific symptoms such as headaches, cranial neuropathies and visual disturbances, causing diagnostic delays. Given the challenges of direct visualization, imaging plays a crucial role in differential diagnosis. This study aims to analyze imaging and intra-operative features from complex cases treated in our department.

Materials and Methods: A retrospective review of sphenoid sinus lesions treated at our institution was conducted. Computed tomography (CT) and magnetic resonance imaging (MRI) were reviewed, correlating them with intraoperative and histopathological findings.

Results: The most common isolated sphenoid sinus diseases are inflammatory or infectious: polyps appear as soft tissue density masses without bone erosion; mucoceles are expansile and well-defined with bone remodeling; mycetomas are non-expansile with characteristic calcifications. Less common lesions include: cholesterol granulomas, well-defined and hyperintense on T1 and T2 MRI; malignant sphenoid lesions, such as chordoma and adenoid cystic carcinoma, that display aggressive imaging findings, including bone destruction, invasion of adjacent structures and heterogeneous enhancement. Some lesions, like pituitary adenomas, may extend into the sphenoid sinus and mimic primary pathology, further complicating diagnosis. In rare cases, imaging may be inconclusive, necessitating surgical exploration for directly assessing lesion characteristics and allowing for histopathological examination.We present 6 clinical cases of isolated sphenoid sinus lesions, highlighting radiological and intraoperative findings.

Conclusion: Sphenoid sinus lesions require a thorough diagnostic workup due to their potential severity and nonspecific presentation. A multidisciplinary approach combining radiologic assessment, surgical evaluation, and histopathological confirmation is necessary to optimize patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4546

Importance of Preoperative Assessment of The Frontal Sinus Pneumatization Pattern

Alper Tanrisever[1], Hazan Basak[1], Silay Bostan[1], Suha Beton[1], Cem Meco[1]

[1]Ankara University Medical School Department of Otorhinolaryngology, [2]Ankara University Medical School Department of Otorhinolaryngology, Salzburg Paracelsus Medical University Department of Otorhinolaryngology, Weill Cornell Medical School Department of Otorhinolaryngology

Imaging and Investigations 2 | ROOM 12 - G11 - Level +1 | Tuesday, June 24, 2025

Introduction: Accessing the lateral portion of the frontal sinus and skull base during endonasal endoscopic surgery remains a significant challenge due to anatomical constraints, particularly in cases of well-pneumatized frontal sinuses. The aim of the study is to evaluate the usefulness of different preoperative measurements and defining pneumatization type of the frontal sinus in adult population to help to predict the approach to address all part of frontal sinus including far lateral preoperatively. Material

Methods: The pneumatization of frontal sinuses on CT was classified into four zones (Z1: medial orbital wall, Z2: midway between medial orbital wall and Z3: midorbital point, Z4: midway between lateral orbital wall and midorbital point and lateral orbital wall) and were measured on 250 CT scan of randomly selected healthy patients . Quantitative measurement of anterior posterior distance, Nasofrontal bone thickness, midline to midorbital point distance midline to most lateral part of frontal sinus distance distance between frontoethmoidal sutures were assessed.

Results: A total of 250 patient included in this study. Mean age was 44.46 ±16,07. Mean anterior posterior (frontal sinus inner periost) distance was 1.4±0.4. Nasofrontal bone thickness was measured as 0.58±0.3, followed by midline to midorbital point distance 2.9±0,27, midline to most lateral part of frontal sinus distance 2,5±1.02, mean distance between frontoethmoidal sutures 2.3±0.3. According to measurements in 109 patients(%43.6) frontal sinus pneumatization was in Zone 1 followed by Zone 2 in 70 (%28), Zone 3 in 42 patients (%16.8), Zone 4 in 29 patients (%11.6)

Conclusion: Limited data for preoperative planning of patients undergoing EEA for different pathologies of the frontal sinus exist in current literature. It is important to predict the extend of surgery preoperatively to be able to decide the approach to address all part of frontal sinus including far lateral.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Lacrimal Surgery

4148

The Impact of Stenting on the Outcome of Endonasal Dacryocystorhinostomy: The Relativity of Its Necessity

Ekaterina Kondratishko[1], Irina Kornilova[3], Aleksejs Derovs[4], Girts Brigis[5]

[1]Rīga Stradiņš University, JSC Veselības Centru Apvienība, Medical centre "Consilium Medicum", [2]Rīga Stradiņš University, JSC Veselības Centru Apvienība, Medical centre "Consilium Medicum" , [3]JSC Veselības Centru Apvienība, [4]Rīga Stradiņš University, JSC Veselības Centru Apvienība, [5]Rīga Stradiņš University

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Endonasal dacryocystorhinostomy (endoDCR) is a surgical treatment for distal nasolacrimal duct obstruction (NLDO), with stenting commonly used to prevent rhinostomy closure. While the literature suggests an average stent duration of three months, early stent removal may reduce risks such as infection, granulation, and lacrimal punctum injury. However, there are no definitive guidelines on the role of stenting in postoperative management, prompting this study to evaluate outcomes with standard stenting, early stent removal, and no stenting. This prospective comparative non-inferiority study analyzed adult patients with distal NLDO who underwent endoDCR at a medical centre in Riga (2023–2024). Self-assessment questionnaires (Munk scale, Lac-Q, and GBI-5F) and functional tests were used to compare outcomes across three groups: Control, Group I (stented for 3 months), Group II (stented for 1 month), and Group III (no stenting).The preliminary analysis of data at the third month of postoperative follow-up shows that there is no statistically significant difference between the groups ($p>.05$, Kruskal-Wallis H test). Simultaneous nasal surgery, which was performed to improve surgical access, did not affect the outcome ($p>.05$, Mann-Whitney U test). There is a statistically significant moderate negative correlation between residual tearing after surgery and a glaucoma diagnosis ($r = -0.321$, $n = 41$, $p = 0.041$, Spearman's rank correlation). Granulation formation in Groups I, II, and III was 66.7%, 23.1%, and 7.7%, respectively ($p = 0.003$, Fisher's exact test).Preliminary results indicate that stent use does not significantly impact surgical outcomes. These findings suggest that stenting practices in endoDCR warrant further prospective research to establish evidence-based guidelines.



3702

Fenestra flap in endoscopic dacryocystorhinostomy (EDCR)

Draško Cikojević
Department of Othorinolaryngology

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Introduction: EDCR is a standard surgical method in the treatment of nasolacrimal duct obstruction.

Materials and methods: In this retrospective study, we analyzed the results of EDCR in 24 patients diagnosed with chronic dacryocystitis in the period from May 2022. until May 2023. The operations were all performed at KBC Split and operated by the same surgeon. This study presents an original method of operating with the formation of a fenestra flap for the prevention of postoperative granulation and stenosis of the nasolacrimal canal.

Results: Six months after surgery, a success rate of 91.66%, 22/24 operated patients had a functional rhinostomy appearance.

Conclusion: The use of a fenestra flap in lacrimal duct surgery gives a better postoperative result. The rhinostoma properly forms without signs of granulations, and therefore the tubes can be removed earlier. This method is simple and does not significantly affect the total operating time.







3723

Effectiveness and Factors Influencing Success ofTranscanalicular Laser-Assisted Endoscopic Dacryocystorhinostomy

Marta Kwiatkowska[1], Radosław Różycki[2], Łukasz Skrzypiec[1]

[1]Department of Otolaryngology, Military Institute of Medicine—National Research Institute, *[2]Department of Ophthalmology, Military Institute of Aviation Medicine, 0*

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Laser dacryocystorhinostomy (LDCR) is a surgical procedure designed to treat obstructions in the lacrimal duct system, which can cause excessive tearing, infections, and discomfort. This technique involves creating a new passage for tear drainage, thereby restoring normal tear flow and alleviating symptoms associated with duct obstruction. During the procedure, 400-micrometer diameter optical fiber was inserted into the lacrimal canaliculus. The working tip was rested against the lacrimal bone. The ENT physician visualized the site from the nasal cavity using a 45-degree endoscope to determine the correct placement for laser energy application. The fistula was created by tissue evaporation at the site of laser energy application. A retrospective study was conducted on 48 patients who underwent the LDCR procedure as described, amounting 56 eyes. The primary outcome measured was the anatomical success rate, defined as the restoration of duct patency. Patients were examined postoperatively from 6 months to 3.5 years. The LDCR method demonstrated a 95% success rate, encompassing both anatomical and functional outcomes. The procedure's effectiveness was determined by achieving a patent osteotomy and resolving symptoms. Anatomical success was measured by the creation of a viable drainage pathway, while functional success pertained to the resolution of symptoms such as epiphora. The efficacy of the procedure was found to be independent of both age and gender. Among patients with successful anatomical outcomes, there was a statistically significant improvement in their Munk scores. The LDCR method is highly effective in treating lacrimal duct obstruction. These findings highlight the importance of the Munk score as a predictive indicator of procedural success in LDCR.

Table 4. Categorization of patients by time since surgery.

	Variable	6 Months Postoperatively [*n* = 11]	6 Months–1 Year Postoperatively [*n* = 18]	1–2 Years Postoperatively [*n* = 22]	2–3, 5 Years Postoperatively [*n* = 5]
Duration of symptoms before surgery	<1 year	1 (9.09%)	4 (22.22%)	0 (0%)	0 (0%)
	1–5 years	5 (45.45%)	10 (55.56%)	11 (50%)	3 (60%)
	> 5 years	5 (45.45%)	4 (22.22%)	11 (50%)	2 (40%)
Postoperative canalicular test:	Completely patent	8 (72.73%)	15 (83.33%)	19 (86.36%)	4 (80%)
	Partially patent	1 (9.09%)	3 (16.67%)	2 (9.09%)	1 (20%)
	Partially obstructed	1 (9.09%)	0 (0%)	0 (0%)	0 (0%)
	Completely obstructed	1 (9.09%)	0 (0%)	1 (4.55%)	0 (0%)



3729

Successful endonasal dacryocystorhinostomy implementation in early childhood

Ekaterina Kondratishko[1], Aleksejs Derovs[2], Irina Kornilova[3], Girts Brigis[4]

[1]Rīga Stradiņš University, JSC Veselības Centru Apvienība, Medical Centre Consilium Medicum, [2]Rīga Stradiņš University, JSC Veselības Centru Apvienība, [3]JSC Veselības Centru Apvienība, [4]Rīga Stradiņš University

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Introduction: Antrochoanal polyps are benign lesions originating in the maxillary sinus and extending to the choana through either the natural or accessory ostium. They account for approximately 4–6% of all nasal polyps. Their aetiology remains uncertain, with limited data available in the literature. Despite their benign nature, they significantly impact quality of life, causing nasal obstruction and recurrent infections. Surgery is the primary treatment, though recurrence rates remain high. This case study reports a recurrence two years after initial excision, highlighting the preference for the prelacrimal approach in selected surgical reinterventions.

Case Study: A 72-year-old male with a history of an antrochoanal polyp originating from the left maxillary sinus underwent endoscopic sinus surgery (ESS) in 2022, including unciformectomy, middle antrostomy, and anterior ethmoidectomy. Two years later, he developed recurrent unilateral nasal obstruction, with nasal endoscopy and CT confirming polyp recurrence. Initial conservative medical treatment failed, leading to surgical reintervention. A left prelacrimal ESS was performed, achieving complete polyp excision from its implantation site on the anterolateral maxillary sinus wall, which was subsequently cauterized.

Results: Histopathological analysis confirmed a benign lesion without dysplasia or malignancy. The postoperative course was uneventful, with immediate symptom relief. At 12 months postoperatively, no recurrence of symptoms or mass was observed.

Conclusions: Despite their benign nature, antrochoanal polyps exhibit a high recurrence rate. The prelacrimal approach allows optimal visualisation of the maxillary sinus, facilitating complete excision and potentially reducing recurrence risk.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3886

Conjunctivodacryocystorhinostomy with Stop-Loss Jones Tubes - Experience of a Tertiary Hospital

Joana Guincho[1], Luís Baptista[2], Carlota Sousa[2], Kaamil Gani[2], Pedro Branco[2], Rui Crabal[2], Filipe Correia[2], Gustavo Almeida[2], Nelson Gilberto[2], Pedro Escada[2]

[1]NOVA Medical School [2]Unidade Local de Saúde de Lisboa Ocidental - Hospital Egas Moniz,

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Introduction: Proximal lacrimal pathway obstruction is rare, and conjunctivodacryocystorhinostomy (CDCR) is a treatment option.

Objective: To review the clinical indications for CDCR, describe the surgical technique, surgical challenges, and analyze patients who underwent this procedure at a tertiary hospital.

Material and Methods: Retrospective study including all patients who underwent CDCR with Stop-Loss Jones tubes (SLJT) between 2020 and 2024. Demographic data, clinical presentation, previous DCR surgeries, clinical indications for CDCR, JSLT length, tube drainage class, complications and outcomes where collected. Anatomical success was defined as tube patency during irrigation, while functional success was defined by the resolution of epiphora. Each patient was assigned a drainage class based on tube functionality.

Results: Five CDCR procedures were performed in 4 patients. Etiologies included congenital agenesis of the lacrimal pathway (n=2), recurrent chronic dacryocystitis resistant to multiple DCR surgeries, and lacrimal canal stenosis following prior oncologic resection. All patients had significant epiphora unresponsive to conventional treatments. Conjunctival overgrowth occurred in two cases; one awaits revision, while the other achieved functional and anatomic success after surgical revision with SLJT replacement, mitomycin C application to the medial canthus, and middle turbinate surgery. The remaining two cases achieved functional and anatomical success, with drainage classes I and II.

Conclusion: CDCR with SLJT safely treats proximal lacrimal obstructions. The endoscopic approach ensures accurate placement and addresses middle turbinate issues to prevent postoperative blockages. While SLJT reduces proximal extrusion rates, challenges like medial migration and conjunctival overgrowth highlight the need for long-term follow-up.



3910

Endoscopic Dacryocystorhinostomy with Silicone Stents: Added Value or Added Discomfort? A Prospective Randomized Trial

Shiri Damti Geva[1], Tzuf Karin Bersudsky[1], Amani Daoud[1], Igor Yakubovich[1], Yanir Kassif[1], Relli Ovadia[1], Dana Simhi Cohen[1], Emad Ghnem[1], Matti Mizrachi[1], Tal Marshak[1]

[1]*The Azrieli Faculty of Medicine Bar Ilan University*

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Introduction: Endoscopic dacryocystorhinostomy (DCR) has become the standard treatment for acquired nasolacrimal duct obstruction (ANDO). However, the benefit of using silicone stents in DCR remains a topic of debate. This study aimed to evaluate the impact of silicone stents on surgical success, complications, and patient satisfaction.

Material and Methods: This prospective, randomized controlled trial included patients aged 18 or older with primary ANDO undergoing endoscopic DCR. Participants were randomized into two groups: DCR with a silicone stent and DCR without a stent. Preoperative and postoperative assessments were conducted at 1, 3, and 6 months. Primary outcomes included subjective (Munk score, Lac-Q score, Likert scale for epiphora disturbance) and objective (dye disappearance test, Jones dye test) improvements in epiphora. Secondary outcomes included intraoperative and postoperative complications and discomfort.

Results: Thirty patients were enrolled (15 per group). The overall success rate was 96%. No significant difference in subjective and objective measures of epiphora were found between the groups ($p>0.05$). One patient in the stent group experienced surgical failure, and five had stent prolapse. Nasal obstruction (NOSE scale) was significantly higher at 3 months in the stent group ($p<0.05$). Approximately 60% of patients with stents reported Likert scores 5 or higher for stent-related discomfort.

Conclusion: These findings suggest that the routine use of silicone stents in patients with primary ANDO who underwent endoscopic DCR may not be justified. On the contrary, the silicone stents were associated with increased minor complications, impaired nasal breathing, and discomfort. Long-term studies are needed for further validation.



4249

Endonasal Endoscopic Dacryocystorhinostomy: A Straightforward Technique

Mohsen Naraghi[1]

[1]*Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery*

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Many otolaryngologists perform dacryocystorhinostomy as an infrequent procedure. Improvement of techniques in endonasal endoscopic dacryocystorhinostomy has optimized the results with fewer complications and a higher success rate. Presenting a simple technique that ensures a non-traumatic procedure avoiding mucosal damage and bone exposure at the end of the procedure ensures patency in the long term. It diminishes the instrumentation expenses and the time of surgery. Preserving normal tissues and creating a wide patent rhinostomy with the least surgical trauma and less subsequent scar plays the most crucial role in achieving successful results.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4388

Prelacrimal Approach in Antrochoanal Polyp Recurrence: A Case Report

Mariana Cascão[1], Ricardo Damaso[2], António Castanheira[2]

[1]Unidade Local de Saúde Trás-os-Montes e Alto Douro, [2]ULSTMAD,

Lacrimal Surgery | ROOM 13 - G15 – Level +1 | Tuesday, June 24, 2025

Introduction: Antrochoanal polyps are benign lesions originating in the maxillary sinus and extending to the choana through either the natural or accessory ostium. They account for approximately 4–6% of all nasal polyps. Their aetiology remains uncertain, with limited data available in the literature. Despite their benign nature, they significantly impact quality of life, causing nasal obstruction and recurrent infections. Surgery is the primary treatment, though recurrence rates remain high. This case study reports a recurrence two years after initial excision, highlighting the preference for the prelacrimal approach in selected surgical reinterventions.

Case Study: A 72-year-old male with a history of an antrochoanal polyp originating from the left maxillary sinus underwent endoscopic sinus surgery (ESS) in 2022, including unciformectomy, middle antrostomy, and anterior ethmoidectomy. Two years later, he developed recurrent unilateral nasal obstruction, with nasal endoscopy and CT confirming polyp recurrence. Initial conservative medical treatment failed, leading to surgical reintervention. A left prelacrimal ESS was performed, achieving complete polyp excision from its implantation site on the anterolateral maxillary sinus wall, which was subsequently cauterized.

Results: Histopathological analysis confirmed a benign lesion without dysplasia or malignancy. The postoperative course was uneventful, with immediate symptom relief. At 12 months postoperatively, no recurrence of symptoms or mass was observed.

Conclusions: Despite their benign nature, antrochoanal polyps exhibit a high recurrence rate. The prelacrimal approach allows optimal visualization of the maxillary sinus, facilitating complete excision and potentially reducing recurrence risk.



Sinonasal Malignancy 3

3868

Precision Medicine in Sinonasal Cancers: Using Next-Generation Gene Sequencing Data on Connectivity Map for Screening Potential Drugs

Ming-Ying Lan[1], Chi-Ying Huang[2]

[1]Taipei Veterans General Hospital, Taipei, Taiwan, [2] National Yang Ming Chiao Tung University

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Background: Sinonasal cancer is a rare type of head and neck cancer with diverse histopathological subtypes. The molecular mechanisms underlying different forms of sinonasal cancer remain largely unknown, and prognosis is generally poor. To better understand the pathogenesis of sinonasal cancers and identify potential therapeutic agents, next-generation sequencing (NGS) was performed on sinonasal olfactory neuroblastoma (ONB) and adenoid cystic carcinoma (ACC). The C-Map and Library of Integrated Network-Based Cellular Signatures (LINCS) Unified Environment (CLUE) platform was used to identify potential small-molecule treatments, which were further validated through in vitro cell viability assays.

Methods: ONB and ACC cell lines were established from sinonasal tumor samples. NGS was conducted to analyze the genetic profiles of ONB and ACC. Three candidate drugs—homoharringtonine, emetine, and verrucarin A—identified via CLUE were evaluated for their antitumor effects using cell viability assays, wound healing assays, and colony formation assays.

Results: We successfully developed nine ONB and three ACC cell lines. NGS analysis revealed differentially expressed genes (DEGs) and key molecular pathways associated with ONB and ACC. The three candidate drugs demonstrated significant antitumor effects in vitro.

Conclusions: These findings provide insight into the molecular landscape of ONB and sinonasal ACC. The identified drugs—homoharringtonine, emetine, and verrucarin A—show promising antitumor potential, highlighting their potential for future clinical applications in treating ONB and ACC.





3882

Prognostic Significance of HPV in Sinonasal Carcinoma- Insights from a Retrospective Single-Center Study

Nina Wenda[1], Marta Barde[1], Sebastian Wagner[2], Jan Gosepath[1], Annette Fisseler-Eckhoff[2]

[1]Helios HSK Wiesbaden, Germany, Department of Otolaryngology, Head and Neck Surgery, *[2]Helios HSK Wiesbaden, Germany, Department of Pathology*

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: The prognostic role of HPV in oropharyngeal cancer is well established. Increasing data suggest an association between HPV and sinonasal carcinoma, but its rarity and heterogeneity make prognostic assessments challenging. HPV 16 and 18 are the dominant subtypes in oropharyngeal cancer, while HPV 33 is strongly linked to HPV-associated multiphenotypic sinonasal carcinoma (HMSC). This study aimed to determine whether HPV status, particularly subtypes 16, 18, and 33, has prognostic significance in sinonasal carcinoma.

Methods: This single-center retrospective study analyzed 103 patients with sinonasal carcinoma (2010–2024) identified using DRG codes C30.0 and C31.0-.9. 42 cases were excluded due to non-eligible histologies, and 6 due to insufficient tissue, leaving 55 patients for analysis. We assessed p16 expression, HPV subtyping, Mib1 proliferation rate, demographic data, tumor stage (TNM), and treatment modalities.

Results: HPV-positive tumors (49.1%) showed no significant association with recurrence or metastasis rates. Larger tumor size was linked to increased local recurrence ($p = 0.008$). HPV 16 and 33 tumors had higher Mib1 rates and more frequently had higher grading. Consistent with oropharyngeal cancer data, 20% of p16-positive cases were HPV-negative.

Conclusion: While HPV status does not significantly impact recurrence or metastasis rates, its association with higher Mib1 levels suggests distinct tumor biology. Higher Mib1 is linked to increased radiosensitivity in various carcinomas, potentially influencing treatment response in sinonasal cancers. Given the rarity and variability of sinonasal squamous cell carcinoma, p16/HPV testing should be integrated into standard histopathological work-up to better assess its prognostic and therapeutic relevance.



4121

Sinonasal Radiation Induced Sarcoma: Experience from a Quaternary Care Referral Center

Jonathan Joseph[1], **Juliet Edey**, Laurie Springford[1], Wing Lau[1], Christopher Hogan[1]
[1]*Royal National ENT and Eastman Dental Hospitals*

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Sinonasal malignancies secondary to prior radiotherapy are rare but may increase as cancer survival rates rise. SEER data indicate a low incidence of sinonasal tumours (0.556 cases per 100,000 from 1973–2006), with secondary malignancies being even rarer. This study examines treatment approaches, risk factors for disease progression, and outcomes in patients with radiation-induced sinonasal malignancies.

Methods: A retrospective review was conducted on patients with sinonasal malignancies secondary to radiotherapy. Data included patient demographics, primary and secondary treatments, disease progression, and final outcomes. Risk factors such as radiotherapy exposure, treatment response, and recurrence patterns were evaluated.

Results: The current analysis demonstrates that all patients had a history of radiotherapy for prior malignancies, including retinoblastoma, acoustic neuroma, oligodendroma and sinonasal carcinoma. The first intervention was surgical in 57% of cases. A second intervention was required 86% of cases, consisting of a mixture of post-operative radiotherapy, hemimaxillectomy, endoscopic resection and wide local resection. Further tumour recurrence led to a third intervention in 57% of cases consisting of adjuvant chemotherapy and endoscopic resection. A fourth intervention was required in 43% of cases. Risk factors for disease progression included prior high-dose radiotherapy, incomplete tumour excision, and aggressive histological subtypes. Despite aggressive treatments, 57% of cases progressed to palliative care, requiring palliative chemotherapy, radiotherapy, or debulking surgery. 29% of cases are currently undergoing surveillance following endoscopic resection or debulking. 14% of cases have been transferred elsewhere for ongoing care due to patients moving out of area.

Conclusions: Radiotherapy-induced sinonasal malignancies are aggressive, often requiring multiple interventions with high recurrence rates. The high rate of progression to palliative care underscores the need for lifelong surveillance and early intervention in high-risk patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







4175

Endoscopic-assisted transorbital extended orbital exenteration: A multi-institutional preclinical study

Giuseppe Roccuzzo[1], Edward C. Kuan[2], Eric W. Wang[3], Samuel Leong[4], Rishi Sharma[5], Philippe Herman[6], Benjamin Verillaud[7], Iacopo Dallan[8], Alberto Schreiber[9], Davide Mattavelli[10], Alberto Daniele Arosio[11], Paolo Battaglia[12], Maurizio Bignami[13], Volpi Luca[14], Paolo Castelnuovo[14], Piero Nicolai[15], Marco Ferrari[15], Erich Vyskocil[16], Lena Hirtler[17], Sam Agustine Kandathil[16], Maria Peris Celda[18], Edoardo Agosti[19], Chee Samuel Leong[20], Daniele Borsetto[21], Alessandro Vinciguerra[22], Damien Bresson[23], Stefano Taboni[24], Boban M. Erovic[25], Alperen Vural[26], Francesco Doglietto[27], VIttorio Rampinelli[28], Marco Valentini[29], Mario Turri-Zanoni[14], Fabio Pozzi[30], Luca Volpi[14]

[1]University of Padova, Department of neurosciences, [2]University of California, Irvine, [3]University of Pittsburgh Medical Center, [4]Liverpool Head and Neck Centre, [5]Cambridge University Hospital, [6]Hopital Lariboisière, APHPNord, Universoté Paris Cité, [7]Department of Head and Neck Surgery Hôpital Lariboisière, AP-HP U1141 - Université Paris Cité, [8]ENT Unit, Azienda Ospedaliero-Universitaria Pisana, [9]ASST degli Spedali Civili di Brescia, [10]Unit of Otorhinolaryngology-Head and Neck Surgery Department of Medical and Surgical Specialties, Radiological Sciences, and Public Health, ASST Spedali Civili of Brescia, University of Brescia, [11]University of Insubria, [12]Uninversity of Insubria, Department of Biotechnology and Life Sciences, Varese, [13]Insubria University, [14]University of Insubria, Italy, [15]Otolaryngology Section, Department of Neurosciences DNS, University of Padova, Padova, Italy., [16]Medical University of Vienna, [17]University of Vienna, [18]Mayo Clinic Rochester , [19]) Division of Neurosurgery, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, [20]Aintree University Hospital, [21]Addenbrooke's, Cambridge University Hospitals, [22]Hopital Lariboisiere, [23]Hôpital Foch, [24]University of Padua, [25]Institute of Head and Neck Diseases, Evangelical Hospital, Vienna, Austria., [26]Istanbul University Cerrahpasa - Cerrahpasa Medical Faculty, [27]Università Cattolica del Sacro Cuore, [28]University of Brescia, [29]Division of Otorhinolaryngology, Department of Biotechnology and Life Sciences, University of Insubria-Varese, ASST Sette Laghi, [30]Department of Neurosurgery, ASST Sette Laghi, Ospedale di Circolo Fondazione Macchi, Varese, Italy

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Background: Sinonasal malignancies with orbital invasion have dismal prognosis due to locoregional recurrence and distant metastasis even when treated with orbital exenteration (OE). Sugawara et al. developed a surgical strategy called “extended-OE (EOE)”, showing encouraging outcomes, although requiring extensive transcranial approaches, impacting patients' morbidity and quality of life. We hypothesized that a similar resection could be achievable under endoscopic guidance through the exenterated orbit (endoscopic-EOE), maintaining oncologic efficacy while reducing surgical invasiveness.

Methods: The study was conducted in three institutions: University of Vienna; Mayo Clinic; University of Insubria. A detailed anatomical study was conducted on cadaveric specimes; 48 orbital orbital dissections were performed to describe the surgical anatomy and surgical steps of the endoscopic-EOE. A questionnaire was developed to conduct a survey on the feasibility and safety of each step; the most likely complication(s) of each surgical step were hypothesized.

Results: The step-by-step technique was thoroughly described. The questionnaire was answered by 25 anterior skull base surgeons from 6 different countries. Mean, median, range, interquartile range of both feasibility and safety scores, and most likely complication(s) hypothesized for each surgical step were reported.

Conclusions: Endoscopic-EOE is a challenging but feasible procedure. Clinical real-life validation is required to assess long-term outcomes and safety. This novel technique could expand therapeutic options for patients with orbital apex involvement, offering a viable alternative to palliative care.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3883

Olfactory neuroblastoma involving nasal cavity and anterior skull base - Case Report

Mirjana Ostojic, Josip Lesko[1], Mihaela Moro[1], Kenan Gezo[2], Vjerislav Peterkovic[3], Miro Leventic[1], Ivana Bulic[1]

[1]Department of Otorhinolaryngology, Head and neck surgery, University hospital Mostar, Bosnia & Herzegovina, [2]Department of Otorhinolaryngology, Head and neck surgery, General hospital Konjic Bosnia & Herzegovina, [3]Department of Otorhinolaryngology, Head and neck surgery, University hospital Zagreb, Croatia

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Olfactory neuroblastoma (ONB) is a rare malignant tumor arising from the olfactory neuroepithelium, accounting for 3-6% of endonasal carcinomas. It typically presents with nonspecific symptoms, such as nasal obstruction, epistaxis, and headaches, often leading to delayed diagnosis and local invasiveness, including extension to the anterior skull base.

Case Report: A 60-year-old male with nasal congestion and hearing loss was initially diagnosed with eustachian tube catarrh. Subsequent CT and MRI revealed a frontobasal extra-axial mass extending into the ethmoidal cells and anterior cranial fossa. Biopsy confirmed ONB, classified as Hyams grade II and Kadish stage C. The patient underwent surgical resection using acombined transcranial and endonasal approach, followed by postoperative radiotherapy (50.4 Gyover 28 fractions). Postoperatively, recovery was uneventful, with no recurrence on follow-upMRI. Mild residual anosmia and hearing impairment persisted.

Discussion: ONB poses diagnostic challenges due to its nonspecific presentation. Imaging and biopsy remain critical for diagnosis and staging. Surgical resection with radiotherapy is the standard approach, but achieving clear margins can be difficult due to the tumor's proximity tocritical structures. This case underscores the importance of a multidisciplinary approach and emphasizes the need for ongoing surveillance to detect recurrence.

Conclusion: The aggressive nature and local invasiveness of ONB necessitate a comprehensive treatment strategy. Combined surgical resection and postoperative radiotherapy yield favorable outcomes when complete surgical margins are achieved. Continued follow-up is crucial for detecting recurrence, and further research is needed to optimize treatment and improve survival rates.



4114

Transnasal endoscopic nasopharyngectomy for a radio-recurrent right nasopharyngeal carcinoma

Karamveer Narang[1], Navdeep Bhamra[2], Karan Jolly[1]

[1]University Hospitals Birmingham NHS Trust, [2]Birmingham Women's and Children's NHS Foundation Trust

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Background and Aim: Transnasal endoscopic nasopharyngectomy (TEN) is classified into four types based on resection extent. Type 1 involves the posterior/superior nasopharynx, while Type 2 extends to the torus tubarius and petroclival region. Type 3 includes the distal cartilaginous Eustachian tube, medial pterygoid plate, and muscle. Type 4 is the most extensive, involving the lateral nasal wall, pterygoid plates, muscles, and full cartilaginous Eustachian tube, often required for lesions near the carotid artery or jugular foramen. We present a case of a patient with radio-recurrent nasopharyngeal carcinoma undergoing a Type 3 TEN.

Case Study: A 54-year-old Chinese male completed radiotherapy in March 2023 for T1N0M0 right nasopharyngeal undifferentiated squamous cell carcinoma. Imaging in April 2024 confirmed a small-volume recurrence at the primary site, making him a candidate for surgical resection. Following MDT discussion and further imaging, he underwent a right endoscopic nasopharyngectomy in May 2024.

Results: Histology confirmed EBV-positive undifferentiated carcinoma with complete clearance and disease-free margins. The patient remains under regular follow-up but developed postoperative trismus, currently managed by the Speech and Language Therapy team.

Conclusions: TEN remains a less common but valuable approach for select cases. Key surgical considerations include lateral retraction of the pterygopalatine fossa for pterygoid process exposure, followed by drilling to reveal the tensor and levator veli palatini. These structures define the inter-veli fascial plane, which houses the posterior inferior cerebellar artery within the stylopharyngeal fascia, serving as a critical landmark.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4376

Adult sinonasal rhabdomyosarcoma: clinical features, prognostic markers, and emerging therapies

Jose-Carlos Redondo-Benavente[1], Dolores Rodriguez-Rodriguez[1], Cristina-Isabel Sanz-Sanchez[1], Oscar-Emilio Cazorla-Ramos[1], Angela Ruiz-Lama[1]
[1]SEORL-CCC

Sinonasal Malignancy 3 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Nasal rhabdomyosarcoma (RMS) is a rare malignant tumor in adults, comprising less than 1% of sarcomas in this population. Due to its anatomical complexity and proximity to vital structures, its management requires a multidisciplinary approach.

Objective: To analyze the management of adult nasal RMS, focusing on histological subtypes, clinical features, treatment modalities, key prognostic factors, and future research directions.

Materials & Methods: A systematic review was conducted in PubMed, MEDLINE, Cochrane Library, and Scopus, including studies published in English or Spanish from 2016 to 2024. The selection prioritized studies addressing clinical management, treatment outcomes, and prognostic factors in adult patients.

Results: Among 14 selected studies, pleomorphic RMS (43%) was the most frequent subtype, followed by embryonal RMS (34%), while alveolar RMS (ARMS) was rare but aggressive. Diagnosis typically occurs in advanced stages due to nonspecific symptoms. Multimodal treatment (surgery, chemotherapy, radiotherapy) was the predominant approach. Endoscopic surgery improved local control in resectable tumors. Proton beam radiotherapy showed benefits in complex anatomical cases. Chemotherapy efficacy was lower in adults compared to pediatric patients. Immunotherapy with PD-L1 inhibitors demonstrated potential in selected cases. Prognostic factors included histological subtype, tumor invasion, surgical margins, and molecular alterations (e.g., PAX-FOXO1 fusion).

Conclusions: Nasal RMS in adults demands a personalized approach. Proton therapy and immunotherapy are promising but require further validation. Future research should focus on molecular profiling and multicenter clinical trials to optimize treatment protocols.

Author	Year	Country	N	Intervention	Results
Wen-Ling L et al	2022	Taiwan	8	CT + RT ± surgery	75% alveolar, 87.5% local recurrence, 87.5% metastasis, worse prognosis with LDH >400 U/L and negative desmin/MyoD1
Radzikowska J et al	2016	Poland	36	Surgery + CT ± RT	67% parameningeal, 78% embryonal, 5-year OS 50% primary surgery, 46.7% recurrence surgery
Saadi M et al	2022	Tunisia	47	Surgery + CT ± RT	70% localized, 30% metastatic, 36% pleomorphic, 5-year OS: 35% localized, 27% metastatic, better prognosis with surgery and non-extremity location

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS - Biologics 5

3653

Two-year data of tapered dupilumab shows high effectiveness in CRSwNP with NSAID-exacerbated respiratory disease

Hester Elzinga[1], Josje Otten[1], Marjolein Cornet[2], Bas Rinia[3], Rik Van der Lans[1], Wytske Fokkens[1], Sietze Reitsma[1]
[1]Department of Otorhinolaryngology, Head and Neck Surgery, Amsterdam UMC, University of Amsterdam, Meibergdreef 9, Amsterdam, The Netherlands, *[2]Department of otorhinolaryngology, Alrijne Hospital, Leiden, The Netherlands*, *[3]Department of otorhinolaryngology, Isala Hospital, Zwolle, The Netherlands*

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Patients with Non-steroidal anti-inflammatory drugs (NSAID)-Exacerbated Respiratory Disease (N-ERD) suffer from difficult-to-treat primary diffuse type 2 chronic rhinosinusitis with nasal polyps (CRSwNP). This study evaluates dupilumab effectiveness and dose tapering in CRSwNP patients with N-ERD compared to those without.

Methods: A real-world prospective cohort with CRSwNP patients, with N-ERD or without (controls), aged ≥18 treated with dupilumab 300 mg subcutaneously every 2 weeks. In case of clinical control, interdose interval was prolonged every 6 months with steps of 2 weeks. (Clinical) data were collected at baseline, 24 weeks and 2 years of treatment.

Results: Most baseline characteristics, (including Nasal Polyp Score (NPS), Sino-Nasal Outcome Test-22 (SNOT-22), and Sniffin' sticks-12 test (SSIT-12)) were comparable between groups (N-ERD n=105, controls n=293). There was a higher prevalence (91.5% vs. 71.1%, p<0.001) and poorer control of asthma in N-ERD patients (asthma control test (ACT): 61.4% less/uncontrolled vs 47.3%, p=0.03). All outcomes improved significantly with dupilumab treatment at 24 weeks and remained improved after 2 years, without intergroup differences (N-ERD patients vs controls (median scores at 24 weeks) NPS: 2 vs 1, p=0.65; SNOT-22: 18 vs 19, p=0.27; SSIT-12: 7 vs 8, p=0.02; ACT: 21 vs 22, p=0.77). Dose tapering was possible in the majority of patients, with almost half at an 8-12 week interval in both groups after two years.

Conclusion: Dupilumab shows comparable effectiveness and taper-feasibility in N-ERD patients compared to CRSwNP patients without N-ERD.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4313

Anti-TSLP antibody induces rapid improvement in sinonasal symptoms following class-switching from other biologics

Heizo Nakano Ismael[1], Peta-Lee Sacks[1], David L Jackson[1], Alexandra M Nanzer[1], Jaideep Dhariwal[1], Linda Green[1], Faizan Haris[1], Jessica Gates[1], Claire Hopkins[1]

[1]*Guys and St Thomas Foundation Trust*

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

INTRODUCTION: Patients with chronic rhinosinusitis (CRS) who fail to respond to existing biologic treatments pose a significant therapeutic challenge. Anti-TSLP antibody is an emerging treatment and the potential benefit of class switching to tezepelumab in these patients remains unclear.

OBJECTIVES: To evaluate change in sinonasal symptoms following a switch in biologic therapy to the anti-TSLP biologic tezepelumab in patients with severe asthma and co-morbid nasal polyps,.

METHODS: A prospective database of patients undergoing biologic treatment for severe eosinophilic asthma at Guy's Hospital, London, was screened for patients with CRSwNP and who had switched biologic to tezepelumab. 31 patients starting tezepelumab were identified for analysis. Baseline SNOT 22 scores were collected and repeated four weeks after their first injection. Two individual SNOT 22 items were also analyzed: Sense of taste / smell and blockage. Responsiveness to treatment was defined as a 9-point improvement in SNOT 22.

RESULTS: The mean baseline SNOT 22 was 47.5 ± 22.6. Four weeks after the first injection, a significant improvement was noted, with mean scores reducing to 29.8 ± 21.1, and a reduction in total SNOT-22 of 17.61 ($p = 0.01$). 22/32 (68.9%) were considered responsive to tezepelumab after only a single injection, based on improvement greater than the MCID of 9 points. Sense of taste/smell improved from 2.9 ± 1.8 to 2 ± 1.7 ($p = 0.03$) and blockage from 3 ± 1.5 to 2 ± 1.5 ($p=0.09$), on a 5 point scale.

CONCLUSION: Tezepelumab effectively reduced key symptoms of nasal polyps and disease specific quality of life in patients with severe asthma who were previously unresponsive to other biologics, after a single injection, suggesting a promising treatment pathway.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4524

Access and reimbursement of biologics for chronic rhinosinusitis with nasal polyps: a survey of current practices

Sukhraj Virdee[1], **Amber Abdool Wahed**[1], Peta-Lee Sacks[1], Claire Hopkins[1]
[1]Guy's and St Thomas' Foundation Trust

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Biologic therapies have been approved by regulatory agencies such as the FDA and EMA for the treatment of chronic rhinosinusitis with nasal polyps (CRSwNP). Due to the high cost of these treatments, many countries have implemented specific criteria to guide prescription and reimbursement. However, these criteria vary across healthcare systems, and a comprehensive understanding of current practices may help inform future guideline development.

Methods: A survey was distributed to members of the European Rhinologic Society (ERS) to assess the availability of biologic therapies for CRSwNP. The survey collected information on whether biologics were available for prescription and reimbursement, and the specific criteria used to determine patient eligibility.

Results: 87.5% of respondents reported at least some reimbursement for biologics for CRS indications. Among the responding countries where biologics are reimbursed, 71.1% included serum and/or tissue eosinophilia as either a mandatory criterion or one of the parameters used to determine eligibility. A specific serum eosinophil threshold was a requirement in 42.9% of countries, though the cutoff values varied. Prior surgery was mandatory in 85.7% of countries, while it remained an optional criterion in the rest. Oral steroid use was either a required or contributing eligibility factor in 85.7% of cases.

Conclusion: All surveyed countries with reimbursement for biologics had specific criteria for prescription, but there was considerable heterogeneity in eligibility requirements. Understanding these differences provides insight into current prescribing and reimbursement practices.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3696

Effects of Tezepelumab on eosinophilic chronic rhinosinusitis complicated by severe asthma

Ryo Wakasugi[1]

[1]Department of Otolaryngology Head and Neck Surgery, [2]Graduate School of Medical and Dental Sciences

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Tezepelumab (TEZ) is a biologics targeting thymic stromal lymphopoietin (TSLP), an epithelial cytokine, which acts upstream in the inflammatory cascade. It was launched in 2022 in Japan for the treatment of severe asthma. In this report, we describe two patients with eosinophilic rhinosinusitis (ECRS) complicated by severe asthma, for which biologic therapies were given: TEZ was chosen due to hypereosinophilia and poor response to Dupilumab for each. Case 1. 60-year-old woman who received Functional Endoscopic Sinus Surgeries (FESS) for ECRS needing frequent oral corticosteroids (OCS) bursts complicated by severe asthma. She was considered for a biologics. Given that her blood eosinophil count was as high as 1678 /μL, TEZ was chosen among several biologics due to concerns about further eosinophilia. After introducing TEZ, she needed no OCS bursts and olfaction has normalized one year after treatment. Case 2. 41-year-old man complicated by severe asthma had recurrence of ECRS one month after FESS. Dupilumab was started 3 months postoperatively, which was not effective for ECRS. She was switched to TEZ at 6 months after Dupilumab. Four months later, her pan-sinus shadow on CT disappeared. Although IL-5-related agents are recommended in the treatment algorithm for severe asthma where blood eosinophil counts are 1500 or higher, TEZ may be a promising option when complicated by ECRS. TEZ switch may also be a viable option in cases of Dupilumab failure. TEZ for ECRS is not covered by insurance in Japan currently, it would be a potential agent for intractable ECRS complicating by severe asthma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3782

Superior Results with Mepolizumab and Sinus Surgery vs Mepolizumab Alone: 6-Month Randomised Trial

Anne-Sophie Homøe[1], Kasper Aanaes[2], Jens Even Tidemandsen[4], Christiane Holbaek Haase[1], Bent Ivan Holmegaard Larsen[5], Grethe Badsberg Samuelsen[6], Vibeke Backer[1], Niclas Rubek[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery and Audiology, Rigshospitalet, University of Copenhagen, [2]Department of Otorhinolaryngology, Head & Neck Surgery and Audiology, Copenhagen University Hospital, Denmark, [3]MD, PhD, DMSc, [4]Centre for Physical Activity Research, Rigshospitalet, University of Copenhagen. University of Copenhagen, [5]Department of Otorhinolaryngology and Maxillofacial Surgery, Zealand University Hospital, [6]Department of Otorhinolaryngology, North Zealand Hospital

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) affects quality of life (QoL). Treatments include nasal steroids, systemic corticosteroids, and functional endoscopic sinus surgery (FESS). Biologic drugs, like mepolizumab, improve disease control in severe CRSwNP, but residual symptoms may persist. Combining biologics with FESS could provide faster and longer-lasting symptom relief. This study compared the effectiveness of combined FESS and biologic therapy versus biologics alone.

Materials and Methods: In this randomised controlled trial, 58 patients with CRSwNP and type 2 inflammation were assigned to FESS or non-FESS groups. All patients received 100 mg of subcutaneous mepolizumab every four weeks for six months. The FESS group had surgery two weeks after the first injection. Assessments at baseline and six months included the SNOT-22, visual analog scale (VAS), nasal congestion score (NCS), and Smell Identification Test (sniff16).

Results: Both groups showed significant improvements in SNOT-22 scores ($p<0.001$), with no significant difference between groups ($p=0.055$). Patients with high NPS (6–8) showed greater improvement in SNOT-22, NPS, VAS CRS, and NCS with combined FESS and mepolizumab compared to mepolizumab alone ($p<0.05$).

Conclusion: Patients with high polyp burden had greater improvements in QoL and more reductions in NPS, NCS, and VAS CRS with FESS plus mepolizumab compared to mepolizumab alone.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3848

Efficacy and safety of tezepelumab in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps: results from the phase 3 WAYPOINT study

Claire Hopkins[1], Joseph K Han[2], Brian J Lipworth[3], Martin Desrosiers[4], Stella E Lee[5], Joaquim Mullol[6], Oliver Pfaar[7], Ting Li[8], Claudia Chen[9], Gun Almqvist[10], Mary Kay Margolis[11], Julie McLaren[12], Shankar Jagadeesh[13], Jamie MacKay[14], Vaishali S Mankad[8], Bahadori Lila[15], Sandhia S Ponnarambil[16]

[1]Department of Otolaryngology-Head and Neck Surgery, Guys and St Thomas' Hospital, London, UK, [2]Department of Otolaryngology, Head and Neck Surgery, Eastern Virginia Medical School, Norfolk, VA, USA, [3]Scottish Centre for Respiratory Research, Ninewells Hospital and Medical School, University of Dundee, Dundee, UK, [4]Division of Otolaryngology, Head and Neck Surgery, Centre Hospitalier de l'Université de Montréal, University of Montreal, Montreal, QC, Canada, [5]Division of Otolaryngology, Head and Neck Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [6]Rhinology Unit & Smell Clinic, Department of Otorhinolaryngology, Hospital Clinic Barcelona, IDIBAPS, CIBERES, University of Barcelona, Barcelona, Catalonia, Spain, [7]Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Marburg, Germany, [8]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Durham, NC, USA, [9]Biometrics, Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [10]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden; , [11]Patient-centered Science, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [12]Global Clinical Development – Medical, Amgen, Thousand Oaks, CA, USA, [13]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [14]Early-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK, [15]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Gaithersburg, MS, USA, [16]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Rationale: Tezepelumab, a human monoclonal antibody, blocks the activity of epithelial cytokine, thymic stromal lymphopoietin (TSLP). WAYPOINT (NCT04851964) evaluated the efficacy and safety of tezepelumab in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP).

Methods: Eligible adults with severe CRSwNP were randomized (1:1) to tezepelumab 210 mg or placebo subcutaneously every 4 weeks for 52 weeks. The co-primary endpoints were change from baseline in total nasal polyp score (NPS) and biweekly mean nasal congestion score (NCS) at week 52. Key secondary endpoints included self-reported loss of smell, SNOT-22 total score, Lund–Mackay score (LMK), total symptom score (TSS), and time-to-first NP surgery decision or systemic corticosteroid (SCS) treatment for CRSwNP.

Results: Patients received tezepelumab (n=203) or placebo (n=205). Tezepelumab significantly improved total NPS (−2.07 [−2.39, −1.74]; p<0.001) and NCS (−1.03 [−1.20, −0.86]; p<0.001) at week 52 (LS mean difference versus placebo [95% CI]); improvements in NPS and NCS were observed at the first post-treatment assessments (weeks 4 and 2, respectively). At week 52, significant improvements with tezepelumab versus placebo were observed in loss of smell (−1.00 [−1.18, −0.83]), SNOT-22 score (−27.26 [−32.32, −22.21]), LMK (−5.72 [−6.39, −5.06]) and TSS (−6.89 [−8.02, −5.76]); all p<0.001. Tezepelumab significantly reduced the need for NP surgery or SCS versus placebo by 92% (HR: 0.08, 95% CI: 0.03, 0.17; p<0.01). Overall adverse event rates were similar between groups.

Conclusions: Tezepelumab significantly reduced NP severity and the need for NP surgery or SCS, and improved patient-reported sino-nasal symptoms versus placebo in adults with severe CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4105

Sleep quality after biological treatment for chronic rhinosinusitis with nasal polyposis

Khalid Aldilaijan[1], Danah Althomaly[1], Mai Almasoud[1], Arulanantham Zechariah Jebakumar[2]

[1]Department of Otorhinolaryngology, King Fahd Military medical Complex - Dhahran, [2]Vice Deanship of Postgraduate Studies Research, Prince Sultan Military College of Health Sciences – Dhahran

CRS - Biologics 5 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Sleep disturbance is prevalent in patients with chronic rhinosinusitis with nasal polyps (CRSwNP). Although biological treatment has been shown to improve overall patient-reported sinonasal symptoms in CRSwNP, the treatment impact on individual sleep quality remains less explored. The purpose of this study is to investigate the effect of dupilumab treatment on sleep quality in patients with CRSwNP.

Methods: A single-institutional, retrospective chart review was conducted on adult patients who received biological treatment (dupilumab) for CRSwNP. Patients' condition was assessed before treatment and 3–12 months after continuous treatment. The assessment included SNOT-22, NOSE scale, NPS, and VAS for smell. Sleep-related symptoms and treatment outcomes were assessed using PSQI global score, sleep domain questions within SNOT-22, and sleep-related question in the NOSE scale.

Results: A total of 15 charts were included in this study. Sixty percent of them were having bronchial asthma. The mean follow-up duration was around 6.7 months. The patients showed significant improvement in nasal assessment using the median values for SNOT-22, NOSE scale, NPS, and VAS for smell (P-value ≤ 0.001). As well, there was a significant improvement in the median scores for global PSQI, sleep domain questions within SNOT-22, and sleep-related question in the NOSE scale (P-value 0.04, < 0.001, and 0.001, respectively). Eight subjects (53.3%) had poor sleep quality before treatment. Four out of them improved from being poor sleepers to good sleepers after using the treatment.

Conclusion: This study indicates that dupilumab is an effective treatment for CRSwNP and it improves sleep quality parameters in some patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Smell and Taste 3

4088

Central Olfactory Disorders

Naif H. Alotaibi[1], Basile Landis[2]

[1]Deptartment of ORL, King Faisal University and King Faisal Specialist Hospital, Riyadh, Kingdom of Saudi Arabia, [2]Rhinology-Olfactology Unit, Dept of ORL, University Hospital of Geneva, Switzerland

Introduction: Most patients with olfactory disorders seeking help in specialized smell and taste centers have a peripheral olfactory impairment. Their thresholds are week or not measurable, whereas they perform well in suprathreshold olfactory tasks. This pattern of olfactory impairment is typical for chronic rhinosinusitis patients. The opposite, good threshold results but poor suprathreshold scores is rarer and said to be a “central pattern” of olfactory dysfunction. Little is known about the characteristics and recovery prognosis of these patients.

Methods: We retrospectively analyzed more than 3000 patients of a specialized smell and taste centers to analyze the frequency and characteristics of those with a central pattern of olfactory impairment. We focused on etiology and recovery of olfactory function in these patients. All patients had full olfactory workup with Sniffin’Sticks.

Results: We found 21 patients with a central pattern of olfactory impairment. Most were related to head trauma and only a minority recovered to a normal olfactory function.

Conclusion: The present data suggest, that central pattern of olfactory impairment is rare, mostly related to head trauma and does not recover. This suggests that olfactory plasticity is not very efficient in patients with central pattern of olfactory impairment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4186

U.K. National clinical practice survey on the management of olfactory disorders

Tharsika Myuran[1], Edward Balai[2], Andrew Williamson[3], Shyam Gokani[4], Louis Luke[5], Ngan Hong Ta[6], Isabelle Williams[7], Ying Ki Lee[8], Carl Philpott[9]

[1]Royal Hampshire Hospitals NHS Trust, [2]Imperial College Healthcare NHS Trust, [3]Head and Neck Department, Royal Marsden Hospital, [4]University College London Hospitals NHS Trust, [5]University Hospitals Northamptonshire, [6]University Hospitals Birmingham NHS Trust, [7]Guy's and St Thomas' NHS Foundation Trust, [8].,[9]University of East Anglia Rhinology and Olfactory Research Group

Smell and Taste 3 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: It is estimated over 1 in 5 adults suffer with an olfactory disorder. Whilst the Position Paper on Olfactory Dysfunction 2023 introduced recommendations for the management of olfactory dysfunction, there is currently a lack of standardised pathways in the UK. This project aimed to assess current practice within ENT departments in the U.K. via the U.K. trainee research collaborative- INTEGRATE.

Materials and Methods: A survey of clinical practice was distributed via INTEGRATE. The survey was open between 1st May 2024 and 31st July 2024 alongside the national audit of the management of olfactory disorders, and was sent to be completed by the consultant site-leads. Questions related to the frequency and nature of olfactory disorder management and included: modes of examination, use of subjective and objective smell testing, use of imaging, and treatment modalities by diagnosis.

Results: 41 NHS trusts responded. 19.1% would refer to a specialist olfactory disorder clinic. A third did not use any patient reported outcome measures and two thirds did not use any objective smell tests. The main barrier to using smell tests was insufficient staff (83%), time (80%) and funding 68%). Reported management is contrasted with the national audit.

Conclusion: This survey highlights not only the need for standardized protocols and greater alignment with evidence-based guidelines to improve patient care outcomes; but also the need for better resource allocation for the management of olfactory dysfunction in the UK.



4215

The APOLLO Trial: A Proof-of-Concept Study for Vitamin A Nasal Drops in Post-Viral Olfactory Loss

Zhu Hui Yeap[1], Allan Clark[1], James Boardman[2], Thomas Hummel[3], Carl Philpott[1], Rashed Sobhan[4], Sara Bengtsson[1], Saber Sami[1]

[1]University of East Anglia, [2]Fifth Sense charity, [3]Dresden University of Technology, [4]University of Nottingham

Smell and Taste 3 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Post-viral olfactory loss (PVOL) is common in COVID-19 patients. This two-arm randomised controlled trial aims to establish proof of concept for Vitamin A versus placebo as a treatment modality for COVID-19 patients with PVOL on olfactory bulb and right orbital sulcus volume, blood flow in olfactory areas, smell test, quality of life, parosmia outcomes, and Brain Derived Neurotrophic Factor (BDNF).

Methods: This study compared 9000 IU daily self-administered vitamin A intranasal drops versus peanut oil drops over 12 weeks in COVID-19 patients with PVOL. An MRI scan (including functional and diffusion sequences), Sniffin Stick TDI smell score, SSParoT, Olfactory Disorder Questionnaire (ODQ) score, and BDNF blood tests were collected from participants at baseline and after trial intervention at 12 weeks.

Results: 57 participants were recruited in the trial and allocated to Vitamin A and placebo at a 2:1 ratio. After withdrawals, 34 participants in the Vitamin A arm and 18 in the placebo arm were analysed. There was no significant difference in olfactory bulb volume between both groups. Apart from improved quality of life scores, there were no significant changes in the secondary outcome measures.

Conclusions: This proof of concept trial has demonstrated no significant effect of intranasal Vitamin A versus placebo on both objective and subjective measures of olfaction in COVID-19 PVOL patients. Further work is required to identify other therapeutic agents in the management of PVOL.







4133

Revisiting Olfactory Dysfunction in Cystic Fibrosis: A Potential Benefit of CFTR Modulators

Alberto Minzoni[1], Pietro Orlando[2], Giuseppe Licci[1], Silvia Bresci[5], Giandomenico Maggiore[4]

[1]University. of Florence, [2]ENT uini, AOU-Careggi, Florence, [3]Department of Otorhinolaryngology, Careggi University Hospital, University of Florence, Florence, Italy., [4]Otorhinolaryngology uinit, AOU-Careggi, Florence, [5]Cystic Firbrosis Unit, AOU-Careggi, Florence, Italy

Smell and Taste 3 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Olfactory dysfunction (OD) is a common yet underappreciated symptom in cystic fibrosis (CF), often linked to chronic rhinosinusitis (CRS). The introduction of CFTR modulators, particularly elexacaftor/tezacaftor/ivacaftor (ETI), has significantly improved pulmonary outcomes, yet its effect on OD remains unclear. This study aims to assess the impact of ETI on olfactory function in CF patients with CRS.

Materials and Methods: This monocentric, retrospective study included 45 CF patients with CRS treated with ETI. Olfactory function was assessed using the Sniffin' Sticks Identification Test (SSIT) before and 12 months after treatment. Patients were classified as normosmic (SSIT ≥12) or hyposmic (SSIT ≤11) and further categorized as responders (normosmic post-treatment or improved from hyposmia) or non-responders (no improvement or worsening). Sinonasal and pulmonary function parameters were also evaluated.

Results: At baseline, 26.7% of patients were normosmic, increasing to 75.6% post-treatment. SSIT scores improved significantly (9.7 to 13.6, $p<0.001$). Among responders (75.6%), 25 transitioned from hyposmia to normosmia, while 9 maintained normosmia. Non-responders (24.4%) remained hyposmic (17.8%) or worsened (6.7%). Responders showed greater FEV1 improvement (+16.9% vs +8.0%, p=0,04) and a substantial eosinophil count reduction (-50.40 vs +0.45 cells/µL, p=0.32). No significant sinonasal score differences were found between groups.

Conclusions: ETI significantly enhances olfactory function in CF patients, particularly in those with better pulmonary responses and lower systemic inflammation. However, a subset of patients shows limited olfactory recovery despite sinonasal improvements. Further research is needed to identify predictors of olfactory response and optimize treatment strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4153

What features of persistent COVID-associated chemosensory dysfunction drive changes in smell-related quality of life over time?

Tiana Saak[1], Jeremy P. Tervo[1], Patricia T. Jacobson[2], Brandon J. Vilarello[3], David A. Gudis[4], Davangere P. Devanand[5], Jonathan B. Overdevest[4]

[1]Columbia University Vagelos College of Physicians and Surgeons, [2]Department of Otolaryngology-Head and Neck Surgery, Yale School of Medicine, [3]Department of Otolaryngology-Head and Neck Surgery, University Miami Miller School of Medicine, [4]Department of Otolaryngology-Head and Neck Surgery, New York-Presbyterian/Columbia University Irving Medical Center, [5]Department of Psychiatry, New York-Presbyterian/Columbia University Irving Medical Center

Smell and Taste 3 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Persistent COVID-associated olfactory dysfunction (C19OD) is a prominent features of long-COVID that diminishes quality of life (QoL). Clarifying whether quantitative smell loss, qualitative parosmia, or perceived gustatory dysfunction (GD) contribute differentially to QoL evolution over time would provide insight into clinical counseling.

Materials & Methods: Following psychophysical chemosensory evaluation, participants with C19OD (N=97) enrolled in a prospective longitudinal cohort study where they completed QoL questionnaires about olfaction (Questionnaire of Olfactory Disorders-Negative Statements, QOD-NS) and parosmia (QOD-Par) at baseline and 1-year. Multivariable analyses assessed baseline and longitudinal associations between aspects of chemosensory dysfunction and QOD scores.

Results: TDI (OR [CI]: -0.31 [-0.60, -0.012]), threshold (-0.79 [-1.5, -0.094]), QOD-Par (1.7 [0.72, 2.7]), and self-reported GD (-7.2 [-14,-0.24]) scores associated with QoL at baseline. Longitudinally, improvements in odor discrimination (-1.4 [-2.5, -0.21]) and QOD-Par (2.9 [0.95, 4.9]) were associated with improved QOD-NS score. While MCID QOD-NS score improvements at one-year were found both for participants reporting resolved parosmia (mean, p-value: 12.86, 0.040) and persistent parosmia (6.16, <0.001), resolution of parosmia provided a significantly larger improvement compared to persistence (p=0.038).

Conclusions: Chemosensory function is critical for QoL in C19OD. While the presence of parosmia, low threshold score, and patient-reported GD are all associated with poorer QoL at baseline, resolution of parosmia and improvement in odor discrimination contribute greatest to improvement of QOD-NS score among C19OD patients. While actual GD is rare in this population, perceived GD and ongoing parosmia significantly decrease QoL (higher QOD-NS score), suggesting interactions with food may drive this relationship.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4199

Olfactory Training Outcomes: A Retrospective Analysis of Predictive Factors

Rafael Pires[1], Aldora Quintal[1], Jorge Dentinho[1], Mário Santos[1], Mariana Neto[1], Luís Antunes[1]

[1]Unidade Local de Saúde Almada Seixal, [2]Unidade Local de Saúde Almada Sexial

Smell and Taste 3 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Given the regenerative capacity of the olfactory system following olfactory dysfunction (OD), olfactory training (OT) has emerged as a promising intervention to improve smell function. Despite its potential, OT's effectiveness remains debated, necessitating further investigation into its outcomes and influencing factors.

Materials & Methods: A total of 69 individuals who completed OT at our institution from 2019 to 2024 were included. The Portuguese Smell Test (2017) was applied before and 12 weeks after OT, calculating the DIF score (detection, identification and discrimination). Wilcoxon Signed Ranks Test assessed pre- and post-OT score differences. Mann-Whitney U test, Spearman's correlation, Kruskal-Wallis test were used to evaluate associations with age, sex, education, Mini-Mental State Examination (MMSE), Beck Depression Inventory (BDI), medical comorbidities, smoking and alcohol consumption, MRI findings, etiology of OD, and initial olfactory test scores.

Results: There was a significant improvement in DIF score after OT ($Z = -6.166$, $p < 0.001$). Lower baseline DIF scores were associated with greater DIF score differences (Spearman's rho = -0.276, $p = 0.021$). The presence of MRI changes in the olfactory cortex and bulb was negatively correlated with smell recovery (Kruskal-Wallis $H = 8.387$, $p = 0.015$). Lower MMSE scores were related to poor olfactory improvement ($Z = -1.889$, $p = 0.048$). Results regarding other demographic and clinical factors showed no statistically significant associations with DIF score differences.

Conclusion: OT significantly improved olfactory function, particularly in individuals with lower initial scores. MRI abnormalities and cognitive impairment may negatively impact training success.



CRS – Diagnosis and Investigations 2

4281

Can Nasal Wash Be Useful In Diagnosing Type 2 Endotype In Chronic Rhinosinusitis With Nasal Polyps (CRSwNP)?

Clara Lima[1], Laiana Almeida[2], Marcus Lessa[3], Carolina Cincura[2]

[1]professor Edgar Santos University Hospital, *[2]federal University Of Bahia*, *[3]federal Universsity Of Bahia*, *[4]federal University Of Bahia*

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Objectives: The main objective is to compare eosinophilia between the AP and NL methods in CRSwNP. Secondarily, evaluate the association between tissue eosinophilia and disease control; the severity of asthma; sensitization to aeroallergens; endoscopic and tomographic findings; total IgE and peripheral eosinophilia.

Methods: cross-sectional study where participants were submitted to nasal biopsy, for detection of eosinophilia in anatomical pathology(AP) of tissue, and nasal wash (NW) for cytology evaluation to determine level of agreement between methods. In addition, level of agreement between to peripheral and tissue eosinophilia was compared, in relation to the diagnosis of the Type 2 endotype in CRSwNP. Analysis of clinical and epidemiological factors associated with tissue eosinophilia, SNOT-22, asthma control assessment, Prick test, laboratory tests, nasal endoscopy and tomography was also performed.

Results: Thirty patients were included. All were characterized as eosinophilic by one of three methods: peripheral eosinophilia, AP or total IgE. Eosinophils were altered inby: 70% of the sample in blood assessment if the cut off point was above 250 cells/mm 3, and 83.3% when considering above 150 cells/mm 3; 86.6% in AP and 30% in NW. Total IgE was altered inby 63.3%. Eosinophilic NW was statistically associated with elevated tissue eosinophilia.

Conclusions: NW is a non-invasive and easy to perform method, but inferior to AP., However, in very eosinophilic patients, NW was presented a statistically significant association. Peripheral eosinophilia, with a cut off point of 150 cells/mm 3, was the method with the closest level of agreement when compared to the gold standard for eosinophilia detection, AP.





3836

The Establishment of the Hungarian Rhinosinusitis Registry Augmenting Healthcare (HURRAH).

Lujber László[1], **Bella Zsolt**[1], **Ludányi Kristóf**[2], **Imre Dóka**[2], **Orosz Tünde**[2], **Ágnes Kiricsi**[3], **Hirschberg Andor**[1], Kraxner Helga[4], Tibor Szalóki[5], Anna Bódi[1], László Tóth[6], Fent Zoltán[4], Liktor Balázs[1], Lili Lakatos[7], Liktor Bálint[1], Mária Matúz[8], Erdélyi Eszter[2], Zsuzsanna Horváth[9], Szalenkó-Tőkés Ágnes[2], Zsiros Csenge[2], Dóka Imre[2], Vass Vivien[11], Kiricsi Ágnes[1], Varga Szonja[12], Gábor Forgács[2], Hegyi Péter[13]

[1]ENT Consultant, [2]assistant lecturer, [3]ENT consultant Ph.D., [4]assistant professor, [5]Semmelweis Egyetem Budapest, [6]ENT consultant, Ph.D. Med. Habil, [7]Dél-budai Centrumkórház Szent Imre Kórház, [8]Pharmacologist habil., [9]ENT consultant, Department Head, [10]resident, [11]register coordinator, [12]Medical student, [13]Professor, Lead

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: Chronic rhinosinusitis (CRS) significantly impacts patients' quality of life and poses a substantial burden on healthcare systems. Despite advancements in diagnostic and therapeutic approaches, management remains challenging. Real-world data collection through a dedicated registry offers an invaluable opportunity to better understand disease patterns, optimize treatment strategies, and guide future research.

Material & Method: The comprehensive national registry was initiated in 2024 and aims to collect standardized medical data on CRS patients. The registry seeks to:
- Characterize the demographic, clinical, and phenotypic profiles of CRS patients.
- Evaluate the effectiveness of treatment modalities.
- Assess the impact of CRS management on patient-reported outcomes. Methods: Based on the Hungarian CRS guideline, 14 medical centers collect data on

• Demographics and comorbidities,
• Clinical symptoms and disease severity,
• Imaging and endoscopic findings,
• Treatments
• Follow-up data on symptom progression, complications, and quality of life.

Results: On-going enrollment has included 150 patients. On average, 3 visits per patient are recorded with 420-460 pieces of data. Approximately 250 thousand data have been collected to date. Early analysis suggests a significant treatment response with biological therapies in patients with nasal polyps. Long-term follow-up is ongoing to evaluate outcomes.

Conclusions: The standardized electronic registry provides consistency in data collection and facilitates multicenter collaboration to enhance the understanding of CRS and its management. By capturing real-world data, it has the potential to guide personalized treatment approaches, identify gaps in care, and improve clinical outcomes for patients with CRS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3953

The comparison of rhinosinusitis complicated with cavernous sinus syndrome or direct orbital involvement

Hsuan Fu Chang[1], Liang Chun Shih[1]
[1]*China Medical University Hospital*

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: Study evaluated differences in clinical characteristics and prognosis between patients with rhinosinusitiscomplicated by ocular neurological symptoms, divided into cavernous sinus syndrome (CSS) and direct orbital involvement (DOI) groups, to aid in early recognition and treatment of complications.

Methods: Study compared clinical features and outcomes of severe sinusitis patients with CSS and DOI groups through retrospective analysis of demographic, comorbidity, clinical symptom, imaging, microbes culture, and treatment data.

Results: A total of twenty one patients were enrolled in the study, including nine in the CSS group and twelve in theDOI group. The CSS group demonstrated a significantly higher incidence of comorbidities, including hypertension (66.67% vs. 16.67%; P=0.032) and diabetes mellitus (88.89% vs. 16.67%, P=0.002), as well asa greater prevalence of fungal infection (62.5% vs. 8.33%, P=0.046) and an older age (67.89 vs. 45.92;P=0.012) compared to the DOI group. The most common symptoms in the CSS group were blurred vision(55.56%) and double vision (55.56%), while eyelid swelling (58.33%) was most common in the DOI group.The primary treatment was functional endoscopic sinus surgery (FESS), and most patients received Amoxicillin/clavulanic acid (61.9%) as preoperative antibiotic therapy. The DOI group demonstrated ahigher rate of complete recovery (91.67% vs. 44.44%; P=0.046) during the one-year follow-up period.

Conclusion: CSS group has worse prognosis and higher risk of intracranial infections than DOI group. Advanced age, diabetes, and fungal infections are risk factors. Antifungal agents should be considered for preoperative antibiotics. Prompt diagnosis and early intervention are crucial for CSS management.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4021

Using nasal nitric oxide levels to predict the need for surgical evaluation in chronic rhinosinusitis

Pekka Tamminen[1], Ilkka Kivekäs[1], Numminen Jura[1], Jorma Järnstedt[1], Markus Rautiainen[1], Lauri Lehtimäki[1]
[1]*Tampere University Hospital*

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: The symptoms of chronic rhinosinusitis (CRS) in the general population are common, but endoscopy or computed tomography (CT) findings and the need for surgical interventions are less frequent. CT is not justified in all patients and endoscopy is performed only by specialists. We assessed how nasal nitric oxide (nNO), Sinonasal Outcome Test 22 (SNOT-22) and Zinreich modified Lund–Mackay CT-score (ZL–M) performed in real-life predicting the need for surgical treatment among subjects with CRS or recurrent acute rhinosinusitis (RARS).

Material & Methods: Sixty-six patients with CRS or RARS were included. The nNO and the relative difference in nNO (nNORD) before and after using xylometazoline nasal spray were measured. In addition, the SNOT-22 and ZL–M were assessed during three consecutive visits: on their regular medication when they were referred; after a four-week medication pause; and after four weeks of intranasal fluticasone propionate treatment. Decisions of surgical treatment were made after the three visits, with the clinicians being blinded to the nNO results.

Results: The predictive values of nNO alone and combined with nNORD for later surgery were the same “after regular fluticasone”: the positive predictive value (PPV) was 76 %, and the negative predictive value (NPV) was 80 %. These results were not statistically significantly different from the ZL–M (PPV of 76 % and NPV of 82%) in identifying patients who ultimately required surgical treatment.

Conclusion: Measuring nNO in primary care patients with symptoms suggestive of CRS might help in identify those who should be referred for an ENT evaluation for possible surgical treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4173

Nasal floor mucosal thickness in chronic rhinosinusitis: a CT-based case-control study

Mónica Teixeira[1], André Cunha[3], Francisco Nazaré[2], Bernhard Schuknecht[4], Hans Rudolf Briner[5]

[1]Unidade Local de Saúde Gaia/Espinho, [2]Department of Otolaryngology, Unidade Local de Saúde Gaia/Espinho, Portugal, [3]Department of Neuroradiology, Unidade Local de Saúde Gaia/Espinho, Portugal, [4]Medizinisch Radiologisches Institut, Zurich, Switzerland, [5]ORL-Zentrum - Otorhinolaryngology and Facial Plastic Surgery, Hirslanden Klinik, Zurich, Switzerland

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

INTRODUCTION: Tissue remodeling, involving temporary and permanent changes in mucosal structure, is a hallmark of chronic rhinosinusitis (CRS). Despite advances in understanding its molecular mechanisms, a gap remains in determining whether certain mucosal structures, such as the nasal floor, undergo significant changes. The anatomical continuum between the nasal cavity and paranasal sinuses, along with shared inflammatory processes, suggest that nasal floor changes may mirror those in the sinuses. This study explores whether radiographic evidence of nasal floor mucosal thickening is a characteristic feature of CRS.

MATERIAL AND METHODS: This retrospective case-control study included 80 patients with bilateral CRS who underwent endoscopic sinus surgery and 80 controls. We measured nasal floor mucosal thickness at two points on coronal plane paranasal sinus CT: anteriorly, where the inferior turbinate inserts the maxilla, and posteriorly, at the nasolacrimal duct opening into the inferior meatus.

RESULTS: In the CRS group, the mean nasal floor mucosal thickness was 2.52±0.74mm anteriorly and 2.05±0.63mm posteriorly. In the control group, it was 2.02±0.59mm anteriorly and 1.52±0.44mm posteriorly. The CRS group exhibited significantly thicker mucosa at both points ($p<0.001$). Eosinophilic CRS patients had significantly greater anterior mucosal thickness compared to non-eosinophilic CRS patients ($p=0.006$), but no difference was found in posterior thickness ($p=0.173$).

CONCLUSION: Our study highlights the link between increased nasal floor mucosal thickness and CRS, particularly in eosinophilic phenotype. These findings suggest that the nasal floor may be an important site of tissue remodeling in CRS. Future studies could explore whether nasal floor mucosa thickness can be used to monitor the disease course in CRS patients.



4244

Evaluating the role of Cone beam computed tomography (CBCT) in a 'One-Stop' Rhinology clinic model in identifying paranasal sinus disease enhancing shorter patient pathway and increasing same day discharge

Nikita Bhoombla[1], Marlene Speth[1], Catherine Rennie[1]
[1]*Imperial College Healthcare Trust*

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

CBCT has emerged as a reliable imaging modality for assessing the paranasal sinuses. This study evaluates its effectiveness in replacing traditional CT sinuses with multiple follow-up in a one-stop rhinology clinic model. The aim to determine whether CBCT reduces the clinic burden by enabling same-day discharge, minimizing follow-up appointments, improving the patient journey as well achieving cost savings for the trust. A prospective analysis was conducted over six months at a busy tertiary centre in London, assessing the use of the CS9600 care-stream dental CBCT of paranasal sinus imaging in rhinology clinics. Patients presenting with symptoms but minimal clinical signs of sinus disease were sent for CBCT imaging, with the goal of achieving diagnostics and same-day discharge.55 eligible patients underwent CBCT imaging from rhinology clinics. Sinus disease was excluded in 38 patients (69.1%) post imaging. 20 patients (36.4%) were discharged on the day, enabling the department to provide same-day diagnoses, increasing appropriate treatments and further alleviating the follow up burden and costs. For each diagnostic one-stop rhinology outpatient appointment the trust gained + £98.28, amounting to £5,405.40.The use of CBCT in a one-stop rhinology clinic is a patient centered and cost-effective, efficient alternative to traditional CT imaging. It facilitates same-day diagnoses and thus an improved patient pathway. It further reduces follow-ups and generates significant cost savings for the trust/NHS whilst maintaining diagnostic accuracy. This study demonstrates CBCT's effectiveness as a cost-efficient alternative to traditional imaging in our one-stop rhinology clinic. Our findings show 69.1% of patients with suspected chronic rhinosinusitis(CRS)/symptoms of CRS had normal sinus ndings. Among those reporting severe symptoms (SNOT-22 score>), 66.66% had alternative diagnoses. CBCT enables immediate diagnosis and further treatment planning, eliminating prolonged waiting times.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4296

Radiological Evidence of Chronic Rhinosinusitis in the Paediatric Population

Raymond Kim[1], Alina Rankin[2], Jin Kwun[2], Wanida Kimita[1]

[1]The University of Auckland; Auckland City Hospital, *[2]Auckland City Hospital*

CRS – Diagnosis and Investigations 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: Accurate diagnosis for children presenting with chronic nasal congestion is challenging as symptoms overlap with several conditions, including chronic rhinosinusitis (CRS). While CT imaging is the gold standard for diagnosing CRS, there can be hesitancy in performing imaging routinely in children. This retrospective case series evaluated the incidence of CRS on CT imaging in children referred to a consultant rhinologist with nasal symptoms.

Materials & Methods: Retrospective review of clinical records of all patients 1 prior surgical procedure related to nasal congestion (21.9%). 109 (95.6%) patients had preoperative CT imaging. 59% of patients had LM scores >5, with 33.3% >10. Of these, 24% had prior surgery, but persistent symptoms. 13.4% of patients with LM >5 had no prior CRS diagnosis.

Conclusions: Routine preoperative CT imaging in managing nasal congestion in the paediatric population allows accurate diagnosis and aids in formulating an appropriate management plan. The benefits of commencing appropriate medical management and optimizing the number of surgical procedures required could outweigh the risks from relatively low-dose radiation exposure.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS Medical Management + Diagnosis & Investigations

4314

Clinical-Based Phenotyping of Odontogenic Sinusitis

Lorenzo sabatino[1], Francesco Iafrati[3], Simone Di Giovanni[4], Manuele Casale[5], Antonio Moffa[6], Michelangelo Pierri[7], Luigi De Benedetto[6]

[1]md of otolaringology, policlinico campus bio medico di roma, [2]Md in policlinico campus bio medico di Roma, [3]md policlinico campus bio medico di Roma, [4]md policlinico campus bio medico di roma, [5]full professor of Otolaringology, UOS terapie integrate in otorinolaringoiatria, policlinico campus bio medico di roma, [6]md of Otolaringology, UOS terapie integrate in otorinolaringoiatria, policlinico campus bio medico di roma, [7]resident of otolaryngology, policlinico campus bio medico di roma

CRS Medical Management + Diagnosis & Investigations | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Background: Odontogenic sinusitis (ODS) is a condition needing a multidisciplinary approach to be successfully treated. Effective communication between the involved health providers reduces chances of errors and treatment failure.

Purpose: This study proposes a new classification of ODS facilitating the communication of pivotal information.

Materials and Methods: In this observational study the authors considered 124 consecutive patients with ODS treated in the Campus Bio-Medico of Rome Foundation Hospital. Predictor/exposure/independent variable The main elements influencing the treatment of this condition resulted as: Timing, Etiology, Presence of foreign Body, maxillary Obstruction of the ostiomeatal complex, and presence of oroantral Fistula (OAF); these elements were organized in the acronym TEBOF. Each patient received a TEBOF classification. The “T” was categorized in “Tc” for patients diagnosed with chronic sinusitis, “Ta” for of acute sinusitis, and “T0” for patients with maxillary sinus foreign body without sinusitis. The “E” was differentiated in “Ec” when the condition was a side effect of a primary dental pathology, “Eb” when the initial cause was not a dental implant, and “Ea” for when the initial cause was having a dental implant placed. “B" was reported as “B1” when there was a maxillary sinus foreign body and “B0” when there was not. “O” was reported as “O1” when the ostiomeatal complex resulted closed and “O0” when it was clear. “F” was used as “F1” when there was a communication, and “F0” when there was not.

Results: This classification provides a concise and easy-to-understand combination facilitating communication between the various healthcare providers who are essential for the appropriate treatment of this condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4426

Developments of gelatine and hyaluronic acid based medication containing nanogels wound healing in vitro

Achim Beule[1], Dennis Harder[1], Tonny Voermans[2], Claudia Rudack[1]

[1]Department of ENT, University Hospital of Münster, *[2]BioMed Elements*, *[3]Department of ENT, University Hospital of Medicine*

CRS Medical Management + Diagnosis & Investigations | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Background: Endonasal surgery of chronic rhinosinusitis results in wounds left for healing in secondary intention. Gelatine and hyaluronic acid are compounds having been incorporated in nasal packings previously. We developed prototypes in which nanomolecular structures of different drugs have been implemented to study their effect on wound healing.

Method: Human nasal epithelial cells and fibroblasts in human primary cell cultures were exposed to a gelatine based (A) or hyaluronic acid based carrier (B) in both rothi test (for toxicity testing) with and without incorporated medications and a standardized wound model of a monolayer. Effects were evaluated after 0-96h. Medium was analysed for changes in cytokine expression for different concentrations of the formulations employed. Ciliary beat frequency was measured to exclude a negative effect on mucociliary clearance in an ex-vivo setting of fresh nasal epithelial cells.

Results: Both formulations showed good tissue tolerability with increased viscosity for the gelatine based approach. A showed similar wound healing velocity to control. B resulted in accelerated wound healing with a most pronounced effect at 10 µg/ml with a response to local treatment in a dose-dependant manner. Incorporation of medications resulted in decreased proliferation similar to previously reported effects of the medication (epithelial cells > fibroblasts) without additional interference. Ciliary beat frequency decreased only in relation to viscosity of the carrier.

Conclusion: Both carriers are promising in the postoperative setting, and incorporating nanogel containing medication will helps to prolongate topical medical therapy after sinus surgery in difficult accessible anatomical areas. Disclaimer: The research is sponsored by the Interreg VIA programm of the European Union.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4440

Evaluating ChatGPT's Performance in Answering Questions About Allergic Rhinitis and Chronic Rhinosinusitis

He Zhang[1]
[1]*The Third Affiliated Hospital of Sun Yat-sen University*

CRS Medical Management + Diagnosis & Investigations | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

***Background*:** This study aims to evaluate the accuracy of ChatGPT in answering allergic rhinitis (AR) and chronic rhinosinusitis (CRS) related questions.

Method: Responses to AR (n = 189) and CRS (n = 242) related questions, generated by GPT-3.5 and GPT-4, were independently graded for accuracy by two senior rhinology professors, with disagreements adjudicated by a third reviewer

Results: Overall, ChatGPT demonstrated satisfactory performance, accurately answering over 80% of questions across all categories. Specifically, GPT-4.0's accuracy in responding to AR-related questions significantly exceeded that of GPT-3.5, but this distinction was not evident in CRS-related questions. Patient-originated questions had significantly higher accuracy compared to doctor-originated questions when utilizing GPT-4.0 to respond to AR-related questions. This discrepancy was not observed with GPT-3.5 or in the context of CRS-related questions. Across different types of content, ChatGPT excelled in covering basic knowledge, prevention, and emotion for AR and CRS. However, it experienced challenges when addressing questions about recent advancements, a trend consistent across both GPT-3.5 and GPT-4.0 iterations. Importantly, the accuracy of responses remained unaffected when questions were posed in Chinese.

Conclusion: Our findings suggest ChatGPT's capability to convey accurate information for AR and CRS patients and offer insights into its performance across various domains, guiding its utilization and improvement.



4555

Dupilumab-induced eosinophilia in patients with diffuse type 2 chronic rhinosinusitis

Fabio S. Ryser[1], Michael Soyka[2], Urs C. Steiner[1], Catrin Brühlmann[2], Tina Mauthe[2]

[1]Department of Rheumatology and Immunology, University Hospital Bern, Switzerland, [2]Department of Oto-Rhino-Laryngology and Head Neck Surgery, University Hospital Zurich, Switzerland

CRS Medical Management + Diagnosis & Investigations | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Background: Dupilumab, a monoclonal anti-IL-4Rα antibody, is approved for several type 2 mediated inflammatory diseases like asthma, atopic dermatitis, and diffuse type 2 chronic rhinosinusitis (CRS). Clinical studies had reported a transient increase in blood eosinophils during dupilumab therapy. This study aimed to assess the impact of elevated blood eosinophils on clinical outcome and to investigate the cause of high blood eosinophil levels under dupilumab therapy.

Methods: Patients suffering from diffuse type 2 CRS treated with dupilumab were examined on days 0, 28, 90, and 180 after therapy start. Sino-Nasal-Outcome-Test Score (SNOT-22), Total Nasal Polyp Score (TNPS), and blood samples were collected. Cytokine measurements and proteomics analysis were conducted. Flow cytometry analysis measured receptor expression on eosinophils.

Results: Sixty-eighty patients were included. Baseline eosinophilia ≥0.3G/L was observed in 63.2% of patients, and in 30.9% of patients, eosinophils increased by ≥0.5G/L under dupilumab. Subjects with eosinophilia ≥0.3G/L at baseline had the best SNOT-22 mean change compared to no eosinophilia. Eosinophil elevation during dupilumab therapy had no impact on clinical scores. The eosinophil adhesion molecule VCAM-1 decreased significantly during therapy in all patients. The chemokine receptor CXCR4 was significantly down- and IL-4 upregulated in subjects with eosinophil increase.

Conclusion: Our findings suggest that increased eosinophils in type 2 CRS are associated with a good clinical response to dupilumab. Patients with elevated IL-4 at baseline developed dupilumab-induced transient eosinophilia. We identified the downregulation of VCAM-1 and surface markers CD49d and CXCR4 on eosinophils as possible explanations of dupilumab-induced eosinophilia.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4094

Bilateral Choanal atresia in a preterm infant with down syndrome: surgery step by step

Carlota Andrade de Sousa[1], **Carlota Sousa**[1], Joana Guincho[1], Luís Baptista[2], Luís Castelhano[2], Filipe Correia[2], Mariana Donato[2], Pedro Escada[2]

[1]ENT department of Unidade de Saúde Local Lisboa Ocidental, [2]ENT department Unidade de Saude Local Lisboa Ocidental

CRS Medical Management + Diagnosis & Investigations | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Bilateral choanal atresia (BCA) is a rare congenital defect, usually associated with genetic syndromes such as Apert's, CHARGE, DiGeorge, trisomy 18 and rarely Down-syndrome. Surgical treatment is urgent and poses a great challenge as there is no consensus regarding the best surgical technique, surgical instruments or timing. We present a literature review on BCA and a case report (with surgical video) of a premature girl, with Down-syndrome, born at 27 weeks with a weight of 1054g, requiring mechanical ventilation. After failed attempts of nasogastric intubation mixed BCA was suspected and confirmed by nasal endoscopy and CT scan. Endoscopic endonasal surgery with intraoperative neuronavigation and otologic instruments was performed at 77 days of age with a weight of 2896g. Surgical steps included: creation of cross over septal flaps, resection of the posterior nasal septum, drilling of basisphenoid and medial pterygoid plates and choanoplasty. The neochoane, with a diameter of 10mm latero-laterally and a 6 mm superior-inferiorly, is delimited laterally by the partially drilled pterygoid processes, superiorly by the nasal septum and drilled basisphenoid and inferiorly by the nasal floor. The exposed bone was covered with the previously designed flaps, surgical and fibrin glue. Follow-up included regular nasal washes and endoscopic examination for crust removal. At 20 weeks the infant, extubated, maintains a patent neochoane, 2 months post-op. This life-threatening defect requires urgent treatment to reduce the damaging consequences of prolonged intubation. Timing for surgical intervention must be discussed through weighing the advantages of an early repair against the technical difficulties and the higher probability of restenosis.



Training 2

3684

Refining Septo-Collumelloplasty: How We Do It Background

Michaella Cameron[1], Manu Shrivastava, Joseph Marais
[1]*Northwick Park Hospital*

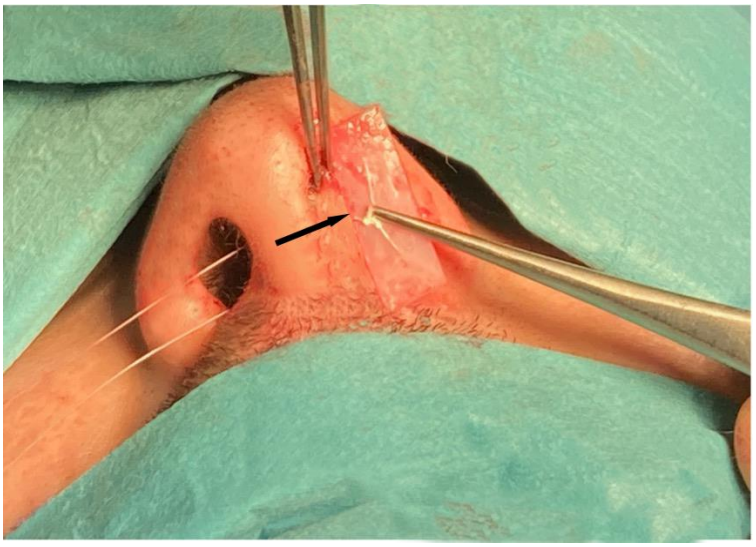
Training 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Objective: To describe a simple, reproducible closed technique for caudal septal deviation correction using the parachute graft method.

Results: The technique was applied in over 100 patients with a revision rate of 3%.

Technique: A caudal incision is made endonasally, and bilateral mucoperichondrial flaps are elevated. The deviated caudal septum is harvested, leaving a dorsal strut intact. A rectangular parachute graft is fashioned from the harvested cartilage and sutured using 4-0 Vicryl Rapide in a vertical axis. The graft is re-implanted into a columellar pocket, and precise suturing through the medial crura.

Conclusions: The parachute graft technique provides a reliable, closed approach to caudal septal deviation correction. Its simplicity, reproducibility, and favorable outcomes make it an effective technique for both experienced and training novice surgeons.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3761

Ergonomics in rhinosurgery

Zacharias Kalentakis[1], Georgios Dritsas[1], Alexandros Ninos, Effrosuni Papatheodorou[1]
[1]*Sismanogleio General Hospital of Attiki*

Training 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Background and aim: Ergonomics explores efficiency in the work environment by integrating principles of anatomy, physiology, psychology, and mechanics. While it has been thoroughly examined in other medical fields, ergonomic considerations in rhinosurgery have remained largely overlooked. This study aims to evaluate and summarize the existing literature on ergonomics in rhinosurgery.

Materials and Methods: A systematic review of English-language publications was conducted using the PubMed and Web of Science databases. The keywords used were "ergonomics in rhinology," "ergonomics in rhinosurgery," and "ergonomics in otorhinolaryngology.

Results: Out of 323 articles published between 2011 and 2025, 27 met the inclusion criteria for this study. The results revealed that over 75% of nasal surgeons report musculoskeletal problems, primarily affecting the neck, shoulders, and lumbar spine. Factors such as prolonged standing, repetitive fine motor movements, and awkward neck angles significantly contribute to the development of these disorders. Specifically, women and left-handed surgeons face pronounced ergonomic issues, experiencing increased fatigue and reduced efficiency due to standard surgical equipment designs that do not fit their needs. To overcome these issues targeted interventions are required. However, ergonomic principles are rarely prioritized during surgical training or in operating room schedules, with fewer than 30% of otolaryngologists receiving relevant education.

Conclusions: By prioritizing surgeon health through education, technological innovation, and inclusive equipment design, the medical community can promote a sustainable and equitable work environment. Integrating ergonomic principles into surgical practice not only enhances the well-being of surgeons but may also fosters surgical precision and patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3786

Can lambs' heads be a useful adjunct of surgical simulation training for rhinological surgery: a validated simulation model

Yadsan Devabalan[1]
[1]*Oxford University Hospital*

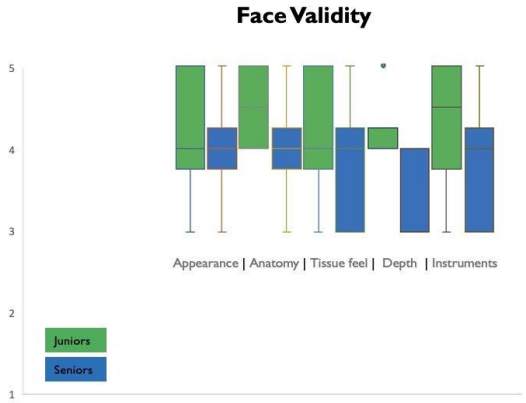
Training 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

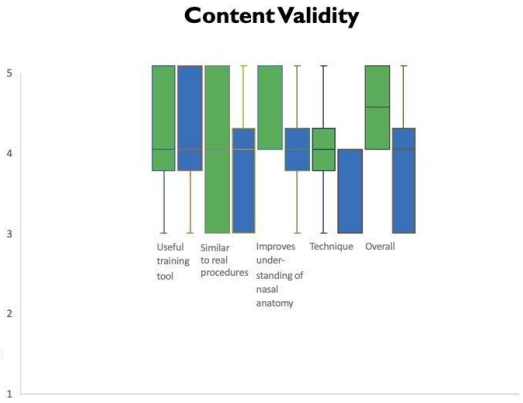
Background: Otolaryngology training has shifted to a more competency-based curriculum, with an increasing focus on surgical simulation to augment clinical learning opportunities. We aim to validate a cost-effective, high-fidelity rhinological simulation model using lambs' heads.

Methodology: We set out to answer three questions: 1. Does the lamb's head accurately reflect human sinus anatomy? Four lambs' heads were imaged with a CT scanner. The nasal cavity and paranasal sinuses were evaluated with axial, sagittal and coronal sections. Quantitative and qualitative data was collected on size, common features, and any abnormalities compared to human CT sections.2. Is it feasible to perform the same steps on a lamb? One expert rhinologist performed common rhinological procedures on the lamb's head in a simulated theatre training facility. Comments were gathered regarding the feasibility. 3. Can we implement this for ENT trainees?A training session was developed for experienced and novice junior and senior otolaryngological trainees. 2 trainees were assigned to one lamb head each. A 20-item pre- and post questionnaire was designed to assess domains of validity (face, content).

Results: 1.There is remarkable similarity between the human and lambs' sinonasal anatomy. Anatomical measurements were more closely related to humans, and more specific for instruments used in ESS.2. A range of rhinological procedures from simple to advanced procedures were deemed feasible in the lambs' head.3. 12 otolaryngology trainees (6 experienced and 6 novice) performed specified tasks on the lamb models. The model achieved face validity of 4 (4-5), and a content validity of 4 (4-5). There was no statistical difference between the 2 groups.

Conclusion: Lamb's head is a validated high-fidelity simulation model for endoscopic training in rhinology,. This presents a cheaper, and more environmentally friendlier alternative to current models.





ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4136

The Frontal Sinus Masterclass – concept and validation

Bronagh Lang[1], NC Tan[2], E Vyskocil[3], P J Wormald[4], S Leong[1]

[1]Liverpool Head and Neck Centre, Liverpool, United Kingdom, [2]Royal Cornwall Hospitals NHS Trust, United Kingdom, [3]Medical University of Vienna, Austria, [4]The University of Adelaide, Australia; Department of Otolaryngology, Queen Elizabeth Hospital, Adelaide, Australia.

Training 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: The Frontal Sinus Masterclass is a unique instructional course for surgeons wanting to learn endoscopic frontal sinus surgery. The aim of this study was to evaluate the face and content validities of the unique course programme which incorporates the building blocks concept and 3-D printed models.

Materials & Methods: Delegates are required to undertake surgical planning on the CT scan of the actual training model using the building blocks software. The surgical planning is then presented to a member of faculty for approval. Following dissection of the model, delegates observe a live demonstration of the dissection before being shown the operative video of the actual patient. Delegates complete surgical planning and dissection on three models of increasingly complex frontal sinus anatomy. At the end of the course, all delegates were invited to complete a questionnaire survey to assess the model's realism and its effectiveness as a training tool in the Frontal Sinus Masterclass.

Results: One hundred and one complete datasets were available for analysis. The models were reported to be anatomically accurate and corresponded precisely with the CT scans. The composite structures of the model mimicking various sinonasal structures had realistic tactile feedback. Over 95% of delegates agreed that the course structure was useful for learning frontal sinus anatomy, surgical planning and improving operative techniques. A similar proportion of delegates reported that they felt more confident undertaking endoscopic frontal sinus surgery.

Conclusion: The concept of the Frontal Sinus Masterclass is a revolutionary method of teaching and learning surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4003

The Impact of Hand Dominance in ENT

Mariella Fortune-Ely[1], Talisa Ross[2], Leyla Ozbek[1], Catherine Rennie[1], Rishi Sharma[3]

[1]Imperial College Healthcare NHS Trust, *[2]Northwick Park Hospital*, *[3]Cambridge University Hospital*

Training 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: ENT surgery requires fine motor skills with both hands, but surgical instruments and setups are predominantly designed for right-hand use. Left-handed individuals make up 10% of the population, with a similar proportion in the surgical profession. Studies have described left-handedness as a risk factor for injuries, particularly when using tools. Therefore, this study explores how hand dominance impacts the training, teaching, and professional lives of ENT surgeons in the UK, and investigates the adaptations made to address technical and workplace challenges.

Methods: A web-based survey was distributed via the ENT UK newsletter and local trust group chats to ENT surgeons at various stages of training, from CT1 to consultant level.

Results: 88 participants responded. 25% were left-handed, higher than the general population. This greater engagement may suggest that handedness affects them more effect than their right-handed counterparts. 59% believed being right-handed is advantageous. There was no significant difference in physical discomfort or time to acquire surgical skills between left- and right-handed participants. Qualitative responses highlighted challenges such as difficulty with instrument handling and the alternations to theatre setups for left-handed surgeons. Training with someone of the opposite hand dominance was also identified as both advantageous and challenging.

Conclusion: Hand dominance affects ENT surgeons' experiences in the UK. Human, equipment, and environmental factors contribute to these challenges. Standardised training techniques for both left- and right-handed surgeons could transform these challenges into opportunities to improve training and operative ergonomics for all.



CRS – Medical Management (Excluding Biologics)

4424

Development of gelatine and hyaluronic acid based medication containing nanogels to improve wound healing

Achim Beule[1], Tonny Voermans[2], Dennis Harder[3], Claudia Rudack[1]

[1]Department of ENT, University Hospital of Münster, *[2]BioMedElements*, *[3]Derpartment of ENT, University Hospital of Münster*

CRS – Medical Management (Excluding Biologics) | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Background: Endonasal surgery of chronic rhinosinusitis results in wounds left for healing in secondary intention. Gelatine and hyaluronic acid are compounds having been incorporated in nasal packings previously. We developed prototypes in which nanomolecular structures of different drugs were implemented to study their effect on wound healing.

Method: Human nasal epithelial cells and fibroblasts in human primary cell cultures were exposed to a gelatine based (A) or hyaluronic acid based carrier (B) in both rothi test (for toxicity testing) with and without incorporated medications and a standardized wound model of a monolayer. Effects were evaluated after 0-96h. Medium was analyzed for changes in cytokine expression for different concentrations of the formulations employed. Ciliary beat frequency was measured to exclude a negative effect on mucociliary clearance in an ex-vivo setting of fresh nasal epithelial cells.

Results: Both carriers showed good tissue tolerability with increased viscosity for the gelatine based approach. A showed similar wound healing velocity to control. B resulted in accelerated wound healing with a most pronounced effect at 10 µg/ml with a response to local treatment in a dose-dependent manner. Incorporation of medications resulted in decreased proliferation similar to previously reported effects of the medication (epithelial cells > fibroblasts) without additional interference. Ciliary beat frequency decreased only in relation to viscosity of the carrier.

Conclusion: Both carriers are promising in the postoperative setting, and incorporating nanogel containing medication will helps to prolongate topical medical therapy after sinus surgery in difficult accessible anatomical areas. The research is sponsored by the Interreg VIA programm of the European Union.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4496

The Use of Medihoney in the Treatment of Rhinological Conditions

Ramtin Pir-Siahbazy[1], Katharine Hamlett[1], Hannah Kulbacki[1], Krishna Kaimal[1], Anu Daudia[1], Napoleon Charaklias[1]
[1]*East Lancashire Hospital Trust*

CRS – Medical Management (Excluding Biologics) | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Honey has been valued in medicine since ancient Egyptian and Greek civilizations. Its antibacterial properties and ability to aid wound healing stem from factors such as possessing qualities of high osmolarity; acidity; the production of hydrogen peroxide; and the presence of antioxidants. Honey based agents as a template for wound healing are used in all disciplines of ENT - notably head and neck, and rhinology. Thus, presented is a bibliometric review of the medicinal properties of honey and its application in rhinology, alongside our experience in using honey nasal douches for refractory chronic rhinosinusitis (CRS).

Methods: A standardized PRISMA flow diagram was used to outline the literature search. The studies stratified into different evidence levels, with a brief conclusion of each paper. Exclusion criteria were outlined as: papers deemed to be editorial; primarily not in English; duplications; and not primarily related to rhinological conditions.

Results: 17 papers were outlined. The majority of publications were of level 2 evidence and above. All 17 papers outlined beneficial use of honey both in medical management of conditions such as CRS, allergic rhinitis; and post-operative management of sinus surgery. 2 of the studies found benefit in adjunct to classical managements such as targeted topical antibiotics, and intranasal steroids.

Conclusion: Honey is a safe and effective agent for use in rhinological conditions. The efficacy is well documented. Our experience reflects this. Further large-scale studies are required to qualify its use as either a sole, or adjuvant agent in the management of different rhinological conditions.



3636

Recent research trends in chronic rhinosinusitis (CRS)

Syed Ahamed Peer Mohamed[1]

[1]*Prime Healthcare Group*

CRS – Medical Management (Excluding Biologics) | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Recent research trends in chronic rhinosinusitis (CRS) have focused on elucidating its underlying mechanisms, improving diagnostic techniques, and exploring novel therapeutic options. Here are some of the prominent research directions: 1. Endotyping and Phenotyping of CRS • CRS is now recognized as a heterogeneous disease with multiple endotypes and phenotypes, including CRS with nasal polyps (CRSwNP) and CRS without nasal polyps (CRSsNP). Research aims to better classify patients by these subtypes, as they have distinct inflammatory profiles and treatment responses. • Studies focus on identifying specific biomarkers (e.g., cytokine profiles, eosinophilic markers) to help differentiate between these endotypes, leading to personalized treatment strategies. These research trends reflect a paradigm shift in the understanding and management of chronic rhinosinusitis. From a one-size-fits-all approach, the field is moving toward personalized medicine, with a focus on specific endotypes and targeted therapies. Advances in biologics, the study of the microbiome, and improved diagnostic tools hold promise for better outcomes and quality of life for CRS patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3936

Comparison of the use of different volumes of Nasal Irrigation Solution after Nasal Endoscopic Surgery in patients with Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)

Fabiana C P Valera[1], Isabella B Freitas[1], Denny M Garcia[1], Adriana A B Murashima[1], Edwin Tamashiro[1], Wilma T Anselmo-Lima[1]

[1]Division of Otorhinolaryngology, Department of Ophthalmology, Otorhinolaryngology and Head and Neck Surgery, Medical School of Ribeirão Preto, University of São Paulo (FMRP – USP)

CRS – Medical Management (Excluding Biologics) | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Nasal irrigation is better than nasal sprays for delivering corticosteroids after surgery, but there is no consensus about which volume would be necessary to control symptoms.

Methods: This is a randomized controlled clinical study, which compared two different volumes of saline nasal irrigation with corticoids (experimental group - 60ml in each nostril vs. control group - 120ml in each nostril) in patients with CRSwNP immediately after surgery. The outcomes measured were the SNOT-22 questionnaire, the Lund-Kennedy score, and a non-validated questionnaire on adverse events (AE), 30 and 60 days after Endoscopic Nasal Surgery. 32 patients (18-70 years) with bilateral disease were included (15 in the experimental group and 17 in the control group).

Results: We found no difference in the SNOT-22 and Lund-Kennedy scores between the two groups, at both moments. The AE questionnaire showed that, on D30, patients using high-volume irrigation reported coughing and choking more frequently than those having moderate-volume irrigation, but this difference was not observed on D60.

Conclusion: The findings indicate that moderate and high-volume irrigation are equally effective in the immediate postoperative period and that patients using high-volume irrigation are more likely to experience adverse events (choking and coughing), but they are transient. Our study suggests that both volumes can be used immediately after Endoscopic Nasal Surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4065

Comparing Alternate-Day vs. Daily Pulmicort Nasal Irrigation for Post-Surgical Maintenance in Allergic Fungal Sinusitis

Ahmed Shaikh[1], Hamad Alsaey[1], Sara Ashakanani[1], Emad Alduhirat[1], Mansour Alsulaiti[1], Mashael Alhail[1]
[1]Hamad Medical corporation, Qatar

CRS – Medical Management (Excluding Biologics) | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Aim and Objective: Allergic fungal sinusitis (AFS) is associated with a high recurrence rate (1,2). To prevent recurrence, patients require prolonged use of topical or systemic medications post-surgery (3,4). However, long-term adherence to topical treatments tends to decline, increasing the risk of recurrence. This retrospective study evaluates the effectiveness of an alternate-day Pulmicort nasal irrigation regimen compared to daily irrigation in maintaining disease control following endoscopic sinus surgery (ESS) in patients with AFS. The study reports six-month follow-up outcomes.

Materials and Methods: We analyzed data from 75 patients who underwent functional endoscopic sinus surgery (FESS) for confirmed AFS. All patients followed a standardized postoperative management protocol for the first three months. After this period, patients were divided into two groups: Group A (n = 35): Received Pulmicort nasal irrigation on alternate days. Group B (n = 40): Received Pulmicort nasal irrigation daily. Outcomes were assessed using the SNOT-22 score and nasal polyp score at six months. The effectiveness and adherence to both regimens were compared.

Results: At the six-month follow-up, there was no significant difference between the two groups in terms of SNOT-22 scores or nasal polyp scores. However, patients in the alternate-day regimen demonstrated better compliance over time compared to those on the daily regimen.

Conclusion: Alternate-day Pulmicort nasal irrigation is an effective maintenance strategy for AFS, providing comparable disease control to daily irrigation while improving patient adherence. This approach may enhance long-term compliance without compromising treatment efficacy.



Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4

3802

Algorithmic approach to management of skull base CSF leak - an Indian Tertiary Center Experience.

Pankhuri Mittal[1]

[1]*Assistant Professor, Department of ENT and Head & Neck Surgery*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Cerebrospinal fluid (CSF) leak is a critical condition that can result in life-threatening complications if not managed effectively. An algorithmic approach to diagnosis and management ensures a structured and tailored strategy for optimal outcomes. This study explores the experience of managing skull base CSF leaks at a tertiary care center in India, highlighting the application of a stepwise protocol.

Methods: A retrospective analysis was conducted on patients diagnosed with skull base CSF leaks between July 2022 and December 2024. The management algorithm included clinical evaluation, biochemical confirmation of CSF, radiological localization, and tailored surgical interventions. Endoscopic repair was the primary modality, with graft materials and multilayer techniques tailored to defect size and location. Postoperative monitoring for complications and recurrence was performed over a 6-month follow-up.

Results: A total of 55 patients were included, with majority presenting with spontaneous leaks. Radiological confirmation was successful in 92% of cases with MR Cisternography being primary modality. Significant patients responded to conservative treatment. Endoscopic repair achieved a 100% success rate on the first attempt, with minimal complications. No patients developed meningitis during follow-up. Patients demonstrated significant symptomatic improvement, with low recurrence rates.

Conclusion: An algorithmic approach to managing skull base CSF leaks ensures accurate diagnosis, effective surgical repair, and favorable outcomes. This structured methodology, adapted to the resources and challenges of an Indian tertiary care setting, demonstrates high success rates and can serve as a model for similar healthcare setups.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4116

Impact of mono versus dual fungal coinfection on clinicopathological, radiological and survival outcomes in invasive fungal sinusitis

Regi Kurien[1], Lalee Varghese[1], Lisa Mary Cherian[1]
[1]*Department of Otolaryngology, Christian Medical College, Vellore, Tamil Nadu, India*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Invasive fungal sinusitis (IFS) is an angioinvasive infection associated with serious mortality. Most often caused by a single fungal species which are either aseptate or septate, co-infections by both species have also been observed. Mono-fungal infections could exhibit a more predictable progression directly correlated with virulence of the pathogen. We hypothesize that dual fungal co-infections could be more aggressive, with overlapping symptoms due to synergistic pathogenicity. The study aims to assess the impact of mono versus dual fungal coinfections on clinical, pathological, radiological and survival outcomes in invasive fungal sinusitis.

Materials and Methods: Retrospective study including patients diagnosed with IFS between January2014 and December2022 at a tertiary medical teaching hospital.

Results: A total of 356 patients had IFS, of whom 299(83.9%) had aseptate, 33(9.26%) septate, and 24(6.74%) fungal coinfection. Aseptate hyphae was significantly associated with diabetes($p<0.001$), facial pain($p=0.021$) and oral symptoms($p<0.001$). Imaging revealed pterygopalatine fossa involvement significantly higher in aseptate group (<0.001), while involvement of orbit and cavernous sinus was more among fungal coinfections. Aseptate fungi were associated with acute IFS(62.9%), septate fungi with chronic granulomatous IFS(55%) while fungal coinfection showed a mix of acute and chronic IFS. Survival analysis showed a 95.8% survival among septate involvement which lowered to 84.2% and 81.8% with aseptate and fungal coinfections respectively.

Conclusion: Dual fungal co-infections in contrast to infection by single fungal aseptate or septate species shows a combination of acute and chronic granulomatous disease with a poorer survival compared with single infections with either aseptate and septate alone.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3770

The Degree of Stress in Patients With Empty Nose Syndrome, Compared With Chronic Rhinosinusitis and Allergic Rhinitis

Kim Joo Yeon[1], Jaehwan Kwon[2]

[1]Kosin University hospital, Busan, Korea., *[2]Dept. Otorhinolaryngology, Kosin Medical University*, *[3] Kosin University hospital, Busan, Korea*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Depression is a mental health disease of growing public health concern because depressive mood affects the sufferer's daily life and is also associated with productivity decline. Depression that is caused by other diseases or substances is referred to as secondary depression, which is an important distinction because curing the underlying cause could subsequently regulate depressive mood. Empty nose syndrome (ENS), also known as ''paradoxical obstruction of the nose,'' is a condition in which the major symptom is difficulty breathing, despite having sufficient breathing space in the nose. Empty nose syndrome has been increasing in prevalence in Korea. We found that patients with this ENS have a tendency toward depressive mood, which can escalate so far as to lead to suicide attempts. Thus, herein, we aimed to investigate the psychological burden on patients with ENS.

Methods: We divided patients into 4 groups: ENS (group A), chronic rhinosinusitis with polyp (CRS c polyp, group B), chronic rhinosinusitis without polyp (CRS s polyp, group C), and allergic rhinitis (AR, group D). We estimated and compared Beck Depression Inventory (BDI) scores among the 4 groups, and we investigated the relationship between depression index and nasal cavity area in patients with ENS.

Results: The ENS group (A) had depression prevalence of 71% with varying severity, which was much higher than group B (19%), group C (15%), and group D (27%). The correlation between nasal cavity volume and BDI score for the ENS group was not statistically significant.

Conclusion: The degree and severity of depression in patients with ENS was higher than in patients with CRS or AR. Furthermore, there was no relationship between depression severity and nasal cavity volume in the patients with ENS. Thus, physicians should be careful not to dismiss the accompanying mental health problems of patients with ENS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4538

Role of Mucosal Reconstruction Techniques in Preventing Restenosis After Frontal Sinusotomy, A Systematic Review and Meta-analysis

Islam Soltan[1], Saad Elzayat[2], Hussein El-Shirbeny[2], Hossam Sayed Elsherif[3], Ahmed Elgendy[2]

[1]Otorhinolaryngology Department, Bart Health NHS Trust, UK., [2]Otorhinolaryngology Department, Faculty of Medicine, Kafrelsheikh University, Kafrelsheikh, Egypt., [3]Otorhinolaryngology Department, Faculty of Medicine, Tanta University, Tanta, Egypt.

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Frontal sinusotomy is a well-established surgical approach for managing various frontal sinus pathologies, including chronic sinusitis, neoplasms, cerebrospinal fluid (CSF) leaks, and mucoceles. Successful postoperative healing and long-term surgical outcomes depend significantly on effective mucosal reconstruction. While both free mucosal grafts and local flaps have been utilized, the optimal reconstruction technique remains a subject of debate. This systematic review aims to establish robust evidence regarding the efficacy of mucosal reconstruction in frontal sinusotomy. Additionally, it seeks to determine the impact of different surgical techniques on post-operative outcomes.

Methods: A comprehensive literature review was conducted, including studies published over a 12-year period (2011–2023). A total of 239 patients met the inclusion criteria. The primary indications for surgery included chronic sinusitis, tumors (e.g., inverted papilloma, osteoma), cerebrospinal fluid (CSF) rhinorrhea, and mucoceles. An initial search yielded 163 studies, with no duplicates. After screening, 147 studies were deemed irrelevant, and 14 underwent further evaluation. The distribution of studies across databases was as follows: PubMed (90), SCOPUS (13), Cochrane Library (40), and Web of Science (20).

Results: A single-arm meta-analysis was performed using R software. Between-study heterogeneity was assessed, and a fixed-effect model meta-analysis was conducted if the Cochrane Q test indicated p>.1. Additionally, a univariate meta-regression analysis was performed to examine the influence of various covariates on the surgical success rate.

Conclusion: Our review suggests that free mucosal grafting is a more viable approach than local flap techniques for mucosal reconstruction in frontal sinusotomy. The most commonly utilized donor site was the septal mucosa harvested during septectomy. Importantly, the use of free mucosal grafts does not impose additional limitations on the surgical field, making it a practical and effective option in frontal sinus reconstruction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4542

Intra-Nasal Asymmetry in Healthy Adults: A Computational Analysis of Anatomy and Function

Dennis Frank-Ito[1]

[1]*Duke University Medical Center, North Carolina, USA*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: The human nasal cavity exhibits natural intra-individual anatomical variations, such as the nasal cycle and nasal vestibule notching, which can create significant left-right asymmetry in size of anatomy and nasal airflow. This study quantifies intra-nasal asymmetry in anatomy and function among individuals with healthy nasal airways.

Methods: Computed tomography scans from 32 adults (12 males, 20 females) with normal nasal cavities were used to generate subject-specific airway models. Computational fluid dynamics (CFD) simulations were conducted at a steady inspiratory flow rate of 15 L/min to assess airflow and heat transfer. Intra-individual differences in nasal cavity surface area, volume, and airflow parameters were analyzed using one-sample t-tests, with 95% confidence intervals (CI) and effect sizes calculated using Cohen's d.

Results: The mean (±Standard Deviation) Nasal Obstruction Symptom Evaluation (NOSE) score was 10±13. Intra-nasal differences were observed in surface area (4.05±4.78 cm^2, CI: [2.32, 5.77], $p<0.001$, Cohen's $d=0.85$) and volume (2.41±1.96 cm^3, CI: [1.70, 3.12], $p<0.001$, Cohen's $d=1.23$). Intra-nasal airflow asymmetry was 3.78±2.61 L/min (CI: [2.85, 4.72], $p<0.001$, $d=1.45$), nasal resistance difference was 0.079±0.12 Pa·s/mL (CI: [0.036, 0.122], $p<0.001$, Cohen's $d=0.67$), and mucosal heat flux variation was 58.65±47.67 W/m^2 (CI: [41.46, 75.84], $p<0.001$, Cohen's $d=1.23$).

Conclusion: Results demonstrate statistically significant intra-individual differences in nasal cavity measurements, with large effect sizes across all computed parameters. Thus, suggesting that the typical healthy nasal airways are often inherently asymmetric.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4543

Function Of The Anterior Superior Alveolar Nerve In Lateral Nasal Wall Surgery - Preliminary Results Of A Prospective Study

Andre Machado[1], HansRudolf Briner[2], Miguel Castelo Branco[3], Daniel Simmen[2]

[1]ULSTMAD; FCS-UBI, *[2]ORL-Zentrum*, *[3]FCS-UBI*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Lateral nasal wall surgery can impact the anterior superior alveolar nerve (ASAN), leading to sensory disturbances such as numbness of the teeth, gum hypoesthesia, and facial paresthesia. Despite its clinical relevance, standardized methods for evaluating ASAN function postoperatively are lacking. This innovative prospective study systematically assesses ASAN function following different lateral nasal wall procedures, including prelacrimal window approach, piriform turbinoplasty, and medial maxillectomy.

Materials & Methods: This prospective study included 37 patients undergoing one of the mentioned lateral nasal wall surgeries. Ethical approval was obtained (2022-01080), and only routine health-related data were collected. Sensory function was evaluated at 1 week, 1 month and 3 months, through:1. A standardized questionnaire assessing subjective sensory complaints (numbness, hypoesthesia, and paresthesia) scored from 0 to 10.2. Objective monofilament testing, using forces 300, 4, 2, 0.4, and 0.07 g/mm², to measure sensory thresholds at the incisor/canine region and a control area.3. Nasal endoscopy to assess mucosal healing and crusting.

Results: This study provides new insights into ASAN function after different surgical approaches. Most patients experienced progressive symptom resolution, with a significant decrease in sensory complaints by Week 12. Early postoperative disturbances were common, particularly in procedures involving more extensive lateral nasal wall dissection, but improved over time.

Conclusions: This is one of the first studies to systematically assess ASAN function following lateral nasal wall surgery using a structured and reproducible protocol. The findings suggest that surgical extent influences ASAN recovery, with more invasive approaches showing longer recovery times. These results contribute to a better understanding of nerve healing patterns, potentially guiding surgical planning and patient counseling. Further research with a larger cohort is warranted.



4533

Endoscopic trans-pyriform aperture approach for anterior maxillary sinus lesions ; a novel technique as a modification of endoscopic modified Denker's approach

Mohamed Morsy[1]

[1]*Sandwell and West Birmingham NHS trust*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

@font-face{ font-family:"Times New Roman"; } @font-face{ font-family:"宋体"; } @font-face{ font-family:"Calibri"; } @font-face{ font-family:"SimSun"; } p.MsoNormal{ mso-style-name:Normal; mso-style-parent:""; margin:0pt; margin-bottom:.0001pt; font-family:Calibri; mso-fareast-font-family:SimSun; mso-bidi-font-family:'Times New Roman'; } span.msoIns{ mso-style-type:export-only; mso-style-name:""; text-decoration:underline; text-underline:single; color:blue; } span.msoDel{ mso-style-type:export-only; mso-style-name:""; text-decoration:line-through; color:red; } } div.Section0{page:Section0;}Modified endoscopic Denker’s procedure has been described to allow access of the difficult areas of the maxillary sinus, particularly its anterior wall and its far lateral wall, as it allows removal the pyriform aperture together with the medial and anterior maxillary walls [2].It is particularly useful in endoscopic resection of sinonasal tumors involving the maxillary sinus such as inverted papillomas or juvenile nasopharyngeal angiofibromas , and also for access of infratemporal fossa. However, this procedure might cause some morbidity such as cosmetic deformity, alar retraction, alar collapse , cheeck parathesia. The aim of this article is to describe a novel surgical technique as a modification of Modified endoscopic Denker’s procedure , by addressing the anterior wall of maxillary sinus through the pyriform crest itself , via minimally invasive technique with minimal access and a small bony wondow using simple non-powered intruments, and minimal morbidity while avoiding the complications of the Modified endoscopic Denker’s procedure, and ensuring addressing the site of origin of disease to prevent furthur recurrence. Endoscopic Trans-pyriform crest approach is used as a modification of endoscopic Modified Denker’s approach to address lesions in the anterior wall of the maxillary sinus. It is a minimally invasive technique with minimal morbidirty and less complications and speedy recovery, with preservation of function and nasal anatomy ,using readily availble simple instruments. The authors recommend this teqchnique for recurrent antrochoanal polyp , fungal debris in the anterior wall of maxillary sinus as well as for inverted papillomas not involving the nasolacrimal duct. @font-face{ font-family:"Times New Roman"; } @font-face{ font-family:"宋体"; } @font-face{ font-family:"Calibri"; } @font-face{ font-family:"SimSun"; } p.MsoNormal{ mso-style-name:Normal; mso-style-parent:""; margin:0pt; margin-bottom:.0001pt; font-family:Calibri; mso-fareast-font-family:SimSun; mso-bidi-font-family:'Times New Roman'; } span.msoIns{ mso-style-type:export-only; mso-style-name:""; text-decoration:underline; text-underline:single; color:blue; } span.msoDel{ mso-style-type:export-only; mso-style-name:""; text-decoration:line-through; color:red; } } div.Section0{page:Section0;}

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4019

Endotype characterization of chronic rhinosinusitis with nasal polyps and evaluation of response to treatment

Kaamil Gani[1], Catarina Morais[1], Beatriz Rodrigues[1], André Pereira[1], Joana Guincho[1], Carlota Sousa[1], Luís Castelhano[1], Filipe Correia[1], Mariana Donato[1], Rui Cabral[1], Rita Oliveira[2], Luís Roque Reis[1], Pedro Escada[1]

[1]Department of Otorhinolaryngology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, *[2]Department of Pathology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal*

Granulomatous Diseases of the Nose – CSF leaks; diagnosis and management – Rhinology – Miscellaneous 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: The emergence of biologic drugs revolutionized the treatment of chronic rhinosinusitis with nasal polyps (CRSwNP). With this event, the endotype characterization in patients with CRSwNP should be routinely performed. There is a lack of data regarding endotype characterization in CRSwNP in Portugal.The main objective of this study was to characterize the endotype of CRSwNP in a tertiary center in Portugal. Additionally, the response to treatment was evaluated.

Materials and Methods: Prospective clinical study, approved by Local Ethics Committee. Patients were included from February 2024 to February 2025. Type 2 endotype was defined by the presence of ≥ 10 tissue eosinophils/high power field, or blood eosinophils ≥150 U/L, or total IgE ≥100 IU/mL.Response to treatment was evaluated using SNOT-22, Lund-Kennedy score, peak nasal inspiratory flow (PNIF) and current clinical control for chronic rhinosinusitis from EPOS.

Results: Twenty-two patients were included (male gender 72.7%, mean age 51.2 years). Ten patients (45.5%) had comorbid asthma, and 2 patients (9.1%) aspirin-exacerbated respiratory disease. A predominance of type 2 endotype was observed in 20 patients (90.9%).Preoperative SNOT-22 score improved from 53 to 13 at 6 months, Lund-Kennedy from 8.5 to 2 at 6 months and PNIF from 77.5 to 125 at 6 months. A positive statistically significant correlation (p=0.024) was found between serum eosinophils and preoperative SNOT-22.

Conclusion: This study demonstrated a predominance of type 2 endotype in CRSwNP in our center. To our knowledge, this is the first study evaluating the endotype of CRSwNP in a tertiary center in Portugal.



Epistaxis and HHT 2

3873

Elevated FVIII levels in hereditary hemorrhagic telangiectasia: Implications for clinical management

Ole Jakob Jørgensen[1], Sinan Dheyauldeen[1], Johan Steineger[1]
[1]*Oslo University Hospital*

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Hereditary hemorrhagic telangiectasia (HHT) is a vascular disorder characterized by recurrent epistaxis. Research suggests an increased prevalence of thromboembolic events (TE) in HHT, with elevated factor VIII (FVIII) as a contributing factor. Limited research has explored FVIII's role in TE risk among HHT patients, warranting further study. This study examines TE prevalence in Norwegian HHT patients and its relationship with FVIII levels.

Materials and Methods: HHT patients from Oslo University Hospital (April 2021–November 2022) were included consecutively. Clinical histories and blood samples (FVIII, FIX, vWF, hemoglobin, ferritin, CRP) were analyzed, and risk factors were identified using logistic regression analysis. FVIII levels were measured consecutively in a subset of patients to assess fluctuations.

Results: A total of 134 HHT patients were included. Thromboembolic events occurred in 23.1%, exceeding general rates. FVIII> IU/dL was observed in 68.3% of patients and showed a significant association with TE. Among those with elevated FVIII, 33% experienced TE. Of the 51 patients with repeated FVIII measurements, 25% fluctuated above and below 150 IU/dL. Age significantly correlated with TE, while iron and hemoglobin levels did not.

Conclusions: Norwegian HHT patients have a high prevalence of TE, significantly associated with elevated FVIII levels. FVIII variability underscores the need for repeated measurements. Regular FVIII monitoring may enhance TE risk assessment and anticoagulation management in HHT patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3853

Reviewing the efficiency of the initial work-up for hereditary haemorrhagic telangiectasia in a tertiary referral university centrer

Florence Rogister[1], Clément Palm[1], Anne-Lise Poirrier[1], Jo Caers[2], Séverine Camby[1], Philippe Lefebvre[1]
[1]University Hospital of Liège

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

INTRODUCTION: There are few referral centers for HHT in Europe and the disease is often under-reported in our regions. The primary aim of this study is to describe the clinical characteristics of patients with HHT, in particular the prevalence of vascular malformations (VM). Secondary objective is to describe associations between VM work-up and anemia.

MATERIAL AND METHODS: We performed a retrospective analysis of 118 patients treated at our center between 2015 and 2024. We analyzed documented VM and correlation with genetic work-up, prevalence of epistaxis and referral of patients to specialist ENT services. We studied the correlation between anemia and different clinical parameters.

RESULTS: The results confirm the dominance of epistaxis among the documented symptoms and the correlation with anemia. The same was true for age and presence of digestive malformations. Only 55% of patients with epistaxis were referred to an otorhinolaryngologist. Majority of patients (65%) had documented multisystem involvement of at least two organs. However, liver malformations were not documented in 41% of cases and lung malformations in 31% of cases. In our cohort, 61% of patients underwent genetic analysis (80% ENG and/or ACVRL1). However, there was no significant association between genetic and multisystem work-up.

CONCLUSIONS: We highlight the importance of epistaxis as a cardinal symptom in the management of HHT. We also highlight gaps that could lead to future improvements, such as systematic referral of patients with epistaxis to ENT and improved coordination of care. Further longitudinal studies would allow us to assess the impact of improved pathways.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3933

Septal perforation closure in patients with hereditary hemorrhagic telangiectasia

Stephen Bansberg[1], Devyani Lal[1], Amar Miglani[1]
[1]*Department of Otolaryngology-Head & Neck Surgery*

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: A septal perforation in the patient with hereditary hemorrhagic telangiectasia (HHT) can increase nasal symptom burden to further impact quality of life. Perforation repair with symptom outcomes have not been reported in HHT patients.

Case Study: This case series examines HHT patients with septal perforations who underwent bilateral mucosal flap repair, with a minimum follow-up period of six months. Outcome measures included closure status, symptom outcomes using the NOSE-Perf scale, and quality of life change using the 5-Factor Glasgow Benefit Inventory (GBI-5F) at last follow-up.

Results: Four patients (3 males, aged 52–63 years) presented with primary symptoms of nasal crusting and epistaxis. Perforation lengths ranged from 1.2 to 2.1 cm. In three cases, surgery was staged following sodium tetradecyl sclerosing telangiectasia injections. Repairs utilized mucosal advancement and pedicled flaps, with sclerosing injections administered post-repair in three patients. At the last follow-up, complete closure was achieved in all cases. The mean NOSE-Perf score improved significantly from 25.3 (range: 23–27) preoperatively to 9.0 (range: 7–10) postoperatively (maximum score: 48). Additionally, all patients reported enhanced quality of life as measured by the GBI-5F.

Conclusion: Bilateral mucosal flap repair effectively achieves durable septal perforation closure in HHT patients, resulting in significant symptom relief and quality of life improvement. This approach also supports subsequent sclerotherapy with minimal risk of re-perforation.



3705

Embolization In Masive Epistaxis – Our Experience

Cristian Mircea Neagos[1], Adriana Neagos[1]
[1]*GEORGE EMIL PALADE University of Medicicne Pharmacy, Science and technology, otorhinologic Departement*

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

INTRODUCTION: Posterior epistaxis has its origin most often in the Woodruff plexus, which is located on the lateral wall of the nasal cavity, below the posterior end of the inferior nasalconcha (turbinate) and at any branches of the sphenopalatine artery. Posterior Epistaxis is more rare than anterior one, but is likely to require aggressive management. Severe refractory posterior epistaxis may require invasive treatment options such as transcatheter embolization.

MATERIAL AND METHODS: The embolization technique is a relatively new method approached in our clinic in the management of posterior epistaxis, with spectacular results in the medium and long term. We present several cases that benefited from embolization of the sphenopalatine artery to stop a nasal hemorrhage refractory to classical treatments with anterior and posterior nasal tamponade

Results: After embolization, the patients that we have embolized were supervised for 24 hours in the Neurosurgery department, without any bleeding after manual haemostasis, and transferred in the ENT clinic for gradual removal of the nasal packing. Nasal packing was completely removed after 2 daysof hospitalization, without any active bleeding. The patient was discharged after 7 days in good condition, with recommendations.

CONCLUSION: Masive posterior epistaxis can't always be stopped with nasal packing. Multidisciplinary approach must be considered for the best outcome.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3972

A review of current algorithms in severe epistaxis

Olga Romanova[1], Jean-Rene Milliet[1]
[1]*European Medical Center - medical school, Moscow*

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Background: Severe posterior nasal bleeding is a common emergency not only in ENT, but also in maxilla-facial, plastic and neurosurgeon practice. The identification of bleeding sites is still a problem. There is little consensus in the literature regarding treatment algorithm of epistaxis. The objective of this topic is to perform an analysis of literature to clarify diagnostic and treatment algorithms.

Methods: A review of the literature for severe epistaxis performed using the search systems eLIBRARY.ru, PubMed, Web of Science, Research Gate.

Results: 94 articles were reviewed. Comparison of different treatment strategies is provided from conservative, nonsurgical management to more aggressive surgical options on ethmoidal , sphenopalatine and septal arteries.

Conclusion: the treatment algorithm of epistaxis should be standardized and clear to all medical workers from office practitioners to emergency, hospital and surgical specialists. However personal history of the patient such as spontaneous, posttraumatic or postoperative anamnesis should be taken into account. Surgical (or/with embolization) plan with order of arteries to be ligated will be founded.



3976

Review: Variety of surgical approaches to ethmoidal and sphenopalatine artery systems in severe epistaxis

Olga Romanova[1], Marina Nersesyan[2]

[1]European Medical Center – medical school, [2]Peoples' Friendship University of Russia, Moscow

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Background: Severe epistaxis, or posterior nasal bleeding, is the most challenging problem for specialists, associated with life-threatening comorbidities. From all the patients with epistaxis only 2-6% need operations on big arteries. There are various surgical techniques and approaches described by different schools and authors. The number of cases in the publications is not big therefore each case makes its invaluable contribution to the world statistics. The objective of this topic is to perform a review of surgical technics and perform the comparison of various treatment options.

Methods: A review of the literature for severe epistaxis performed using the search systems eLIBRARY.ru, PubMed, Web of Science, Research Gate.

Results: 94 articles were reviewed. Comparison of different surgical maneuvers provided. According to analysis, there are six different technics and approaches to anterior ethmoidal artery (AEA): 1- endoscopical transcutaneous transorbital approach; 2- endoscopical transcaruncular approach; 3- endoscopical transc-conjunctiva/caruncular approach; 4- endoscopical endonasal transorbital approach; 5- endoscopical endonasal transethmoidal approach; 6- transcranial approach. There are three approaches to sphenopalatine artery (SPA) and branches are described.

Conclusion: each technique is good in the hands of professional. In our opinion, transorbital and transcaruncular approaches both have good visualization, are faster and easier to perform, especially in cases of emergency, show fewer complications compared with endonasal surgery on the ethmoid roof. Transcaruncular approach has a better esthetic result. SPA and PN artery ligation are modern and comfortable to perform, and have few complications.



4127

Pharyngo-laryngeal telangiectatic lesions in patients with Hereditary Hemorrhagic Telangiectasia.

Sveva Introini[1], Bogdan Nacu[1], Domenica Giunta[1], Roberto Sannasardo[1], Michele Demaria[1], Anna Ferrauto[1], Nicolò De Faveri[1], Andrea Zerilli[1], Fabio Sovardi[1], Fabio Giuseppe Pagella[1]

[1]*University of Pavia, Pavia, Italy; Department of Otorhinolaryngology, Fondazione I.R.C.C.S. Policlinico San Matteo, Pavia, Italy*

Epistaxis and HHT 2 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Background: Hereditary Hemorrhagic Telangiectasia (HHT) is a rare genetic disease, leading to abnormalities in the vascular epithelium. It usually presents with epithelial, nasal, oral mucocutaneous telangiectatic lesions, and visceral pulmonary, hepatic, cerebral arterio-venous malformations. Although multiple studies about these districts have been performed, the remnant portions of the upper airways have yet to be described. This study primary aim was to investigate for presence of telangiectatic lesions in the pharyngo-laryngeal district, describing their morphology, numerosity and localization. As secondary aim, symptoms associated with them and correlations between their presence and comorbidities were analyzed.

Methodology/Principal: : 60 patients with diagnosis of HHT underwent an ENT evaluation in IRCCS Policlinico San Matteo of Pavia between September 2023 and April 2024, comprehensive of pharyngolaryngeal district examination through a laryngoscopy with a rigid 70° endoscope.

Results: 31 patients presented pharyngo-laryngeal telangiectatic lesions (51.6%), most frequently localized on the epiglottis (41.6%). Lesions were asymptomatic. No correlation with other characteristics was found.

Conclusions: Pharyngo-laryngeal telangiectatic lesions are a common finding in HHT patients and the larynx is an additional district affected by this disease. Fortunately, these lesions seem to be asymptomatic.



Pituitary & Orbital Surgery

4109

Endoscopic assisted probing for symptomatic congenital nasolacrimal duct obstruction after one year of age

Sevki Elmoursi
Al-Mansoura University - Alshaheen center

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Purpose: When probing treatment for congenital nasolacrimal duct obstruction fails, it is often unclear whether it is due to technical difficulties or the severity of obstruction. Therefore our aim was to study the causes of probing failure and how to treat them.

Method: In a prospective study, 36 lacrimal systems of 26 children aged 12 months to 4 years with congenital nasolacrimal duct obstruction (CNLDO) were treated by probing. In all child- ren probing was done under direct vision using nasal endoscopy. Different forms of CNLDO were treated and studied to determine the potential predictors for treatment failure.

Results: The overall success rate was 94.5 %. Expected failure was attributed mainly to the construction of different forms of membranous penetration on probing. Surgical membranoto- my at the area of Hasner's valve under direct nasal endoscopic visualization is an essential step for proper management of CNLDO.

Conclusions: Nasolacrimal duct probing under direct nasal endoscopic visualization can be considered as the standard treatment of CNLDO as it minimizes intranasal trauma and leads to a better surgical outcome



3919

Combined endonasal and transorbital approach to inverted papilloma with orbital extension

Navdeep Bhamra[1], Karamveer Narang[1], Keshav Gupta[1], Karan Jolly[1]
[1]*University Hospitals Birmingham NHS Trust*

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Inverted papilloma are rare sinonasal tumours characterized by a high rate of recurrence, potential for local destruction, and significant risk of malignant transformation. We present the case of a 25-year-old male with chronic right-sided proptosis and hypoglobus secondary to a right sinonasal tumour extending into the superior orbit and associated with a supraorbital-ethmoidal mucocele. MRI imaging and biopsy confirmed an inverted papilloma in the anterior ethmoids extending into the orbit. The patient had previous endoscopic sinus surgery with an osteoplastic flap to drain the mucocele and excise the inverted papilloma. Three months post-operatively, he developed recurrent proptosis, suggestive of formation of the mucocele with associated recurrent inverted papilloma in the ethmoids and orbit. A revision combined endonasal and transorbital endoscopic approach was used to drain the mucocele and excise the recurrent inverted papilloma. Despite this, recurrent right proptosis occurred three weeks later, necessitating further combined endonasal/transorbital mucocele drainage and insertion of an orbito-ethmoid stent. The stent was removed after 8 weeks in the outpatient clinic. The patient remained asymptomatic with no evidence of recurrent proptosis. Follow-up MRI at six months post-operation showed no recurrence of disease or redevelopment of the mucocele. The patient is now 18 months post -surgery and disease free with no recurrent collection. This case highlights the approach to managing a large orbital inverted papilloma with severe dysplasia, utilizing a combined endonasal/transorbital technique and orbito-ethmoid stent. Although technically challenging, we advocate for this multi-approach strategy to achieve more thorough visualization and clearance of the tumour, potentially resulting in improved patient outcomes and reduced risk of recurrence and subsequent surgeries.



4534

How we do it: Revision Endoscopic Pituitary Surgery using Coblation

Mohamed Morsy
Sheffield Teaching Hospitals

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Revision pituitary surgery may be difficult due to loss of landmarks as well as scarring and adhesions in the nasal cavities, sphenoid sinuses and sella areas. Dense fibrous scar tissue around the sphenoidotomy may be problematic to remove, even when using cauterising microdebriders and conventional instruments. In addition, identifying the edge of the previously created bony sella window is often difficult due to scarring. We routinely perform a CT scan of the paranasal sinuses before transnasal pituitary surgery. In revision cases the scan helps identify the areas where the sphenoidotomy needs to be widened and also shows the bony sella opening and where more sella bone may need to be removed to access residual tumour. The CT also confirms the parasellar components of the carotid arteries are covered by bone with no dehiscences. The Coblation radiofrequency device (Procise Tonsillectomy wand by SmithNephewplc) effectively, efficiently and haemostatically removes any adhesions or scar tissue that may be restricting access into the sphenoid sinus. Coblation can then be applied to the sella region so long as there is no dehiscence over the carotid arteries; starting in the midline on to sella bone, inferior to the sella bony window, to remove soft tissue to delineate the bony sella window edge. The coblation is then continued around the bony sella window edge to clearly delineate the whole bony window edge efficiently with minimal bleeding. Further sella bone can be removed with Kerrison punches and the sella dura incised as usual to access the residual tumour. We advocate the use of the Coblation device in revision pituitary surgery.



4279

Functioning adenoma with cavernous invasion - managing cavernous sinus disease as new faculty

Salman Ali[1], Kenneth Byrd[1]
[1]*Medical College of Georgia at Augusta University*

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: Functioning adenomas present significant surgical challenge specially when they invade into the cavernous sinus. Safe tumor resection from cavernous sinus is critical in achieving biochemical remission.

Methods: A retrospective analysis of the cases performed by the author in 1st 6 months of faculty position and 6 cases of functioning adenomas with cavernous invasion were identified. Two case examples are shown above.

Results: 1st patient (Fig. A-D) was a 42yr old female presenting with acromegaly. A giant macroadenoma with possible cavernous sinus wall invasion was identified. An expanded endoscopic endonasal approach (EEA) was adopted. Fig. B shows a two suction technique for tumor resection along the walls of the cavernous sinus. Although the cavernous wall was found to be intact without any obvious breakthrough or invasion, it is well established that growth hormone secreting adenomas tend to invade the cavernous sinus wall microscopically. Therefore, it was decided to resect the medial cavernous wall on both sides and were found to be positive for tumor histologically. Patient tolerated the procedure well with excellent post-op biochemical response. No CSF leak was identified and she was discharged from the hospital on Post-op day 2. 2nd patient (Fig. E-G) was a 45yr old female who presented with Cushings and found to have an adenoma involving the left superior, inferior and medial compartment of cavernous sinus. Again an expanded EEA was adopted. Contrary to first example, the tumor had grossly invaded through the cavernous wall. Using a two suction technique, tumor was meticulously removed from all compartments of cavernous sinus along the carotid artery. Gross total resection was obtained. Patient tolerated the procedure very well and is in remission.

Conclusion: Cavernous sinus invasion can be safely handled as new faculty. Prior fellowship experience with such cases and extensive cadaveric dissections are critical to success.



4280

Optic apparatus compression from excessive suprasellar packing - clinical presentation, imaging review and operative video

Salman Ali[1], Kenneth Byrd[1]
[1]*Medical College of Georgia at Augusta University*

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: Pituitary surgery can have serious complications. Proper management of pituitary adenomas requires extensive specialized training and should only be performed in high volume academic centers.

Case Report: A 22yr old female presented at a community hospital with headaches and worsening vision. She was found to have pituitary apoplexy. She was taken to the operating room and tumor removed via endoscopic endonasal approach (EEA). CSF leak was encountered. Dural substitute and gel foam were used for repair. Patient woke up with complete vision loss in left eye and severely restricted vision in the right eye. Patient was discharged until she presented to our facility with worsening vision in the right eye. Imaging demonstrated a heterogeneously enhancing lesion in the suprasellar space compressing the optic apparatus. She was taken to the operating for EEA for optic decompression. No residual tumor was identified but excessive packing material was identified in the suprasella space. This was sharply dissected and removed in a piecemeal fashion. Unfortunately, both sphenopalatine arteries were sacrificed during the first surgery, therefore naso-septal flap could not be raised. Abdominal fat was used in the suprasellar space. An external ventricular drain was placed for 3 days. She was discharged home without any complications. 3 months post-op, vision improvement was noted in the right eye.

Conclusion: Pituitary surgery requires specialty trained skull base surgeons for proper management. Care must be taken not to overpack the suprasellar space. If progressive vision loss is noted, urgent imaging should be obtained to rule out optic apparatus compression.







4536

The feasibility of endoscopic trans-sphenoidal pituitary surgery through a single sided dominant sphenoid sinus: a technical note in a case series

Morsy Mohamed
Sheffield Teaching Hospitals

Pituitary & Orbital Surgery | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Anatomical variants are commonly encountered in the sphenoid sinus that would affect endoscopic trans-sphenoidal pituitary surgery. The intersphenoid sinus septum might be attached laterally dividing the sphenoid sinus into a larger dominant and a smaller contralateral non-dominant sphenoid sinuses. In case of a large dominant sphenoid sinus, surgery could be attempted through this dominant sphenoid sinus without the need to drill the intersphenoid sinus septum or open the contralateral non-dominant sphenoid as this is not likely to add much benefit in terms of surgical access and exposure. This will also help save the operative time and reduce the potential risk of injury to ICA to which intersphenoid sinus could be attached. This article presents a case series of 3 cases operated through this approach and discusses the radiological criteria required to achieve this approach successfully. @font-face{ font-family:"Times New Roman"; } @font-face{ font-family:"宋体"; } @font-face{ font-family:"Calibri"; } @font-face{ font-family:"Arial"; } p.MsoNormal{ mso-style-name:Normal; mso-style-parent:""; margin-bottom:8.0000pt; line-height:107%; font-family:Calibri; mso-bidi-font-family:Arial; font-size:11.0000pt; } span.msoIns{ mso-style-type:export-only; mso-style-name:""; text-decoration:underline; text-underline:single; color:blue; } span.msoDel{ mso-style-type:export-only; mso-style-name:""; text-decoration:line-through; color:red; } } div.Section0{page:Section0;}Careful reading and interpretation of both CT and MRI scans is required before attempting endoscopic trans-sphenoidal pituitary surgery. If the CT scan shows a wide dominant sphenoid, the feasibility of approaching this pituitary adenoma through this single sided dominant sphenoid needs to be assessed beforehand. Certain radiological criteria should be met in order to ensure satisfactory access to the pituitary adenoma.

First, the whole sella turcica should be confined to the side of the dominant sphenoid sinus.

Secondly, the intersphenoid sinus septum should be going laterally all the way through its vertical length from top to bottom without any medial inclinations or bulges that might hinder direct access to the sella through the dominant sphenoid. This could be easily reviewed by displaying the CT scan in a layout of 3 dimensional planes (axial, sagittal and coronal) to determine the full course of the intersphenoid sinus septum and to ensure it does not hinder the surgical access through the dominant sphenoid sinus (Fig 2).

Thirdly, there should not be any parasellar or suprasellar extension of the tumor on MRI scan, as this would require extended surgical access. In our case series of 3 cases where pituitary tumors were removed through a single sided dominant sphenoid, no limitation in access or restriction in the surgical corridor could be encountered as long as radiological criteria were met, and the surgical access and dissection was no more difficult compared the standard four-hand bi-nostril technique, where both sphenoid sinuses are opened. Working through one sphenoid sinus was found not to compromise the access as the sella is contained separately in the single sided dominant sphenoid sinus. In our series, if access was found to be compromised by the intersphenoid sinus septum, a decision would be made to drill it to enter the contralateral dominant sphenoid, but this has not been encountered in our 3 cases once the CT scans were carefully reviewed and the radiological criteria were met.

Conclusion: Variations in the size and symmetry of the two sphenoid sinuses are not uncommon radiological findings. The direction and configuration of the intersphenoid sinus septum affects the surgical access and exposure of pituitary tumors. Endoscopic trans-sphenoidal pituitary surgery could be done through a single sided dominant sphenoid providing that certain radiological criteria are met, without compromising the surgical access while safely removing the tumor in a shorter operative time and less risk of injury to ICA. @font-face{ font-family:"Times New Roman"; } @font-face{ font-family:"宋体"; } @font-face{ font-family:"Calibri"; } @font-face{ font-family:"Arial"; } p.MsoNormal{ mso-style-name:Normal; mso-style-parent:""; margin-bottom:8.0000pt; line-height:107%; font-family:Calibri; mso-bidi-font-family:Arial; font-size:11.0000pt; } span.msoIns{ mso-style-type:export-only; mso-style-name:""; text-decoration:underline; text-underline:single; color:blue; } span.msoDel{ mso-style-type:export-only; mso-style-name:""; text-decoration:line-through; color:red; } } div.Section0{page:Section0;}



CRS – Outcome Assessment 3

4032

Defining Mepolizumab biological criteria response in chronic rhinosinusitis with nasal polyps patients after two years of treatment

Domínguez Sosa María Sandra[1], María Sandra Domínguez Sosa[1], María Soledad Cabrera Ramírez[1], Miriam del Carmen Marrero Ramos[1], Carlos Cabrera López[2], Teresa Carrillo Díaz[3], Jesús Javier Benítez del Rosario[1], Delia Dávila Quintana[4], Angeles Mercedes Oviedo Santos[1]

[1]ENT Department, Hospital Universitario de Gran Canaria Dr. Negrín, Las Palmas de Gran Canaria, Spain., *[2]Pneumology Department, Hospital Universitario de Gran Canaria Dr. Negrín, Las Palmas de Gran Canaria, Spain.*, *[3]Medical and Surgical Service Department. Universidad de Las Palmas de Gran Canaria. Spain*, *[4]Quantitative Methods in Economics and Management Department, Universidad de Las Palmas de Gran Canaria*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) is a phenotype of Chronic Rhinosinusitis (CRS). Asthma and CRSwNP share pathophysiologic mechanisms, with interleukin-5 (IL-5) and eosinophil-driven inflammation playing important roles. Single-center retrospective observational study on severe CRSwNP patients treated with mepolizumab. We evaluated treatment response based on EPOS 2023 criteria: reduced nasal polyp score (NPS), reduced need for systemic corticosteroids (SC), improved quality of life, improved sense of smell, and decreased comorbidities. NPS, visual analogue scale (VAS) sinonasal outcome test (SNOT-22), asthma control test (ACT), total serum Ig E levels and blood eosinophil counts were assessed at baseline and after 6,12 and 24 months.84 CRSwNP and asthma comorbidity patients were included. After two years, all scores revealed significant improvement compared to baseline, with notable differences observed across various periods. Mepolizumab was shown to be effective in reducing NPS and here was a statistically significant reduction in VAS overall symptom score, VAS-smell, SNOT-22, ACT, total serum IgE and blood eosinophils at 6, 12 and 24 months compared to baseline: VAS: -2.2, -3.5 and -5.1 ($p < 0.001$ for all comparisons); VAS-smell: -2.5, -3 and -5.5; SNOT-22, -50, -55 and -56.5 ($p < 0.001$) and NPS: -2.5, -2 and -2.5 ($p < 0.001$). No statistically significant differences were detected in the median values of NPS, SNOT-22 or IgE between months 12 and 24. Mepolizumab improved nasal symptoms, including loss of smell and nasal obstruction. HRQoL also improved, as evidenced by an improvement in SNOT-22 scores that exceeded the threshold for clinically relevant improvement.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4397

Correlation of sino-nasal outcome test and nasal polyp score in dupilumab-treated chronic rhinosinusitis with nasal polyps

Tina Mauthe[1], Christian Meerwein[1], Fabio Ryser[2], Catrin Brühlmann[1], Ayla Yalamanoglu[3], Urs Steiner[2], Michael Soyka[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich, University of Zurich, Zurich, Switzerland, *[2]Department of Rheumatology and Immunology, University Hospital Bern, University of Bern, Bern, Switzerland*, *[3]Department of Immunology, University Hospital Zurich, University of Zurich, Zurich, Switzerland*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Background: The association between objective clinical metrics and patient-reported outcome measures (PROMs) in chronic rhinosinusitis with nasal polyps (CRSwNP) remains inadequately investigated. This study evaluated changes in Nasal Polyp Score (NPS) and Sino-Nasal Outcome Test (SNOT) scores in CRSwNP patients treated with dupilumab, with a focus on their correlation.

Methods: 69 patients underwent dupilumab therapy for six months. SNOT-20 German Adapted Version (GAV)/SNOT-22 scores were collected weekly, while NPS was assessed at baseline and at one, three, and six months. Correlation analyses utilized Spearman's rank correlation and linear regression modeling.

Results: Significant reductions in both NPS and SNOT scores were observed throughout treatment. While nasal subscores exhibited statistically significant correlations, absolute values showed only weak associations. However, relative changes in SNOT and NPS were strongly correlated, regardless of the time point. Stratified analysis by baseline NPS (8, 6, and 4) demonstrated inverse correlations ($r = -0.54$, $p = 0.01$; $r = -0.44$, $p < 0.001$; $r = -0.7$, $p < 0.001$). Regression modeling supported the predictive value of NPS reduction for relative SNOT score improvement.

Conclusion: Dupilumab significantly improved both objective and subjective CRSwNP outcomes. While absolute correlations between NPS and SNOT scores were limited, strong associations in relative changes suggest that response evaluation benefits from relative change analysis, likely due to interindividual variations in symptom perception.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4405

Improvement of Modified Lund-Kennedy endoscopic score in patient with severe type-2 chronic rhinosinusitis with nasal polyps (CRSwNP) treated with anti-IL4/IL-13 monoclonal antibodies related to the extent of previous endoscopic sinus surgery

Alessia Giorli[1], Mariella Scarano[1], Carla De Vita[1], Ernesto Pasquini[1]
[1]*Otolaryngology and Head and Neck Surgery Unit, Bellaria Hospital, Department of Specialist Surgery, AUSL Bologna, 40139, Bologna, Italy*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Background: Patients with CRSwNP uncontrolled by adequate medical and surgical therapy who are candidates for biological therapy are pheno- and endotyped with numerous assessments. Regarding endoscopic score, NPS is the mainly used parameter; however, alone it is not sufficient to describe endoscopic mucosal response to biological therapy. Modified Lund-Kennedy endoscopic score (MLKEs) describes thoroughly nasal mucosa inflammatory burden in terms of polyps, edema and secretions, and maintains a clinical relevance in guiding therapeutic choices. Our aim is to evaluate the trend of the LKE score in patients treated with Dupilumab and its possible correlation with previous endoscopic surgical therapy.

Materials and methods: Data were retrospectively collected from 106/145 patients in treatment with Dupilumab for CRSwNP in our center, regarding: pre-biologic ACCESS score, MLKEs at baseline (T0), at 3,6,12 months (T1,T2,T3). We then analyzed the trend of the MLKEs from T0 to T3 and subsequently evaluated the correlation between ACCESS and the decrease in MLKEs.

Results: Temporal trend was evaluated for polyps, edema, and secretions between T0 and T3 and to assess the role of ACCESS score on MLKEs. Linear regression showed that ACCESS has a significant effect on the variations of polyps ($R^2 = 0.26$, $p<0.0001$), edema ($R^2 = 0.17$, $p<0.0002$), and secretions ($R^2 = 0.30$, $p<0.0001$), with lower ACCESS moderately associated with a higher reduction in endoscopic parameters.

Conclusions: MLKEs is valuable for monitoring the response to biologic therapy for CRSwNP. In our experience, an adequate previous surgical treatment enhances higher control of nasal mucosa inflammatory burden.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4407

Obesity and Its Impact on Endoscopic Sinus Surgery Outcomes in Patients with Chronic Rhinosinusitis with Nasal Polyps

Hen Chaushu[1], Narin Nard Carmel Neiderman[1], Muhanna Nidal[1], Avraham Abergel[1], Yuval Presman[1]
[1]*Tel Aviv Sourasky Medical Center*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: The rising prevalence of obesity introduces challenges in surgical contexts, including endoscopic sinus surgery (ESS) for chronic rhinosinusitis with nasal polyps (CRSwNP). However, the impact of obesity on ESS outcomes remains underexplored. This study aims to evaluate the association between obesity and surgical complexity, operative duration, postoperative quality of life (QOL), in patients with CRSwNP undergoing ESS.

Materials and Methods: A retrospective analysis was conducted on 310 adult patients who underwent ESS for CRSwNP at a tertiary medical center between 2013 and 2023. Patients were categorized into two groups: non-obese (BMI <0 kg/m²) and obese (BMI ≥ 30 kg/m²). Outcomes assessed included operative time, postoperative complications, and QOL using the Sinonasal Outcome Test (SNOT-22).

Results: Of the 310 patients, 62 (20%) were obese. Obese patients had significantly higher preoperative Lund-Mackay scores (18.5 ± 4.7 vs. 16 ± 5.5, p = 0.036), longer operative durations (179 ± 61 vs. 162 ± 59 minutes, p = 0.034), and worse postoperative SNOT-22 scores (38 ± 26 vs. 24 ± 22, p = 0.041) compared to non-obese patients. They were also more likely to require prolonged oral steroid use (>3 months) (37% vs. 21%, p = 0.013) and biological treatments (21% vs. 8%, p = 0.01). No significant differences were observed in immediate postoperative complications or hospital stays.

Conclusion: Obesity prolongs ESS duration and negatively impacts postoperative QOL in patients with CRSwNP. These findings highlight the need for tailored preoperative planning and postoperative management strategies for obese patients undergoing ESS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4436

BEAMER: Development of a model for disease-agnostic adherence improvement – a multidisciplinary EU project integrating chronic rhinosinusitis (CRS)

Martin Wagenmann[1], **Nicole Sander**[1], **Beamer Beamer Consortium**[2], Kathrin Scheckenbach[1]

[1]University Clinic Düsseldorf, [2]Innovative Medicines Initiative (IMI), European Union Horizon 2020, EFPIA, Link2Trials

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Adherence defined as a practiced treatment consensus between health care providers (HCP) and patients is a key feature for successful treatment outcome. Nevertheless, lack of adherence is widespread, affecting any disease and leading to treatment failures, comorbidities, decreased quality of life and additional costs. For chronic rhinosinusitis (CRS) this phenomenon is well known and affects all treatments (medication, surgery, follow-up) and disease-related comorbidities (asthma, allergy etc.). Since such an overarching model does not exist yet, the BEAMER "Behavioral and Adherence Model for improving quality, health outcomes and cost-Effectiveness of healthcare" aims for a Minimum Viable Product (MVP) as a superordinated, disease-agnostic model to predict adherence. It would thus enable a transformation in the way stakeholders engage with patients with the goal to improve healthcare accessibility and sustainability. The BEAMER approach identified ten iterative steps starting with purpose definition, context/system conception, feature selection, model structure and performance criteria/techniques and resulting in conditional verification, quantification of uncertainty and model testing. The needs of all stakeholders (patients, HCPs, product development/commercialization) are respected in representative settings: immunology (CRS as a “signature disease”), oncology, cardiology, neurology, endocrinology, rare disease. Modelling was supported by modern statistical methods/machine learning. The resulting disease-agnostic BEAMER model enables stakeholders to identify 8 different patient groups with differing support needs through the application of a standardized questionnaire. Each subtype is connected to an advisory recommendation enabling direct interaction support. The BEAMER platform also offers accompanying digital support for a user-friendly implementation. Prospective validation includes CRS patients as a proof of principle.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4445

Nasalance and sinonasal volume changes in patients underwent Endoscopic Modified Lothrop Procedures (EMLP)

Ying-Piao Wang[1], Chia-Hsing Lin[1], Po-Kai Huang[1]

[1]Department of Otolaryngology Head and Neck Surgery, Mackay Memorial Hospital, Taipei, Taiwan, *[2]Chairman, Department of Otorhinolaryngology Head & Neck Surgery, Mackay Memorial Hospital, Taipei, Taiwan*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: The Endoscopic Modified Lothrop Procedure (EMLP) has been shown to significantly increase nasalance scores for both nasal and non-nasal sentences up to three months postoperatively. However, long-term outcomes remain unclear, and no study has simultaneously investigated changes in nasalance and sinonasal volume in patients undergoing EMLP.

Material & Methods: Sinonasal volumes were measured using a 3D model (3D Slicer image computing platform) from pre- and postoperative computed tomography (CT) scans in adult patients. Nasalance was assessed with the Nasometer II system before surgery and at least six months postoperatively. Changes in perioperative nasalance and sinonasal volume were analyzed, and the association between these variables was evaluated.

Results: A total of 27 participants completed the study. The mean preoperative nasalance score for nasal sentences was 58.2 ± 12.5, increasing to 66.5 ± 6.6 at least six months after EMLP ($p < 0.001$). For non-nasal sentences, the score increased from 21.8 ± 11 to 31.6 ± 11.9 ($p < 0.001$). Sinonasal volumes, including the frontal sinus volume (FV), maxillary sinus volume (MV), and ethmoid & nasal volume (ENV), significantly increased postoperatively, except for the sphenoid sinus. Among these, only ENV was significantly associated with nasalance scores for both nasal and non-nasal sentences.

Conclusions: EMLP leads to a sustained increase in nasalance scores for both nasal and non-nasal sentences beyond six months postoperatively. Sinonasal volumes, except for the sphenoid sinus, increased significantly after EMLP. ENV was the only parameter significantly associated with nasalance scores in both sentence types.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4451

Age-related subjective outcome and biological treatment need after surgery for chronic rhinosinusitis with nasal polyposis type 2.

Tareq Zoabi[1], Ramez Salameh[1], Forsan Jahshan[1]
[1] *Tel Aviv Souarsky Medical Center*

CRS – Outcome Assessment 3 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: Surgical and biological treatments are commonly employed to manage refractory chronic rhinosinusitis with nasal polyposis type 2 (CRSwNP2). However, there remains paucity of data on how these interventions impact different age groups. Our research seeks to determine whether there are subjective differences in postoperative outcomes across two age groups and to explore any discrepancies in the need for biological therapy following surgery.

Methods: A retrospective study at a tertiary center included patients who underwent functional endoscopic sinus surgery (FESS) for CRSwNP2. Patient demographics, clinical history, perioperative questionnaire (SNOT-22 & NOSE), systematic steroidal use and post-operative biological treatment were collected. A comparative analysis was conducted between two distinct age groups: individuals younger than 65 years (group A) and those 65 years or older (Group B).

Results: Sixty-five (n=65) patients were included, nineteen (29.2%) of which were equal or above 65 years (group B). Mean pre-op NOSE and SNOT-22 scores were 12.4 and 45.8, improving postoperatively to 6.8 and 26.6, respectively. The mean total follow-up was 21.6 months (SD = 11.9). Regarding comparative analysis – there was a statistical difference in pre-operative mean NPS score (2.33 and 3.05 in group A and B respectively, p= 0.018). No other statistical significance was observed in patient co-morbidities, major complications, differences in pre- and post-operative NOSE and SNOT22 scores, systematic steroidal or biological therapy used between the two groups.

Conclusion: According to our results, surgical intervention is a safe and effective in the elderly patients with no statistical difference in the subjective outcomes and the need for biological treatment between the two age groups.



Non-Allergic Rhinitis – Snoring and OSA 2

4439

Work-Related Rhinitis and Its Impact on Quality of Life and Work Productivity

Lok Yee Joyce Li[1], Cheng-Jung Wu[2]

[1]Department of Environment and Occupational Medicine, National Taiwan University Hospital Hsin-Chu Branch, [2]Department of Otolaryngology, Shuang Ho Hospital, Taipei Medical University, Taipei, Taiwan

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: The impact of work-related rhinitis on quality of life (QoL) and work productivity remains largely neglected/uncertain despite its high prevalence. This research is to investigate the association of work-related rhinitis with QoL and work productivity as compared with subjects with non-work-related rhinitis and those without rhinitis.

Methods: This cross-sectional survey was conducted among workers randomly recruited at the time of their periodic occupational health visit in our hospital. The survey instruments consisted of rhinitis-specific and generic questionnaires: Mini-Rhinitis QoL Questionnaire, Medical Outcome Study Short Form-8, and Work Productivity and Activity Impairment-General Health questionnaire. Eligible participants were categorized into 3 groups: non- work-related rhinitis (current nasal symptoms not related to work, n = 35); work-related rhinitis (current rhinitis with ≥2 nasal symptoms at work, n = 40); and controls (no nasal symptom; n = 50).

Results: Work-related rhinitis showed significantly lower scores in all domains of the Mini-Rhinitis QoL Questionnaire compared with non-WRR. Multivariate analysis confirmed that WRR exerted an independent adverse effect on rhinitis-specific QoL. Both WRR and non-WRR were associated with greater impairment in the physical and mental health components of the Medical Outcome Study Short Form-8 instrument and the overall work productivity compared with controls, whereas these outcomes were more impacted in WRR than non-WRR. Multivariate analyses demonstrated that both WRR and non-WRR had an independent adverse impact on the physical and mental health status and overall work productivity.

Conclusion: Work-related rhinitis should be managed comprehensively to reduce the worsening of QoL and work productivity of those affected.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3766

The Silent Impact of Nasal Surgery on Snoring: A Prospective Controlled Trial

Shiri Damti Geva[1], Tzuf Karin Bersudsky[1], Amani Daoud[1], Igor Yakubovich[1], Ohad Ronen[1], Uri Alkan[2], Tal Marshak [1]

[1] Galilee Medical Center- The Azrieli Faculty of Medicine Bar Ilan University, [2]Rabin Medical Center - Tel Aviv University

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: Snoring, a common condition in sleep-disordered breathing, is exacerbated by nasal obstruction, increasing airway resistance during sleep. Despite its prevalence, the relationship between nasal obstruction and snoring remains unclear. This study investigated the impact of nasal surgery on snoring using both subjective and objective tools, including the SnoreLab application.

Material and Methods: The study included patients aged ≥18 years who underwent septoplasty or inferior turbinoplasty for nasal obstruction (intervention group) and a control group without nasal obstruction or snoring complaints. Assessments were conducted pre-surgery, and at 1 and 3 months post-surgery for the intervention group, and at a single time point for the control group. Tools included the SnoreLab application, Pittsburgh Sleep Quality Index (PSQI), Nasal Obstruction Symptom Evaluation (NOSE), Snore Outcomes Survey (SOS), and Visual Analog Scales (VAS) for snoring and nasal obstruction.

Results: A total of 38 patients were included in both groups, with similar demographics. Three months post-surgery, the SnoreLab app showed significant reductions in snore score and snoring duration ($p < 0.05$). Improvements were also observed in uncomfortable breathing (PSQI), nasal breathing (NOSE), snoring (VAS, SOS), and nasal obstruction (VAS) ($p < 0.05$). Differences in questionnaire scores and SnoreLab parameters between the intervention and control groups (n=30) remained significant post-surgery but were reduced ($p<0.05$).

Conclusion: Nasal surgery for obstruction significantly reduces snoring severity and improves both subjective and objective snoring parameters. Further trials are needed to validate these findings and investigate long-term effects.



4129

Upper airway collapsibility during rapid eye movement sleep tracks the response to upper airway surgery for obstructive sleep apnea

Yungan Tsou[1]
[1]*China Medical University Hospital*

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: Endotype-based intervention has shown promise in treatment for patients with obstructive sleep apnea, and upper airway surgery is an important therapeutic option. However, the response to surgery varies among patients with obstructive sleep apnea. This study aims to examine changes in endotypic traits following upper airway surgery and their association with surgical outcome.

Methods: We prospectively recruited 25 patients with obstructive sleep apnea who visited a single sleep center for upper airway surgery and completed polysomnographic studies both before and following surgery. Endotypic traits during non-rapid eye movement and rapid eye movement sleep — including collapsibility (Vpassive), arousal threshold, loop gain, and upper airway compensation — were estimated using the Phenotyping Using Polysomnography method. Patients were classified as responders or non-responders based on improvements in the apnea-hypopnea index, and we compared pre-surgery endotypic traits between them using Mann-Whitney tests. Changes in pre- and post-surgery endotypic traits between responders and non-responders were compared using generalized linear mixed models.

Results: We identified 12 responders and 13 non-responders. Compared to non-responders, collapsibility during rapid eye movement sleep improved in responders (22.3 vs. - 8.2 %eupnea Vpassive, p = 0.01), and the arousal threshold decreased during non-rapid eye movement sleep in responders (-22.4 %eupnea, p = 0.02). No endotypic trait predicted surgical response, but AHI during rapid eye movement sleep was higher among responders than non-responders (51.8 vs. 34.4/h, p = 0.05).

Conclusions: Upper airway surgery significantly reduced collapsibility during rapid eye movement sleep among responders. The target pathology for upper airway surgery is a compromised upper airway during rapid eye movement sleep.



4134

Unveiling the Relationship: Epworth Sleepiness Scale and SNOT-22 Following Functional Nasal Surgery

João Tavares Correia[1], Francisco Alves Sousa[1], Rita Carvalho[1], Sofia Carvalho[1], Mariline Santos[1], Isabel Silva Carvalho[1]
[1]*Unidade Local de Saúde de Santo António*

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: Nasal obstruction significantly impacts airway resistance, playing a key role in the emergence of sleep-disordered breathing, including conditions like upper airway resistance syndrome and obstructive sleep apnea (OSA) in certain cases. In individuals with sleep-related breathing disorders, surgical intervention may be warranted upon identification of nasal obstruction. The primary objective of this study was to explore the correlation between changes in nasal-associated symptoms and sleep-associated symptoms following functional nasal surgery (septoplasty with inferior turbinate reduction).

Methods: Adult patients with nasal obstruction were evaluated. Preoperative and three-month postoperative SNOT-22 and Epworth Sleepiness Scale (ESS) results were recorded and analyzed. The values of ΔSNOT-22 and ΔESS were calculated by subtracting each patient's postoperative score from the preoperative score for the SNOT-22 and ESS, respectively.

Results: Twenty-seven patients were recruited and submitted to septoplasty combined with inferior turbinate reduction. Postoperative SNOT-22 scores significantly decreased at three months compared to preoperative scores ($p<0.001$), with a mean ΔSNOT-22 of 23.07±22.86. Additionally, postoperative ESS scores also significantly decreased at three months compared to preoperative scores ($p<0.001$), with a mean ΔESS of 2.85±4.40. Pearson correlation analysis revealed a significant correlation between ΔSNOT-22 and ΔESS three months postoperatively ($r=0.591$, $p=0.001$).

Conclusions: Patients who underwent functional nasal surgery experienced improvements in their SNOT-22 and ESS scores, indicating a positive impact on both nasal symptoms and sleep-related issues. Specifically, the enhanced SNOT-22 scores post-surgery associated with better ESS scores, suggesting a potential link between improvements in nasal function and sleep quality following the surgical intervention.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4233

Functional Fallout Of OSA: A Multivariable Approach With FOSQ-30

João Rainha Fernandes[1], Daniela Serras[1], Inês Delgado[1], João Barbosa[2], Constança Oom[1], Carlos Macor[1]

[1]Hospital Beatriz Ângelo, Otorhinolaryngology Department, Lisboa, Portugal, *[2]Hospital Beatriz Ângelo, Otorhinolaryngology Service, Lisboa, Portugal*

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

INTRODUCTION: Obstructive sleep apnea (OSA) is characterized by recurrent upper airway collapse during sleep, leading to sleep fragmentation and impact on daily function. We sought to determine if there was an association between the Functional Outcomes of Sleep Questionnaire-30 (FOSQ-30) and OSA severity measured by apnea/hypopnea index (AHI), VOTE score on drug-induced sleep endoscopy (DISE), Epworth Sleepiness Scale (ESS), Visual Analogue Scale for Snoring (VAS), body mass index (BMI) and cervical perimeter (CP).

MATERIAL/METHODS: We conducted a retrospective study of adults diagnosed with OSA via home sleep tests who underwent DISE from 2020-2025. Data collected included demographics, ESS, VAS-S, and FOSQ-30. Statistical analysis used Spearman correlation and Kruskal-Wallis tests, with significance set at $p<0.05$.

RESULTS: Of the 66 patients, 71% (n=47) were male. The mean age was 51.3±10.6 years, with a mean BMI of 28.4±3.4 kg/m2 and a mean AHI of 21,6±18.1 events/hour. Most patients had moderate OSA (52%,n=34). Higher ESS (r=-0.717,p<0.001) and VAS (r=-0.336,p=0.006) had a significant negative correlation with FOSQ-30. Despite not significant, oropharynx (O) collapse has a negative correlation with FOSQ-30 (r=-0,211 p=0,089). No correlations were found between FOSQ-30 and age, BMI, AHI, CP, other VOTE components.

CONCLUSIONS: The functional outcomes of OSA correlated with daytime sleepiness (ESS) and snoring intensity (VAS), while BMI and CP showed no correlation. There is a trend toward worse FOSQ-30 scores with O collapse. OSA severity had no significance on functional outcomes, establishing the importance of considering symptoms, not only AHI on the management of our patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4353

LEBEGLONE: a novel customized questionnaire evaluating the sleep-related experience of bed partners of patients treated by hypoglossal nerve stimulation for obstructive sleep apnea

Haralampos Gouveris[1], Christopher Seifen[1], Katharina Ludwig[1], Christian Ruckes[2], Christoph Matthias[1]

[1]Department of Otorhinolaryngology, University Medical Center Mainz , [2]Interdisciplinary Center for Clinical Trials, University Medical Center Mainz

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: In patients with moderate or severe obstructive sleep apnea (OSA) and intolerance to or non- acceptance of positive airway pressure (PAP) therapy, improvement in their respiratory outcomes, sleepiness and quality of life have been demonstrated after treatment with hypoglossal nerve stimulation (HGNS). Our aim was to evaluate the bed partners' sleep-related experience and sleep quality after HGNS therapy of PAP-intolerant OSA patients.

Materials and Methods: In a cross-sectional prospective study in a tertiary medical center, 33 consecutive bed partners of patients treated with a unilateral, respiratory-coupled HGNS device completed a 23-item custom-made questionnaire with questions that addressed the bed partner's sleep-related perceptions, satisfaction and experience with HGNS therapy.

Results: Bed partners reported that their own sleep quality was better (91 %) and their sexual partnership was equivalent in 69 % and better in 31% after HGNS treatment of the patients. Moreover, bed partners did not need to motivate the patients to use HGNS therapy (81.8 %), were satisfied with their partners' HGNS therapy (87.9 %) and would recommend HGNS therapy to others (81.8 %).

Conclusion: Bed partners of HGNS-implanted OSA patients perceive the HGNS therapy positively more often than not and they are quite often satisfied or very satisfied with this therapy. Given that several aspects of HGNS therapy for OSA may be experienced quite differently by the patients' bed partners, further research should evaluate the reasons for such discrepancies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4391

Evaluation of Systemic Inflammation Markers in Patients Undergoing Polysomnography for Sleep-Disordered Breathing

Burak Kaan İnan[1], Muhammed Güzel[3], Saim Pamuk[4], İbrahim Sayın[5], Zahide Mine Yazıcı[5]

[1]Otorhinolaryngology Resident at İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital, [2]Otorhinology Resident at İstanbul Bakırkoy Dr. Sadi Konuk Training and Research Hospital, [3]Otorhinology Resident at İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital, [4]Otorhinolaryngology Specialist at İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital, [5]Otorhinolaryngology Professor at İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital

Non-Allergic Rhinitis – Snoring and OSA 2 | ROOM 13 - G15 - Level +1 | Wednesday, June 25, 2025

Introduction: Obstructive Sleep Apnea Syndrome (OSAS) is linked to systemic inflammation, increasing cardiovascular and metabolic risks. This study examines the predictive role of the Systemic Inflammation Index (SII) and Systemic Inflammatory Response Index (SIRI) in patients undergoing polysomnography (PSG) for sleep-disordered breathing, stratified by Apnea-Hypopnea Index (AHI) and Oxygen Desaturation Index (ODI).

Materials and Methods: A total of 114 patients were stratified into four AHI groups: AHI ≥30 (n=26), AHI 15–29.9 (n=26), AHI 5–14.9 (n=26), and AHI <5 (non-OSAS, n=34). They were also classified into two ODI groups: ODI ≥10 (n=47) and ODI <0 (n=67). SII and SIRI values were derived from complete blood count parameters. Statistical analyses (NCSS 2007) included ANOVA and Student's t-test, with significance set at $p<0.05$.

Results: SII values increased with AHI severity: AHI ≥30 > AHI 15–29.9 > AHI 5–14.9 > AHI <5. A significant difference was observed only between AHI ≥30 and AHI <5 ($p=0.001$). Similarly, ODI ≥10 patients had significantly higher SII values than ODI <0 ($p=0.001$). SIRI values did not differ significantly across AHI or ODI groups ($p>0.05$).

Conclusion: SII may serve as a predictive marker of systemic inflammation in severe OSAS (AHI ≥30) and patients with significant hypoxia (ODI ≥10), aiding in identifying high-risk subgroups. In contrast, SIRI lacks predictive value. Further studies are needed to confirm SII's role in OSAS management and inflammation-related complications.



Nasal & Facial Trauma - Benign Nasal Tumor

3671

Exploring intercellular communication of ACC and characteristic of perineural invasion by integrating single-cell and spatial transcriptomics

Chen Zirong[1]
[1]*Xiangya Hospital Central South University*

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Abstract Adenoid cystic carcinoma (ACC) is a cancer characterized by inert growth but high susceptibility to perineural invasion (PNI). Current molecular characterization of ACC lacks depth, resolution, and accuracy, and the malignant cells and pathways that drive ACC onset, progression, and PNI have yet to be identified at the molecular level. In this study, a high-resolution molecular map of ACC cell subtypes and spatial communities is constructed via single-cell RNA sequencing (scRNA-seq) combined with spatial transcriptomics (ST). The neurotrophic signature of malignant cells may respond to crosstalk between tumors and nerves. By integrating spatial cellular and molecular profiles of PNI, it is found that myofibroblast CAFs (myCAFs) and immune regulatory CAFs (imCAFs) are always enriched in the PNI microenvironment and promote PNI progression as a potential functional player in the preinvasion of PNI ecosystem. The results of this study provide insight into the molecular and cellular mapping of ACC. These data serve as a resource for understanding ACC tumor progression, the relationship between PNI and the tumor microenvironment (TME), and precision therapies and research targeting this complex microenvironment, specific cellular phenotypes, and multicellular interactions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3989

Frontal sinus inverted papilloma - A systematic review on approaches and outcomes

Andre Sousa-Machado[1], Valentin Favier[3], Florent Carsuzaa[4], Paresh Naik[5], Maxime Fieux[6]

[1]ULSTMAD; FCS-UBI, [2]ULSTMAD; FCS-UBI; YO-IFOS, [3]Département d'ORL, chirurgie cervico faciale et maxillo-faciale, Hôpital Gui de Chauliac, CHU de Montpellier, Montpellier, France ; Research-team ICAR, Laboratory of Computer Science, Robotics and Microelectronics of Montpellier (LIRMM), Univ. Montpellier, French National Centre for Scientific Research (CNRS), Montpellier, France;, [4]Service ORL, Chirurgie Cervico-Maxillo-Faciale et Audiophonologie, Centre Hospitalier Universitaire de Poitiers, 86000 Poitiers, France ; Laboratoire Inflammation Tissus Epithéliaux et Cytokines (LITEC), UR15560, Université de Poitiers, 86000 Poitiers, France ;, [5]Jaslok Hospital & Research Centre, Pedder Road, Mumbai 400026, Maharashtra India, [6]Hospices Civils de Lyon, Centre Hospitalier Lyon Sud, Service d'ORL, d'otoneurochirurgie et de chirurgie cervico-faciale, France, Pierre Bénite cedex F-69495 ; Université de Lyon, Université Lyon 1, F-69003, Lyon, France ;

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction (Background and Aim): Sinonasal Inverted Papilloma (IP) is a rare benign neoplasm, constituting 0.5–4% of nasal sinus tumors, with a higher prevalence in males (3.4:1) and a mean age of onset at 55 years. Although benign, IPs exhibit local aggressiveness, with recurrence rates of 15-30% and a 7-9% risk of malignant transformation. Frontal sinus IP, comprising 2.5–5% of cases, poses significant surgical challenges due to anatomical constraints and higher recurrence rates. This systematic review, conducted by the Young – International Federation of Otorhinolaryngological Societies, aims to evaluate the efficacy of surgical interventions for frontal sinus IP.

Material and Methods: A systematic review was performed following PRISMA guidelines, analyzing eligible studies from 1960–2024. Data extraction focused on recurrence rates, symptom improvement, and quality-of-life outcomes. Preoperative imaging accuracy in identifying tumor pedicles using CT and MRI (74-90%) was assessed to evaluate its role in surgical planning.

Results: Endoscopic endonasal surgery is the preferred treatment modality, offering reduced morbidity and improved outcomes. However, complex cases may necessitate combined surgical approaches. The review highlights that recurrence rates remain significant despite advancements, underscoring the need for tailored surgical strategies.

Conclusion: Complete surgical excision, including tumor attachment, is essential to minimize recurrence. Robust preoperative evaluation, incorporating imaging, is crucial for surgical success. This study emphasizes the importance of individualized treatment approaches to optimize patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4277

Rhinotillexomania: Understanding the Clinical Implications of Nose Picking

Noémi Nogueira[1], Teresa Bernardo[1], Clara Lima[1], Joana Ferreira[1], Nuno Lousan[1]
[1]*Department of Otolaryngology – Head and Neck Surgery at Unidade Local de Saúde do Tâmega e Sousa*

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: Rhinotillexomania, or compulsive nose picking, is often overlooked but can lead to significant nasal pathology. While often regarded as a benign habit, chronic and severe cases may lead to complications such as recurrent epistaxis, septal perforation and extensive nasal structural damage. This report highlights the clinical implications of severe rhinotillexomania, emphasizing the importance of early diagnosis, multidisciplinary management and preventive strategies to mitigate its impact.

Methods: We present a case of advanced rhinotillexomania with severe nasal destruction. Clinical findings, diagnostic approach and management strategies are analyzed and the condition's pathophysiology, behavioral drivers and complications are reviewed.

Results: Severe rhinotillexomania can cause progressive nasal trauma requiring medical, behavioral and surgical interventions. We report a patient with sequelae of cerebellopontine angle meningioma excision, including trigeminal hypoesthesia, presenting with a saddle nose deformity with a right alar defect exposing the nasal vestibule. Rhinoscopy showed multiple crusts and a two-centimeter septal perforation with crusted margins. Biopsy revealed stratified squamous epithelium with superficial acanthosis and fibrogranulocytic exudate, with secondary infection by herpes simplex virus 1 and 2. Multidisciplinary care, including behavioral therapy to address compulsive tendencies and surgical repair in advanced cases, is essential to address both functional and structural complications.

Conclusions: Rhinotillexomania is an underdiagnosed condition with potential for significant morbidity. Awareness is crucial to prevent severe complications and improve patient outcomes. Further research is needed to better understand and manage this condition effectively.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4181

Sustainable ENT: creating and embedding a local anaesthetic fractured nose pathway

Huw Davies[1], Laura Burton[2], Victoria Evans[2], Anne-Marie Goggin[2], Sandeep Berry[2]

[1]Cardiff and Vale University Health Board, *[2]University Hospital of Wales*

Nasal & Facial Trauma - Benign Nasal Tumor | SYMPOSIUM 19 | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: The climate crisis is a healthcare crisis and action is needed. Healthcare contributes 4.6% of the total carbon footprint of the UK. ENT care includes around 900,000 GP referrals per year in England alone and surgery is proven to be one of the most resource intensive aspects of healthcare. During COVID we opportunistically implemented a local anaesthetic pathway to treat fractured noses, and analyzed the social, environmental and financial impacts of this on our department.

Methods: A hybrid method of carbon foot printing was used; top down and bottom up carbon footprint methods were used as appropriate. Finance data was used for financial impact assessment and informal patient / staff conversations combined with assumed social benefits were used to assess impact.

Results: Local anaesthetic manipulation of fractured noses compared to general anaesthetic saves £30,597.07 per year; the equivalent of £250 per procedure. This pathway produces carbon savings of 4608.8kgCO2e, the equivalent of 27,600km travelled in a diesel car. Our patients avoided a general anaesthetic and unnecessary delays, as well as reduced travel and sick days, whilst theatre and consultant time were also reduced (our advanced nurse practitioners ran this service). Staff report increased autonomy and enjoyment in work when performing this procedure.

Conclusions: Local anaesthetic fractured nose manipulation saves carbon, time and money. It is beneficial for our patients, staff and hospitals. We are currently working to spread and scale this change across all ENT departments in Wales.



4558

Features and Impact of ESS in Patients with Combat Trauma of the Facial and Cranial Skull in the Early and Late Post-Traumatic Period

Leylya Omerova[1]

[1]*Natioanal Military Medical Clinical Centr ""MMCH" ENT department*

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: The complex anatomy of the paranasal sinuses, involving multiple facial and cranial bones, makes them highly susceptible to trauma. Combat-related injuries often include metallic fragments, mucosal necrosis, and damage to adjacent structures such as the orbit, nasolacrimal pathways, and skull base. These injuries require timely surgical intervention to prevent secondary complications, including infections, cerebrospinal fluid leaks, and impaired sinus drainage. ESS and the endoscopic skull base approach are considered the gold standard for managing sinus trauma, providing a minimally invasive and effective treatment option.

Matetial, Methods : A total of 328 ESS procedures were performed in patients with sinus trauma. Of these, 185 were conducted in the early post-traumatic period, while 143 were performed six months or later. Patients were evaluated using LMK and SNOT-22 scores to assess functional outcomes.

Results: In cases with skull base defects and CSF leaks, 4 patients underwent extended ESS with defect reconstruction within the first 10 days after injury, demonstrating high success rates. 181 patients with sinus fractures, bone displacement, and non-responsive conservative therapy underwent ESS for drainage restoration and necrotic tissue removal, with RESS performed in 12 cases. For 112 patients with secondary post-traumatic rhinosinusitis, extensive scarring, impaired osteogenesis, polyp formation, and persistent sinus infections, ESS was performed, with 22 cases requiring mucosal flap reconstruction and 56 undergoing RESS due to severe mucosal changes.

Conclusions: ESS significantly improves LMK and SNOT-22 scores in both early and late trauma stages. Patients with chronic post-traumatic rhinosinusitis particularly benefit from ESS and RESS with mucosal flap reconstruction to restore sinus function and prevent long-term complications.



3650

Video Clinics for Nasal Bone Injuries in COVID times – Is it a valid tool for Routine Practice

Ved Narang[1], Megan McGlone[3], Nick Calder[4]

[1]1. St Helens & Knowsley NHS Trust, UK. 2. Delhi ENT Hospital & Research Centre, New Delhi, India 3. University Hospital Monklands & University Hospital, Wishaw, NHS Lanarkshire, UK 4. Nizwa Hospital, Ministry of Health, Oman, *[2]1. St Helens & Knowsley NHS Trust, UK 2. Delhi ENT Hospital & Research Centre, New Delhi, India 3. University Hospital Monklands & University Hospital Wishaw, NHS Lanarkshire 4. Nizwa Hospital, Ministry of Health, Oman*, *[3]University of Glasgow* , *[4]University Hospital Monklands, NHS Lanarkshire, UK*

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Background: We previously investigated and published the impact of video clinics on the management of closed nasal bone injuries during the COVID-19 pandemic. The aim of the previous study study was to assess the feasibility of managing patients at their homes or workplaces, with instructions to attend outpatient clinics the next working day if they suspected any deviation or reduced nasal airflow, for further evaluation.

Objectives: The objective of the present study (134 patients) was to compare the results of our previous research (42 patients) with the traditional, in-person nasal injury clinics, using the same criteria as in our prior investigation.

Methods: We analysed three months of pre-existing data from video clinics and collected six months of data from face-to-face clinics. We gathered information on the number of patients, categorized by age and gender, as well as records of missed appointments (DNAs) and the requirement for nasal manipulations. Data analysis was conducted using the Chi-Square test in SciPy Python 3.0. Results: Statistical analysis revealed no significant differences between the two groups concerning the number of patients with closed nasal bone injuries, both under and over 18 years of age (p-value - 0.961), the rate of missed appointments (p-value - 0.0734), and the need for fracture reduction (p-value - 0.0734).

Conclusion: Video clinics are as effective as traditional methods for managing suspected nasal bone injuries and need not be limited to emergencies. A balanced approach is recommended to account for the added costs of extra video appointments, which are avoided in traditional emergency settings.



4274

Frontal Sinus Fracture: A Minimally Invasive Innovative Technique

Mohsen Naraghi[1], Amirhossein Babaei[2]

[1]Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery, *[2]Rhinology Research Society*

Nasal & Facial Trauma - Benign Nasal Tumor | ROOM 8 - G3 - Level +1 | Wednesday, June 25, 2025

Introduction: several key techniques are utilized by surgeons for the management of isolated frontal sinus fractures. Conventional techniques allow for precise control over the alignment of the fracture and help restore the structural integrity and function of the frontal sinus. The major drawback of these time-consuming techniques is the relatively large visible incision. This article describes a novel technique for reconstructing a frontal sinus fracture that minimizes the risks associated with conventional approaches. The patient presented with a depressed frontal sinus fracture following a car accident. Surgical technique A 25-year-old male patient came to the ENT office four days after a car accident. Clinical examination showed depression of the forehead in the right supraorbital region. Through a small (5 mm) sub-brow incision, a freer elevator was placed under the fractured parts and pulled up. A 16-gauge venous catheter was inserted horizontally from the lateral part of the bone and brought out from the medial part of the bone. After that, a wire (gauge 24) was passed from the catheter, and then the catheter was removed. The same procedure was done vertically, and the same catheter was passed from the inferior to the superior portion. The same wire was placed. The ends of the wires were fixed to each other on 4 pieces of wooden tongue blade. Two months after surgery, the patient has an aesthetically perfect appearance, and the frontal bone contour is maintained without any functional disorders. Conclusion The surgery was successful, and the patient experienced significant improvement in symptoms following the procedure. The authors attribute the reconstruction's success to the technique's innovative nature and the careful planning and execution of the procedure.

In conclusion, this innovative procedure highlights the potential for creative solutions to complex clinical problems in facial reconstructive surgery. This article underscores the importance

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Smell and Taste 4

4473

Characteristics of Olfactory Dysfunction in an Underserved Community Using a Feasible Smell Test

Marcel Menon Miyake[1], Leticia Sayuri Yada[2], Vinicius Anibal Cardoso Pinto[2], Renan Barros Lima[2], Luiza H. Chuque Medina[2], Marlos Cortez Sampaio[1]

[1]Santa Casa de Misericórdia de São Paulo, Departamento de Otorrinolaringologia, São Paulo, SP, Brazil, *[2]Santa Casa de São Paulo School of Medical Sciences*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Population-based studies on olfactory dysfunction (OD) in underserved communities are limited, particularly in Brazil. Most studies rely on self-reported data, which poorly correlates with psychometric tests. This study aims to characterize the olfactory function of an underserved population in Brazil and compare self-reported evaluations with results from the novel Santa Casa Olfactory Test (SCOT).

Methods: Self-reported olfactory function was assessed using a visual analog scale (VAS). Participants with VAS scores below 8 underwent further evaluation with SCOT, which measures odor identification and threshold sensitivity on a scale from 0 to 10. A convenience sample of participants with VAS scores above 8 also took the SCOT.

Results: The mean VAS score for the population (n=511) was 8.79 (SD 1.96). OD prevalence based on VAS (<8) was 15.7%. Participants with VAS <8 had a significantly lower mean SCOT score (7.23, SD 2.54) than those with VAS ≥8 (8.97, SD 1.34, $p < 0.001$). The correlation between VAS and SCOT was weak ($R = 0.297$, $p < 0.001$). Hypertension was more common in participants with olfactory impairment (50% vs. 38%, $p = 0.04$), and older age was associated with lower SCOT scores.

Conclusions: This study found a 15.7% prevalence of olfactory dysfunction in an underserved Brazilian community, with significant associations to hypertension and aging. SCOT proved more accurate than VAS, highlighting the need for affordable, easy-to-use tests in underserved populations.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4224

Exploring the Link Between Olfactory Dysfunction and Cardiovascular Risk Factors

Carlota Sousa[1], Joana Guincho[1], Luís Baptista[1], Kaamil Gani[1], Filipe Correia[1], Mariana Donato[1], Pedro Escada[1]
[1]ENT department Unidade de Saude Local Lisboa Ocidental

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Cardiovascular diseases are highly prevalent. Previous studies have associated conditions such as dyslipidemia, stroke and heart failure with olfactory dysfunction (OD). However, findings remain inconsistent and the link between them is not fully understood.

Objective: To characterize the relationship between OD, cardiovascular risk factors (CVRFs) and overall cardiovascular risk (CVR).Methods: A retrospective study of patients ≥40 years old evaluated for OD between 2016 and 2024 in a tertiary center. CVRFs such as sex, age, systolic blood pressure, total and HDL cholesterol, body mass index, smoking status, and diabetes mellitus (DM) were assessed. Olfactory function was measured using Burghart Sniffin' Sticks® identification test. CVR score was estimated using SCORE2, SCORE2-OP (>70 years), and SCORE2-DM (diabetic). Analysis included a case-control study and subgroup analysis evaluating the correlation between the identification scores and the analyzed variables. The control group comprised individuals with similar demographic characteristics without subjective OD. Statistical analysis was performed using SPSS®.

Results: 119 patients were included (81 OD and 38 controls). Mean age was 61±11 years, 79 women. The case-control study revealed that patients with OD had significantly higher total cholesterol levels (p=0.042). A trend was observed suggesting a possible link between DM and lower identification scores (p=0.054). Subgroup analysis, excluding the patients with OD due to nasosinusal disease, a low identification score was associated with high CVR (p=0.031) and total cholesterol (p=0.044).

Conclusion: This is the first study to explore the relationship between CVR and OD in the Portuguese population. High CVR, DM and cholesterol levels might be causing olfactory nerve damage, decreasing olfactory function.



4258

Vitamin A and Retinoids for Olfactory Dysfunction: A Systematic Review

Kiran Joshi[1], Hesham Saleh[2], Dilen Parmar[1], Heide Mills[1]

[1]Northwick Park Hospital, London, UK, *[2]Imperial College London, UK*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Olfactory dysfunction significantly impacts quality of life. Vitamin A is essential for olfactory epithelium health, and its deficiency can impair olfaction. This systematic review investigates the efficacy and safety of vitamin A and retinoid analogues in treating olfactory dysfunction.

Methods: A comprehensive search of PubMed, Embase, Cochrane Library, and Web of Science was conducted. Randomized controlled trials, cohort, and case-control studies investigating vitamin A or retinoid analogue supplementation for olfactory dysfunction in adults were included. The primary outcome was the change in objective olfactory test scores. Risk of bias was assessed, and meta-analysis was performed where appropriate. The GRADE approach was used to assess the certainty of evidence.

Results: This systematic review synthesizes the best available evidence on the effects of vitamin A and retinoids on olfactory function. Findings regarding the efficacy and safety of these interventions will be presented, along with an evaluation of the overall certainty of evidence.

Conclusion: This review provides valuable insights into the potential role of vitamin A and retinoids in managing olfactory dysfunction, with implications for clinical practice and future research.



4351

Platelet-rich Plasma injections in patients with COVID-19 related olfactory dysfunction. Are really effective?

Konstantinos Garefis[1], Evangelia Tsakiropoulou[2], Iordanis Konstantinidis[2]

[1]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece, *[2]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Platelet-rich plasma (PRP) was recently introduced as a promising option for the treatment of post-infectious olfactory dysfunction. The aim of our study was to investigate the effect of PRP injections in the olfactory cleft of patients with persistent olfactory loss due to COVID-19 infection.

Material & Methods: 2 mL of PRP was injected in each olfactory cleft (1 mL at the septum and 1 mL at the middle turbinate) in 25 out of 35 recruited patients. All patients had not improved with oral steroids and olfactory training. The duration of olfactory dysfunction was> months. Twenty-two patients with similar demographics served as the control group. Patients were examined using the Sniffin' Sticks battery test (TDI score) and reported their subjective ratings on a visual analogue scale (VAS) at baseline, at one and three months after PRP injections.

Results: Anatomical limitations prevented 4 PRP injections in 10 patients, who were excluded. TDI and VAS scores improved after treatment in both groups. Six out of 25 patients (24%) treated with PRP and 2 out of 22 (9.1%) in the control group showed an improvement of 5.5 points in the TDI score, at three months, with 5 out of 6 treated with PRP improving by the first month. All improved patients were hyposmic. The percentage of improved patients did not differ significantly between the groups. No major complications were recorded.

Conclusion: Although PRP is a safe treatment with early detectable effects, its effectiveness in managing olfactory dysfunction caused by COVID-19 is relatively low.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4352

Effect of Septoplasty with or without Cauterization of Inferior Turbinates on Trigeminal Sensitivity

Konstantinos Garefis[1], Dimitrios Markou[3], Vasilios Nikolaidis[1], Angelos Chatziavramidis[1], Konstantinos Markou[1], Evangelia Tsakiropoulou[1], Iordanis Konstantinidis[1]

[1]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece, *[2]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece* , *[3]School of Electrical & Computer Engineering Aristotle University of Thessaloniki, Thessaloniki, Greece*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: The intranasal trigeminal system is responsible for the subjective perception of nasal airflow. Nasal septal deviation (NSD) with or without (w/wo) inferior turbinates hypertrophy (ITH) is a common cause of nasal obstruction. The aim of our study was to investigate the effect of septoplasty, w/wo cauterization of inferior turbinates, on trigeminal sensitivity.

Material & Methods: Intranasal trigeminal function was assessed in 51 patients with NSD (26 with ITH and 25 without ITH) scheduled for septoplasty, w/wo cauterization of inferior turbinates, at baseline and six months after surgery, along with 27 asymptomatic controls with similar NSD and 24 healthy controls. Testing included the lateralization test, trigeminal sticks test, and CO_2 pain threshold. Nasal obstruction was evaluated using 4-phase rhinomanometry and the NOSE questionnaire.

Results: CO_2 pain responsiveness, lateralization test scores, threshold and discrimination stick test scores were lower in patients at baseline assessment compared to the controls ($p<0.001$). Comparison of the deviated and non-deviated sides did not differ based on the CO_2 pain thresholds and lateralization test. Postoperatively, in patients with NSD without ITH, threshold and discrimination stick test scores improved ($p<0.01$, $p<0.05$). In addition, patients with NSD with ITH showed improvement in lateralization and threshold stick test scores ($p<0.01$). Nasal obstruction improved in patients postoperatively ($p<0.001$). However, 19.6% of patients did not report a subjective improvement according to the NOSE score.

Conclusion: Patients with NSD, w/wo ITH, had lower trigeminal sensitivity than controls before surgery. Septoplasty, w/wo cauterization of the inferior turbinates, seemed to have no negative effect on trigeminal sensitivity and likely improved it.





4560

Electrical trigeminal stimulation at the anterior nasal septum in healthy participants and patients with olfactory dysfunction.

Konstantinos Garefis[1], Susanne Weise[1], Pauline Hanslik[2], Coralie Mignot[2], Halina B. Stanley[3], Maxime Fieux[4], Camille Ferdenzi[3], Evangelia Tsakiropoulou[5], Clementine Lipp[6], Arnaud Bertsch[7], Moustafa Bensafi[3], Iordanis Konstantinidis[1], Hummel Thomas[2]

[1]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece., *[2]Smell & Taste Clinic, Department of Otolaryngology, Technische Universität Dresden, Dresden, Germany*, *[3]Université Claude Bernard Lyon 1, CNRS, INSERM, Centre de Recherche en Neurosciences de Lyon CRNL U1028 UMR5292, NEUROPOP, F-69500, Bron, France*, *[4]Hospices civils de Lyon, Hôpital Lyon Sud, Service d'ORL, d'otoneurochirurgie et de chirurgie cervico-faciale, F-69310, Pierre Bénite; Université de Lyon, Université Lyon 1, F-69003, Lyon; UMR 5305*, *[5]2nd Academic ORL, Head and Neck Surgery Department, Aristotle University of Thessaloniki, Papageorgiou Hospital, Thessaloniki, Greece*, *[6]5 École Polytechnique Fédérale de Lausanne EPFL-STI-IMT-LMIS1, Station 17, Lausanne CH-1015, Switzerland.* , *[7]École Polytechnique Fédérale de Lausanne EPFL-STI-IMT-LMIS1, Station 17, Lausanne CH-1015, Switzerland.*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: The intranasal trigeminal system contributes to the sense of smell. Its integrity in olfactory dysfunction (OD) may be crucial for future treatment options. This study aimed to assess trigeminal somatosensory sensitivity in healthy individuals and patients with OD of different etiologies using electrical stimulation of the nasal mucosa.

Methodology: Eighty-two participants were included: normosmics (n=28) and patients with OD (n=54), comprising 29 patients with post-viral OD (PVOD), 15 with post-traumatic OD (PTOD), and 10 with chronic rhinosinusitis with nasal polyps (SND). Olfactory function was assessed using the Sniffin' Sticks test battery, and trigeminal sensitivity was determined by measuring electrical stimulation thresholds at the anterior nasal septum.

Results: In all participants, age significantly affected the electrical threshold (ET), with older individuals exhibiting higher thresholds (p=0.012). Specifically, in normosmic individuals, there was a positive correlation between age and ET (p=0.02). PTOD patients had the highest ET compared to normosmic individuals (p=0.033). However, PVOD and SND patients showed no significant difference in ET compared to normosmics. Anosmic patients exhibited higher ET than both hyposmic (p=0.001) and normosmic individuals ($p < 0.001$), whereas hyposmic patients did not significantly differ from normosmics. Among age, etiology, and olfactory function, the latter appeared to be the most significant factor influencing ET ($p = 0.013$). Both healthy participants and patients rated the electrical stimulations similarly, describing them as moderately intense and mildly painful, with intensity and pain increasing as the stimulation current increased.

Conclusions: For the majority of patients with OD, intranasal somatosensory trigeminal function was preserved, particularly in hyposmic patients. PTOD patients had the lowest trigeminal sensitivity. keywords: Trigeminal, Olfaction, hyposmic, anosmic

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4339

Protocol for endoscopic sampling of human olfactory cleft mucosa in an outpatient setting

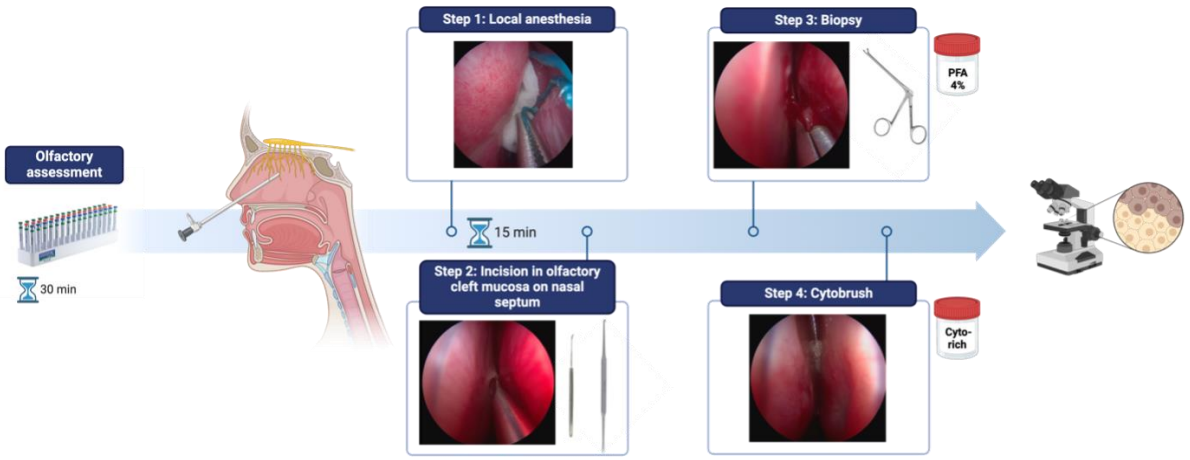
Julie van Waterschoot[1], Laura Van Gerven[1]
[1]*UZ Leuven*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Background: Olfactory dysfunction is one of the key symptoms of a Coronavirus Disease (COVID-19) infection, and although the pandemic is already some time behind us, the exact mechanism underlying this COVID-19-associated olfactory dysfunction (C19OD) remains unclear. One important explanation for this knowledge gap lies in the difficulty of identifying and hence sampling the olfactory mucosa for study purposes.

Objective: We present a protocol for harvesting olfactory cleft mucosa in an outpatient setting, as employed in the DysOSMIC study – a multicenter, prospective study including 240 patients, equally divided between those with and without persistent C19OD, across 6 international centers. To objectively assess olfactory function, we perform a validated psychophysical olfactory test, the Sniffin' Sticks, prior to and after tissue sampling. We aim to investigate C19OD by analyzing structural and cellular changes within the olfactory mucosa and correlating these findings with the degree of olfactory dysfunction. In this protocol paper, we describe a minimally invasive approach designed to optimize sample quality while preserving structural integrity. We provide a step-by-step guide for tissue sampling, outline the necessary instruments and detail the initial processing and storage of samples, along with the various techniques used for histomolecular analysis.

Conclusion: The pathophysiology of C19OD remains poorly understood. To address this, we developed a novel step-by-step study protocol to obtain high-quality olfactory cleft mucosa samples from patients with and without persistent C19OD. Our goal is to elucidate the underlying mechanism of C19OD through detailed histomolecular analysis.





4412

Assessing Nasal Obstruction and Olfactory Impairment in Unilateral Cleft Lip Nasal Deformity and Non-Cleft Individuals

Dennis Frank-Ito[1]
[1]*Duke University Medical Center*

Smell and Taste 4 | ROOM 9 - G6 - Level +1 | Wednesday, June 25, 2025

Introduction: Approximately 70% of individuals with unilateral cleft lip nasal deformity (uCLND) experience significant nasal airway obstruction (NAO), which also affects their sense of smell. It has been suggested that these individuals tend to underreport the severity of their nasal symptoms compared to non-cleft individuals with NAO. This study aims to assess the severity of NAO and olfactory dysfunction in individuals with uCLND and non-cleft NAO using both subjective and objective measures.

Methods: Data were collected from 10 uCLND and 10 non-cleft NAO subjects, including Nasal Obstruction Symptom Evaluation (NOSE) scores, anterior rhinomanometry measurements of bilateral nasal resistance, and University of Pennsylvania Smell Identification Test (UPSIT) scores. Group comparisons were performed using the Wilcoxon rank-sum test, with effect sizes calculated via rank-biserial correlation. Median and interquartile range (IQR) values were reported.

Results: The non-cleft NAO group comprised 7 males and 3 females, while the uCLND group included 6 males and 4 females. Median ages were 49.5 years (IQR=20.8) for the non-cleft NAO group and 18.0 years (IQR=0.8) for the uCLND group. NOSE scores were 75.0 (IQR=21.3) for non-cleft NAO and 57.5 (IQR=28.8) for uCLND (p-value=0.194, effect size=0.35). Nasal resistance values were 0.477 Pa·s/mL (IQR=0.594) for non-cleft NAO and 0.913 Pa·s/mL (IQR=1.130) for uCLND (p-value=0.112, effect size=-0.49). UPSIT scores were 33.0 (IQR=6.8) for non-cleft NAO and 30.0 (IQR 6.8) for uCLND (p-value=0.185, effect size=0.36).

Conclusion: Preliminary findings suggest that individuals with uCLND report lower NOSE scores despite experiencing higher nasal resistance and reduced olfactory function, as indicated by lower UPSIT scores.



CRS – Surgical Management 4

3857

Neuro-ophthalmic Indications of Rhinosinusitis and Other Sinonasal Pathologies : Case Series and Outcomes of the Endoscopic Sinonasal Surgery

Julide Kasaboglu[1], Todor Popov[2]

[1]Department of ENT-Head and Neck Surgery , University Hospital "Queen Joanna"-ISUL, Medical University-Sofia, [2]Department of ENT-Head and Neck Surgery, University Hospital"Queen Joanna"-ISUL, Medical University-Sofia,Sofia,Bulgaria

CRS – Surgical Management 4 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Background: The paranasal sinuses are located adjacent to the orbital structures, and separated by the orbital plate. Pathological conditions such as inflammation and tumors in the sinuses have the potential to extend into the orbital region, leading to symptoms like restricted ocular mobility and visual impairment, which can be critically severe. Materials: Retrospective case series of 5 consecutive patients (1-male and 4 female; age range 10-65 years).

Methods: Retrospective chart-review of all patients presenting with neuro-ophthalmic indications of acute and chronic rhinosinusitis and sinonasal undifferentiated carcinoma with a close analysis of the tempo of the disease and review of the treatment approaches with performed endoscopic sinonasal surgery ,including endoscopic orbital decompression and surgical resection, according to pathology and post-operative outcomes. Main outcome measures for the retrospective chart review were: Demographic data, background medical history (including predisposing factors), symptoms, signs, radiological findings, histopathological findings, treatment approach and subsequent clinical course were recorded and analyzed.

Results: The tempo was acute in three cases, chronic in one case, and malignant progression in one case. In all cases, patients underwent endoscopic sinonasal surgery ,endoscopic surgical resection and orbital decompression were also included, respectively in some cases.The treatment was followed by systemic antibiotics and the patient with sinonasal undifferentiated carcinoma had radiotherapy, post-operatively. Neuro-ophthalmic indications were totally recovered in all cases, including the malignant case.

Conclusion: The aim of our study is to present the case series of five patients with neuro-ophthalmic indications of rhinosinusitis and other sinonasal pathologies, the successful outcomes of endoscopic sinonasal surgery and the post-operative management.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4315

Perioperative Management in Nasal Surgery: An International Survey Among ENT Experts

Simone Di Giovanni[1], Lorenzo Sabatino[1], Francesco Iafrati[1], Manuele Casale[2], Antonio Moffa[1], Luigi De Benedetto[1], Marco Zaganelli[3]

[1]md of otolaryngology, policlinico campus bio medico di roma, [2]full professor of otolaryngology, policlinico campus bio medico di roma, [3]residente of otolaryngology, policlinico campus bio medico di roma

CRS – Surgical Management 4 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Nasal surgery presents significant challenges for surgeons in meeting patient expectations and managing the perioperative period, where balancing patient discomfort with the prevention of postoperative complications is essential. Traditionally, intranasal packing is used to reduce the risk of bleeding and septal hematoma, but its use is often associated with significant discomfort. In recent years, alternative solutions have emerged to enhance patient comfort. This study aims to evaluate different perioperative management strategies in nasal surgery through a survey conducted among international ENT experts.

Materials and Methods: An 18-question survey was designed to explore the perioperative management of nasal surgery patients. The survey was shared with 408 ENT specialists via a WhatsApp group, yielding 124 responses. The questionnaire covered surgical experience, preoperative CT scan use, suturing techniques, nasal packing practices, postoperative devices, and antibiotic prescriptions. Collected data were analyzed using descriptive statistics and Chi-square tests to assess significant associations between variables. Statistical analyses were performed using R software.

Results: The survey revealed considerable variability in perioperative practices. Only 43.5% of surgeons routinely used nasal packing, predominantly in functional septoplasty and rhinoseptoplasty procedures. There was no significant correlation between suturing techniques, the use of postoperative devices, and the incidence of complications. Regarding antibiotics, 65.3% of respondents reported prescribing postoperative antibiotic therapy, but no significant reduction in complications was observed. A significant association was found between the type of surgery and the request for preoperative CT scans, with a higher frequency in functional septoplasty and FESS procedures.

Conclusions: The survey highlighted a trend toward less invasive practices, with a reduction in nasal packing in favor

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4331

Extended endoscopic frontal sinus surgery in refractory frontal sinusitis: A systematic review

Ahmed Alsayed[1], Abdullah Alsheikh[2], Naif Alosaimi[3], Saad Alsaleh[2]

[1]Department of Otolaryngology-Head and Neck Surgery, King Abdullah Medical Complex, Jeddah, Saudi Arabia, *[2]Department of Otolaryngology-Head and Neck Surgery, College of Medicine, King Saud University, Riyadh, Saudi Arabia*, *[3]Department of Otolaryngology-Head and Neck Surgery, King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia*

CRS – Surgical Management 4 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Background: Chronic rhinosinusitis (CRS) is prevalent in many populations. Although many studies have assessed the efficacy of the Draf III and Draf IIb techniques in the management of CRS, they varied considerably in terms of the follow-up periods and scales used to assess postoperative symptoms.

Objective: To evaluate all relevant evidence on the efficacy of both procedures (Draf III and Draf IIb) in patients with CRS using a systematic review approach

Methods: On January 14, 2023, we searched five databases for relevant articles using the search string “("Draf II" OR "Draf 2" OR "Draf IIb" OR "Draf 2b" OR "Draf III" OR "endoscopic modified Lothrop" OR "modified Lothrop") AND ("sinusitis" OR "frontal sinusotomy" OR "frontal sinus").”

Results: A total of 14 studies were included. The Draf III procedure was used in 10 studies, the Draf IIb procedure in three studies, and the Draf III and Draf IIb procedures were compared in one study. Rates of revision surgery ranged from 0 to 25% after the Draf III procedure and from 0 to 10% after the Draf IIb procedure. Draf III and IIb were associated with significant reduction in Sino-Nasal Outcome Test [SNOT]-22 and SNOT-20 scores, respectively. Moreover, SNOT-22 scores were comparable between the Draf III and Draf IIb groups in one study. Both procedures resulted in significant improvements in the total CRS outcomes scores. Regarding frontal sinus patency, frontal stenosis and frontal obstruction were reported in 14% and 2% patients, respectively, in seven studies on Draf III. Frontal stenosis and obstruction were reported in 2% patients each in three studies on Draf IIb.

Conclusion: Both Draf III and Draf IIb led to significant improvements in all the CRS outcome scores. However, head-to-head comparison studies will be needed to assess the efficacy and long-term outcomes of both techniques.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4483

The endoscopic, radiological and prognostic characteristics of CCAD phenotype of CRSwNP

Miljan Folic[1], Vladimir Ljubic[2], Neda Sapic[3]

[1]Faculty of Medicine University of Belgrade, University Clinical Center of Serbia, *[2]Clinic for Otorhinolaryngology, Clinical Center of Montenegro*, *[3]Faculty of Medicine University of Belgrade*

CRS – Surgical Management 4 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: It has been observed that among patients operated due to chronic rhinosinusitis there are variations in the distribution pattern of pathological content in the nasal cavity and sinuses, which is manifested by different score values during endoscopic examination and computed tomography. Also, there are variations in recurrence rates after surgical treatment. Central Compartment Atopic Disease (CCAD) is a phenotype of chronic rhinosinusitis with polyps dominantly occupying the central aspect of the nasal cavity, including the middle and superior turbinate, as well as the upper part of the nasal septum. Although the classification of this phenotype is clear, its position along the continuum of rhinosinusitis inflammation is not well defined. The aim of our study is to determine the prevalence of allergic rhinitis and asthma in patients with CCAD, to determine the value of the score during endoscopic examination and computed tomography, as well as the rate of polyp recurrence surgery.

Material & Methods. We conducted a longitudinal survey of patients operated due to CRSwNP. Patients were divided in 2 groups according phenotype: CCAD and NOS. We compared presence of allergic rhinitis, asthma, symptom score, olfactory disfunction, Lund-Kennedy and Lund-Mackay score, as well as recurrence and reintervention rates.

Results: Our results indicated significant correlation between CCAD and AR ($p<0,001$). Patients with CCAD had a significant lower values of Lund-Mackay score and lower rate of polyp recurrence ($p=0,024$) compared with NOS group.

Conclusion: There is an evidence about AR interfering with CRSwNP pathogenesis. Patients with CCAD phenotype have low recurrence rate.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4384

Endoscopic frontal sinus surgery by expanded agger nasi approach improves long-term control status in type 2 chronic rhinosinusitis

Wendong Liu[1], Lai Ming[2], Shi Jianbo[1], Jianbo Shi[1]

[1]The First Affiliated Hospital, Sun Yat-sen University, *[2]Guangdong Clifford Hospital*

CRS – Surgical Management 4 | ROOM 10 - G7 - Level +1 | Wednesday, June 25, 2025

Introduction: Type 2 chronic rhinosinusitis (T2 CRS) is challenging due to high recurrence rates and poor outcomes. The frontal sinus is often a site of persistent disease. This study evaluates long-term outcomes of endoscopic frontal sinus surgery via the expanded agger nasi approach in T2 CRS patients through a retrospective review.

Methods: We studied 249 patients with T2 CRS who underwent endoscopic frontal sinus surgery using the expanded agger nasi approach between 2017 and 2022. Patients completed follow-ups in Jan 2024. Extended ESS, including the expanded agger nasi approach was used to treat T2 CRSwNP. Draf III or reboot surgeries were not applied. Data collected included demographic information, comorbidities, symptom questionnaires (VAS, TNSS, SNOT-22), blood test results, nasal endoscopic scores, and Lund-Mackay CT scores. The primary outcomes included control status and postoperative endoscopic score(E-score).

Results: The median follow-up period was 34 (IQR:22,48) months. A majority of patients with T2 CRSwNP are mainly characterized by smell dysfunction and opacity in the olfactory cleft on CT scans. Generally postoperative outcomes showed that 123 (49.3%) of patients achieved controlled status, 83 (33.3)% were partly controlled, and 43 (17.2%) remained uncontrolled. General median of E-score were 12.50 (IQR: 4.17, 25.00).

Conclusion: Functional endoscopic sinus surgery (FESS) alone may not adequately treat T2 CRSwNP. Only total ethmoidectomy by expanding the resection of the agger naci cell can adequate space be created between the nasal septum and lamina papyracea, thus preventing the recurrence of polyps or blockage of the frontal recess and olfactory cleft.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Pathophysiology 2

3867

Heterogeneity of CRSwNP/eCRS endotypes and their clinical characteristics

Toshiyuki Matsuyama[1], Hideyuki Takahashi[1], Kazuaki Chikamatsu[1]
[1]*Department of Otolaryngology-Head and Neck Surgery*

CRS – Pathophysiology 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Introduction: The classification of chronic rhinosinusitis (CRS) based on immunological endotypes—type 1, type 2, and type 3—is gaining recognition. However, these inflammatory patterns often overlap, and individual patients may not strictly conform to a single endotype. In this study, we conducted a comprehensive transcriptomic analysis of CRS with nasal polyps (CRSwNP)/eosinophilic CRS (eCRS), predominantly characterized by type 2 inflammation, using public databases. Additionally, we validated our findings with clinical samples.

Material & Methods: Surgical specimens, clinical information, and microarray data were collected from public databases and Gunma University Hospital. Gene expression profiling, gene set enrichment analysis (GSEA), and hierarchical clustering were performed.

Results: In the public database, nasal polyps showed high expression of type 2-, regulatory T cell (Treg)-, type 1-, and type 3-related genes. Three clusters were identified, one of which showed high expression of type 1- and type 3-related genes alongside type 2-related genes. Clinical specimens also demonstrated elevated expression of type 1- and Treg-related genes along with type 2-related genes. Clinical correlation analysis revealed an inverse relationship between the time from surgery to biologic use and type 2 gene expression, whereas type 1 gene expression was positively correlated. Two clusters were identified, one of which showed high expression of type 1- and Treg-related genes.

Conclusion: Nasal polyps in CRSwNP exhibit heterogeneity, with some cases showing upregulation of type 1, type 3, and Treg-related genes in addition to type 2-related genes. These findings suggest heterogeneity within type 2-inflamed CRSwNP. Stratification of CRSwNP based on molecular endotypes may accelerate the development of targeted therapies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4035

Identification of Novel Staphylococcus aureus Virulence Factor Patterns in Chronic Rhinosinusitis

Simon Goldie[1], Huw Jones[1], Laurie Lau[2], Philip Harries[1], Andrew Walls[3], Rami Salib[1]

[1]Department of Otorhinolaryngology / Head & Neck Surgery, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom, [2]1. School of Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton, Southampton, United Kingdom, [3]School of Clinical and Experimental Sciences, Faculty of Medicine, University of Southampton, Southampton, United Kingdom

CRS – Pathophysiology 2 | ROOM 11 - G10 - Level +1 | Wednesday, June 25, 2025

Background: Staphylococcus aureus commonly colonizes the nasal cavities of both healthy individuals and patients suffering from chronic rhinosinusitis (CRS) with (CRSwNP) and without (CRSsNP) nasal polyps. Recent evidence highlights an increased abundance of mobile genetic elements (MGEs) in S. aureus from CRS patients, contributing virulence and antimicrobial resistance genes that facilitate survival and treatment resistance. We hypothesised that S. aureus isolates from non-diseased controls, CRSsNP and CRSwNP would exhibit distinct patterns of virulence factors contributing to persistence and enhanced survival in CRS.

Methods: We collected nasal swabs from 77 patients, culturing S. aureus in 8 controls, 8 CRSsNP patients and 5 CRSwNP patients. Isolates underwent Illumina short-read sequencing and were analysed for stress, antimicrobial resistance and virulence genes, as well as MGEs, including plasmids and prophages.

Results: We identified four novel virulence factor gene patterns: a core set (hlgA, icaC, hlgB, hlgC, hld and aur) present in all isolates, plus accessory sets including the enterotoxin gene cluster (seo, sem, seu, sei and sen) and a complete or partial invasive virulence factor set (splE, splA, splB, lukE and lukD) (P=0.001). CRSwNP isolates showed degradation of the core set, with frequent loss of scn, icaC and hlgA ($p<0.05$). MGEs did not significantly contribute virulence or antimicrobial resistance genes across the groups.

Conclusions: This study documents four previously unreported S. aureus virulence factor gene patterns in CRS. These may underlie the bacteria's enhanced pathogenicity manifesting clinically with



Skull Base Surgery 4

4451

Age-related subjective outcome and biological treatment need after surgery for chronic rhinosinusitis with nasal polyposis type 2.

Tareq Zoabi[1], Ramez Salameh[1], Forsan Jahshan[1]
[1]*Tel Aviv Souarsky Medical Center*

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: Surgical and biological treatments are commonly employed to manage refractory chronic rhinosinusitis with nasal polyposis type 2 (CRSwNP2). However, there remains paucity of data on how these interventions impact different age groups. Our research seeks to determine whether there are subjective differences in postoperative outcomes across two age groups and to explore any discrepancies in the need for biological therapy following surgery.

Methods: A retrospective study at a tertiary center included patients who underwent functional endoscopic sinus surgery (FESS) for CRSwNP2. Patient demographics, clinical history, perioperative questionnaire (SNOT-22 & NOSE), systematic steroidal use and post-operative biological treatment were collected. A comparative analysis was conducted between two distinct age groups: individuals younger than 65 years (group A) and those 65 years or older (Group B).

Results: Sixty-five (n=65) patients were included, nineteen (29.2%) of which were equal or above 65 years (group B). Mean pre-op NOSE and SNOT-22 scores were 12.4 and 45.8, improving postoperatively to 6.8 and 26.6, respectively. The mean total follow-up was 21.6 months (SD = 11.9). Regarding comparative analysis – there was a statistical difference in pre-operative mean NPS score (2.33 and 3.05 in group A and B respectively, p= 0.018). No other statistical significance was observed in patient co-morbidities, major complications, differences in pre- and post-operative NOSE and SNOT22 scores, systematic steroidal or biological therapy used between the two groups.

Conclusion: According to our results, surgical intervention is a safe and effective in the elderly patients with no statistical difference in the subjective outcomes and the need for biological treatment between the two age groups.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4467

Effect of Endonasal Endoscopic CSF Fistula Repair on Olfactory Function and Quality of Life: Long-Term Outcomes

Gülpembe Bozkurt[1], Öykü İzel Onaran[2], Hazan Başak[3], Yavuz Uyar[1]

[1]Prof. Dr.Cemil Taşçıoğlu City Hospital, Department of Otorhinolaryngology, Istanbul, Turkey, *[2]Çerkezköy State Hospital, Department of Otorhinolaryngology, Tekirdağ, Turkey*, *[3]Ankara University Faculty of Medicine, Department of Otorhinolaryngology, Ankara, Turkey*

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: The olfactory fissure serves as a critical reference point for olfactory function. Surgical intervention in this region during cerebrospinal fluid (CSF) rhinorrhea repair is anticipated to negatively impact olfactory function and, indirectly, quality of life. This study aimed to evaluate the effects of endoscopic CSF fistula repair originating from the olfactory fissure on olfactory function and quality of life.

Methods: Demographic data, CSF leak etiology, surgical technique, and olfactory test results were prospectively analyzed over a long-term period, including preoperative and postoperative assessments at 1, 3, and 12 months. Olfactory function and quality of life were evaluated using the Sniffin' Sticks olfactory test and the SNOT-22 questionnaire.

Results: A total of 37 patients were included in the study, with a mean age of 45.95 years. Etiologically, CSF leakage was spontaneous in 20 patients and traumatic in 17 patients. A significant improvement in SNOT-22 scores was observed in both the traumatic and spontaneous CSF leak repair groups when comparing preoperative and 12-month postoperative assessments ($p < 0.001$ for both). When preoperative and postoperative olfactory function scores at 1, 3, and 12 months were compared in the identification, discrimination, and threshold categories, no significant differences were detected in either the traumatic or spontaneous groups ($p>.05$).

Conclusion: The findings of this study suggest that endoscopic repair of cerebrospinal fluid leaks at the olfactory fissure is safe in terms of olfactory function.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4501

“Optimising Outcomes in Anterior Skull Base Malignancies: The Role of Endoscopic Craniofacial Resection

Hammaad Khan[1], Yinan Zhu[1], Alison Lim[1], Saleh Okhovat[1]
[1]*Queen Elizabeth University Hospital Glasgow*

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Aims: To evaluate the outcomes of endoscopic craniofacial resection (ECFR) for anterior skull base malignancies over three years (2022-2024) at NHS Greater Glasgow and Clyde. All patients underwent anterior skull base resection with multilayer reconstruction. Postoperative quality of life (QOL) was also assessed using the Endoscopic Endonasal Sinus and Skull Base Surgery Questionnaire (EES-Q).

Methods: Prospective data collection of ECFR cases from 2022-2024. Patients received EES-Q questionnaires during routine postoperative follow-ups. Variables analyzed included demographics, hospital stay, margin clearance, adjuvant therapy, histopathology, complications, and QOL outcomes.

Results: 20 patients included, mean age 61.05. Mean HDU stay 2.31 days. Mean hospital stay 5.26 days. Negative resection margins achieved in 100% cases. Adjuvant therapy was required in 70% (radiotherapy 60%, chemotherapy 5%, chemoradiotherapy 5%). Histopathology revealed squamous cell carcinoma (45%), adenocarcinoma (20%), sarcoma (20%), and esthesioneuroblastoma (15%). One patient developed neuro-sepsis, managed conservatively. EES-Q results indicated good postoperative QOL.

Conclusions: ECFR is a safe and effective technique for anterior skull base malignancies, providing optimal tumour resection with reduced morbidity compared to open approaches. Postoperative QOL outcomes are favorable. This study provides recent real-world data on ECFR outcomes, emphasizing its safety, effectiveness, and impact on QOL. It reinforces ECFR as a viable alternative to open resection, contributing to evolving surgical strategies in skull base oncology.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4447

Development and Analysis of the LDW Grading System for Postradiation Nasopharyngeal Skull Base Necrosis

Zhaohui Shi[1], Qintai Yang[1], Tianfeng Zhao[2]
[1]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University, *[2]Department of Otolaryngology-Head and Neck Surgery, General Hospital of Southern Theatre Command*

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Objective: To establish a practical and effective LDW grading system for postradiation nasopharyngeal skull base necrosis following nasopharyngeal cancer treatment.

Material & Methods: A retrospective analysis was conducted on 65 patients with postradiation nasopharyngeal skull base necrosis who received treatment at the Department of Otolaryngology-Head and Neck Surgery, Third Affiliated Hospital of Sun Yat-sen University, between October 2023 and January 2025. The study analyzed survival rates based on different necrosis grades, identified prognostic risk factors, and assessed the impact of grading on prognosis and reoperation rates.

Results: The LDW grading system was developed using three dimensions: Length (L) based on the extent of necrosis along the longitudinal axis of the body, Depth (D) based on the lesion's penetration from the mucosa to the dura mater, and Width (W) based on the bilateral involvement of structures and carotid artery compromise. Surgical repair strategies were based on the LDW grading: L1/D1-D2/W1-W2 treated with a pedicled nasal mucosal flap; L1/D3/W3 treated with a temporalis muscle flap; L2/D3/W3-W4 treated with a vascularized free flap. Higher LDW grades were associated with worse prognosis, with statistically significant differences observed. Appropriate surgical choices based on this grading system significantly improved survival, quality of life, and mucosal healing while reducing postoperative complications and reoperation rates.

Conclusion: The LDW grading system provides valuable prognostic information for postradiation nasopharyngeal skull base necrosis. Using this system to guide surgical repair decisions enhances treatment outcomes, offering clinical guidance for better management and prognosis.



4450

Clinical Efficacy of Temporal Muscle Flap Reconstruction for Radio necrosis in Nasopharyngeal Carcinoma

Zhaohui Shi[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University*

Objective: To evaluate the therapeutic outcomes and prognostic factors of temporal muscle flap reconstruction in managing radio necrosis following nasopharyngeal carcinoma (NPC) treatment.

Methods: A retrospective cohort study included 31 NPC patients with radiation-induced tissue necrosis who underwent temporal muscle flap reconstruction at the Department of Otolaryngology-Head and Neck Surgery, the Third Affiliated Hospital of Sun Yat-sen University (October 2023–January 2025). Preoperative clinical status, mucosal healing, postoperative survival, quality of life (QoL), complications, laboratory parameters, and imaging findings were analyzed to identify critical factors influencing surgical outcomes.

Results: Among 31 patients (24 males, 7 females; left-sided flaps: 16, right-sided: 15), major complications included choanal atresia (n=3), facial nerve injury (n=2), and flap necrosis (n=1). Postoperative internal carotid artery hemorrhage occurred in 2 cases (1 fatal), while 28 patients achieved necrosis resolution. Progressive necrosis led to mortality in 2 of 3 cases. Stratification using the LDW necrosis grading system (Third Affiliated Hospital criteria) revealed that adherence to recommended flap selection significantly improved survival rates ($p<0.05$), QoL scores, and mucosal healing (Grade I/II: 89.7% vs. 33.3%, $p=0.01$), alongside reduced complications (18.5% vs. 66.7%) and reoperation rates (7.4% vs. 33.3%).

Conclusion: Severe skull base radio necrosis is a critical contributor to NPC treatment failure and mortality. Temporal muscle flap reconstruction demonstrates efficacy in managing advanced necrosis, contingent upon meticulous patient selection (per LDW criteria), complete intraoperative debridement, and strategic protection of the internal carotid artery. Standardized surgical protocols may optimize survival and functional recovery while minimizing complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4452

Free Flap Reconstruction for Severe Radiation-Induced Skull Base Necrosis in Nasopharyngeal Carcinoma: A Single-Arm Cohort Study

Zhaohui Shi[1], Jin Ye[2], Qintai Yang[1]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Department of Allergy, Third Affiliated Hospital of Sun Yat-sen University, *[2]Department of Otorhinolaryngology-Head and Neck Surgery, Naso-Orbital-Maxilla and Skull Base Center, Third Affiliated Hospital of Sun Yat-sen University*

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: Severe radiation-induced skull base necrosis (RTSBN) is a critical complication of nasopharyngeal carcinoma (NPC), occurring in ~10% of primary radiotherapy cases and ~30% of re-irradiated patients. Surgical debridement remains the definitive treatment, but large-scale skull base reconstruction poses significant challenges, often leading to failure. This study evaluates the efficacy and prognostic factors of free flap reconstruction in managing advanced RTSBN post-radiotherapy.

Material & Methods: A prospective observational study included 12 NPC patients with RTSBN who underwent free flap reconstruction at the Department of Otolaryngology-Head and Neck Surgery, the Third Affiliated Hospital of Sun Yat-sen University (April 2024–January 2025). Preoperative necrosis extent (classified via LDW grading: L1D2W3 [n=2], L1D2W4 [n=4], L2D2W3 [n=6]; L1: nasopharynx, L2: oropharynx, W3: unilateral parapharyngeal invasion, W4: bilateral invasion), surgical approach, flap type (forearm flap [n=3], anterolateral thigh fascial flap [n=4], anterolateral thigh flap [n=5]), recipient vessels (superior thyroid artery [n=8], facial artery [n=4]), and flap routing (parapharyngeal tunnel [n=7], submasseteric-temporal fossa tunnel [n=5]) were analyzed. Outcomes included flap survival, mucosal healing, complications, survival rates, and quality of life (QoL).

Results: Flap survival was achieved in 11 patients (91.7%); one failure due to oropharyngeal fistula was salvaged with a pedicled pectoralis major flap. One mortality occurred from internal carotid artery rupture. At 3–8 months follow-up, 11 patients (91.7%) achieved complete necrosis resolution. Complications were minimal (wound infection: n=2). Adherence to LDW-guided flap selection correlated with improved survival (100% vs. 50% in non-adherent cases), superior mucosal healing (Grade I/II: 90.9% vs. 0%), and reduced reoperation rates (9.1% vs. 50%).

Conclusion: Free flap reconstruction significantly enhances outcomes in life-threatening RTSBN. For nasopharyngeal skull base defects, endoscopic-assisted forearm flap via submasseteric-temporal fossa routing is optimal. Oropharyngeal defects require mandibulotomy with parapharyngeal tunnel access for direct visualization. Success hinges on meticulous debridement, carotid artery protection, and adherence to LDW-based surgical planning. Standardized protocols may mitigate morbidity and mortality in this high-risk cohort.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4498

Combined Rhinosurgical and Neurosurgical Management of Advanced Intradural Angiofibromas

Mohsen Naraghi[1], Hooshang Saberi[2]

[1]Division of Rhinology, Department of Otorhinolaryngology, Head and Neck Surgery, [2]Department of Neurosurgery, TUMS School of Medicine

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: While intracranial extension of angiofibromas is not uncommon, intradural penetration is rare. Managing these rare tumors presents a challenge in skull base surgery, often requiring tumor removal through combined approaches. In this paper, we share our experience in managing extensive intradural angiofibromas.

Methods: Six male patients, five aged 15 to 19, presented with nasal obstruction, epistaxis, and proptosis. One case involved an aggressive recurrent tumor in a 32-year-old patient. These cases underwent combined approaches with the assistance of image-guided endoscopic surgery.

Results: All six cases underwent combined rhinosurgical and neurosurgical approaches with the aid of image-guided endoscopic surgery. In three cases, craniotomy preceded the rhinologic approach. CSF leaks and skull base defects were repaired using temporalis muscle flap and pericranial flap in four cases, and fascia lata in two cases. One postoperative leak was repaired transcranially with fascia lata. Otherwise, all cases had an uneventful recovery.

Conclusions: The intradural intracranial extensions of angiofibroma require a meticulous surgical approach due to the increased risk of complications during dissection. Carotid rupture and brain damage are catastrophic complications to be mindful of. In cases with extensive intradural involvement of the middle cranial fossa by angiofibroma, a combined single-stage extra and intradural approach may help reduce complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4561

Significance of the Anterior Ethmoidal Artery in Endonasal Endoscopic Access to the Lateral Frontal Sinus and Skull Base

Cem Meco[1], Suha Beton[3], Hazan Basak[6], Nihal Apaydin[7]

[1]1) Ankara University Medical School, Department of ORL-HNS, Ankara, Turkey; 2) Salzburg Paracelsus Medical University, Department of ORL-HNS, Salzburg, Austria; 3) Cornell University, Weill Cornell Medical Collage, Department of Otolaryngology HNS, New York, NY, USA, [2]1) Ankara University Medical School Department of ORL-HNS, Ankara, Turkey: 2) Salzburg Paracelsus Medical University, Department of ORL-HNS, Salzburg, Austria: 3} Cornell University, Weill Cornell Medical Collage, New York, NY, USA, [3]Ankara University Medical School, Ankara,Turkey, [4]Ankara University Medical School, Department of ORL-HNS, Ankara University Medical School, Department of Anatomy, [5]1) Ankara University Medical School Department of ORL-HNS, Ankara, Turkey: 2) Salzburg Paracelsus Medical University, Department of ORL-HNS, Salzburg, Austria: 3) Cornell University, Weill Cornell Medical Collage, Department of Otolaryngology-HNS, New York, NY, USA, [6]Ankara University Medical School, Department of ORL-HNS, Ankara, Turkey, [7]Ankara University Medical School, Department of Anatomy, Ankara, Turkey

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: Endonasal endoscopic access to the lateral frontal sinus and skull base is often limited, especially in well-pneumatized frontal sinuses. This limitation in visualized reach and manipulation often necessitates external approaches. Despite advancements in endoscopic techniques, anatomical studies suggest that the lateral frontal sinus remains inaccessible via the endonasal endoscopic approach(EEA). The periorbital suspension technique, previously communicated by us, may overcome this challenge. Given the potential role of the anterior ethmoidal artery(AEA) in this technique, we conducted an anatomical study to evaluate its impact on lateral access.

Methods: Ten cadaver heads (20 sides) underwent pre-dissection CT scans to assess frontal sinus pneumatization. CT scans were evaluated to assess pneumatization levels of frontal sinus and supraorbital recesses. We measured visualized access to the lateral frontal sinus, skull base, and supraorbital recess through stepwise Draf procedures (Types I, IIA, IIB, III). We then performed AEA dissection and transection, followed by periorbital suspension, to evaluate its effect on access.

Results: The medial orbital wall was the primary limitation to lateral access via EEA, even with Draf procedures, in well-pneumatized sinuses. However, as the only medial periorbital attachment, AEA transection enabled significant lateralization of the periorbita. This with sufficient bony-wall removal allowed full visualization and manipulation of the lateral frontal sinus, skull base, and supraorbital recess in all cadavers.

Conclusion: Our findings highlight the AEA's crucial role in periorbital suspension. Transecting the AEA effectively enhances lateral access, overcoming the EEA's limitations and optimizing anatomical approach to lateral frontal sinus, skull base and supraorbital recess.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4562

Endonasal Endoscopic Anatomy of Optic Nerve And Opthalmic Artery in Optic Canal And Orbital Apex

Suha Beton[1], Tugba Morali Guler[3], Hazan Basak[4], Cem Meco[5], Mehmet Yilmaz[3], Ayhan Comert[3], Kahilogullari Gokmen[6]

[1]Ankara University Medical School, Department of Anatomy Ankara University Medical School, Department of ORL-HNS, [2]Ankara University Medical School, Department of Anatomy, Ankara University Medical School, Department of ORL-HNS, [3]Ankara University Medical School, Department of Anatomy, [4]Ankara University Medical School, Department of ORL-HNS, [5]Ankara University Medical School, Department of Anatomy, Ankara University Medical School, Department of ORL-HNS, Salzburg Paracelsus Medical School, Department of ORL-HNS, [6]Ankara University Medical School, Department of Neurosurgery

Skull Base Surgery 4 | ROOM 12 - G11 - Level +1 | Wednesday, June 25, 2025

Introduction: The aim of the study is to define the relationship of optic nerve and opthalmic artery in optic canal and orbital apex.

Materials-Methods: In this study conducted with 10 cadaver head. The relationship between the origin of the opthalmic artery(OA) and the internal carotid artery(ICA), the relationship between the optic nerve(ON) and the OA and the course of the OA in orbital apex were evaluated. The diameter measurements of the OA, the longitudinal length measurements of the decompression performed to the medial and inferior optic canal were made.

Results: The longitudinal length measurement of the decompression made to the medial and inferior optic canal which is the decomression amount of the optic canal was measured between a 6 mm -8 mm (a mean of 6.6±0.69 mm) on the right side and between a minimum of 5 mm-10 mm (a mean of 7±1.33 mm) on the left side. OA diameters were measured between a 1 mm-1.2 mm (a mean of 1.03±0.06 mm) on the right side and between 1 mm-1.5 mm (a mean of 1.14±0.2 mm) on the left side. The OA was observed to be located superomedial to the ICA in 12 and superolateral in 7 and superior to the ICA in 1.

Conclusion: Endoscopic ON decompression has many advantages and currently one of the standard treatment method for various pathologies. It is extremely important to know the anatomy of this region to determine the safe surgery limits.



Poster Abstracts

Acute Rhinosinusitis

3735

Feasibility of a Virtual, Prospective Real-World Data Study in Acute Rhinosinusitis

Michael Plach[1], Claudia B. Bittner[1], Stefan Hoch[1], Hubert Steindl[1], Lisa Klein[2], Tobias Kruse[2], Christoph Abels[1], Claus Bachert[3]

[1]Research & Development, Bionorica SE, Neumarkt i.d.OPf., Germany, *[2]Trials24 GmbH, Munich, Germany; part of SubjectWell, Austin, TX, USA*, *[3]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital of Münster, Münster, Germany*

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: This study evaluated the feasibility of solely virtually recruiting patients from 16 years with symptoms suggestive of acute rhinosinusitis (ARS) and whether a questionnaire-based study can provide plausible and meaningful real-world data (RWD).

Material & Methods: The study was advertised via Google Ads and social media (Facebook, Instagram, TikTok). 20 questions evaluated disease history, use of over-the-counter (OTC) medication, symptomatic burden and disease impact partly by patient-reported outcome measures (PROMs), i.e., the major symptom score in a patient-assessed form (MSSPAT) and bothersomeness of symptoms on a numerical rating scale (NRS). A subgroup of participants also completed the Sino-Nasal Outcome Test-20 German Adapted Version (SNOT-20 GAV). Correlation analyses were performed after the study.

Results: Between February and April 2024, 2032 participants with a history of ARS were included. 93.7% of starters completed the study indicating great willingness to participate. The majority of participants were female and between 25 and 54 years old. PROMs were well accepted and provided plausible results (mean MSSPAT: 8.3 score points; NRS in 86.6% rated with at least 5; mean SNOT-20 GAV: 45.5 score points). PROM scores correlated with each other, indicating their validity for assessing ARS disease burden and impact also in a real-world setting.

Conclusions: This feasibility study showed the successful generation of RWD in ARS in a virtual setting. A larger prospective virtual study on ARS including patients already from 12 years is intended to provide more comprehensive RWD.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3797

Identifying Predictors for the Diagnosis of Acute Invasive Fungal Rhinosinusitis: A Comprehensive Analysis

Chatdanai Akarapas[1], Saisawat Chaiyasate[1], Romanee Chaiwarith[2], Jiraporn Khorana[3]

[1]Department of Otolaryngology, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand, *[2]Department of Internal Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand*, *[3]Clinical Epidemiology and Statistical Statistic center, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand*

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: Acute Invasive Fungal Sinusitis (AIFS) is a rare but aggressive infection with significant morbidity and mortality. Early and accurate diagnosis is critical, but its nonspecific clinical presentation often complicates timely detection. This study aims to identify clinical, laboratory, and radiological predictors associated with biopsy-confirmed AIFS in patients with suspected disease.

Material & Methods: A retrospective analysis was conducted on 134 adult patients who underwent biopsies for suspected AIFS at a tertiary referral center between January 2009 and January 2024. Patients diagnosed with chronic invasive fungal sinusitis were excluded. Among the patients, 60 cases (44.8%) were biopsy-confirmed AIFS. Key variables analyzed included demographic data, comorbidities, clinical signs, endoscopic findings, laboratory markers, and imaging findings. Backward stepwise and multivariable logistic regression analyses were used to identify independent predictors.

Results: Of 36 clinical variables initially assessed, stepwise regression identified 6 significant variables for multivariable analysis. Mucosal necrosis in the nasal cavity (OR 39.853; 95% CI 10.278–154.535; p = 0.000) and cranial nerve palsies (OR 25.826; 95% CI 2.738–140.769; p = 0.000) were the strongest predictors. Other significant factors included unilateral mucosal thickening (OR 5.694; 95% CI 1.720–18.855; p = 0.004), diabetes mellitus (OR 3.462; 95% CI 1.202–9.970; p = 0.021), and female sex (OR 2.959; 95% CI 1.060–8.259; p = 0.038).

Conclusions: Cranial nerve palsies and mucosal necrosis in the nasal cavity are strong predictors of biopsy-confirmed AIFS, highlighting the importance of these clinical signs in early diagnosis.



3892

Frontoethmoidal sinusitis complicated by Thalamic Abscess due to Actinomyces oris.

Ariane Mercado
Hospital Vall d'Hebron

INTRODUCTION: Actinomycosis is a rare anaerobic, gram-positive bacterial infection caused by Actinomyces, which is part of the normal flora in the oral cavity and respiratory and female genitourinary tracts. The cervicofacial area is the most common site of involvement, disruption of the mucosa can lead to infection in virtually any site.

CASE STUDY: We report a case of an actinomycosis infection in the frontoethmoidal sinus complicated by Thalamic Abscess. A 10-year-old female visited our hospital with a history of type 1 diabetes mellitus, presents to the emergency department with recurrent fever of 39°C, vomiting and headache. On physical examination, the patient is in fair general condition, with a temperature of 38°C and other vital signs within normal limits. ENT examination reveals a normal oropharynx and normal otoscopy. Mild neck stiffness is observed, with no other apparent neurological focal signs. Computed tomographym revealed a nodular lesion measuring 13 x 11 mm in the head of the left caudate nucleus, associated with perilesional vasogenic edema involving the foramen of Monro. The lesion enhances after contrast administration, highly suggestive of an intracerebral abscess. Thus, we provisionally diagnosed as a Sinusitis with intracranial complications. At admission, blood cultures were taken, and a lumbar puncture was performed, cerebrospinal fluid with a clear appearance and biochemistry consistent with infection. The culture was positive for Actinomyces oris.

RESULTS: The patient underwent transnasal endoscopic sinus surgery, during which the sinuses were opened, and the pathological material was removed. Histopathological analysis confirmed an infection caused by Actinomyces. The postoperative course was uneventful, and no evidence of recurrence has been observed during the six-month follow-up period.

CONCLUSIONS: Clinicians should remain vigilant that actinomycotic sinusitis may progress, particularly in patients with risk factors such as diabetes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3975

Sinogenic Intracranial abscesses in adults: A Systematic Review and Meta analysis

Timothy Davies[1], Roshan Ratnayaka[3], Stephen Williams[3]

[1]Liverpool University Hospital NHS foundation trust , [2]Liverpool University Hospitals NHS Foundation Trust , [3]Liverpool University Hospitals NHS foundation trust

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: Intracranial suppuration in adults is a rare complication of sinusitis and sinonasal infections. The potential for severe neurological sequalae and death following sinogeneic intracranial abscesses demonstrates the importance of improved understanding of the outcomes of operative intervention in this cohort. Here we present the first systematic review and meta analysis of sinogenic intracranial abscesses in the adult population.

Methods: A comprehensive literature search was undertaken using Medline and Embase. All adult patients (>18yo)with sinogeneic subdural empyema, extradural abscess and intraparenchymal empyema were included. The primary outcome measure was 90-day mortality. Secondary outcome measures include return to theatre, neurologic disability and length of stay. Binary Random effects model meta-analysis wasundertaken.

Results: 26 manuscripts including 113 adult patients over a 40-year (1984-2024) period were included. 62 patients were eligible for inclusion in meta-analysis as patients is case reports were included only in the qualitative analysis. Endoscopic sinus surgery was found to have no effect on reducing risk of mortality in patients treated with sinogeneic intracranial abscess (p=0.153 IQ dif 2.105).

Conclusions: Here we demonstrate that endoscopic sinus surgery in the adult population does not impact upon mortality in patients with sinogeneic intracranial infections. Factors such as paediatric neuroplasticity and an increased incidence of intracranial abscesses in paediatric patients, demonstrates the importance of further work pertaining to this pathology in the adult population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3980

Acute Invasive Fungal Sinusitis: A Case Series on the Challenge of a Lethal Diagnosis

Bárbara Rodrigues[1], André Gonçalves[1], Inês Pereira[1], Silva Joana[1], António Alves[1]

[1]Unidade Local de Saúde Viseu Dão-Lafões, [2]Department of Otorhinolaryngology, Unidade Local de Saúde de Viseu Dão-Lafões, Portugal

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: Acute invasive fungal sinusitis (AIFS) is a rare but highly lethal infection affecting immunocompromised individuals. Caused mainly by Mucorales fungi and Aspergillus, it aggressively invades the paranasal sinuses, causing tissue necrosis and potential systemic spread. This case series presents three recent AIFS cases, highlighting challenges in diagnosis, treatment, and outcomes.

Cases: A 33-year-old woman with severe aplastic anemia and paroxysmal nocturnal hemoglobinuria developed febrile neutropenia, followed by invasive aspergillosis originating in the nasal region, which progressed to pulmonary and splenic involvement. Despite surgical debridement, she developed organ failure and died on day 19 of hospitalization. Another 65-year-old woman with relapsed non-Hodgkin lymphoma and recent Covid-19 presented with fever, diplopia, facial edema, and necrotic nasal lesions with a subperiosteal abscess due to Rhizopus arrhizus. Despite an initial positive response, she succumbed to systemic complications after 1 year and 22 days. A 53-year-old man with decompensated diabetes and hemochromatosis presented with maxillary sinusitis and cranial nerve paresis. He was diagnosed with sinonasal mucormycosis and recovered, though with a palatal fistula as a sequela. All patients underwent surgical debridement, prolonged intravenous antifungals, and attempts to reverse immunosuppression.

Conclusion: This series underscores the importance of early AIFS diagnosis and intervention, especially in high-risk patients, such as those with diabetes, immunosuppression, or hematological malignancies. Rapid management can mean the difference between life and death, making it a clinical threat that cannot be overlooked.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3994

The management of intracranial complications of frontal sinusitis: A multicentre retrospective study

Ding Yang[1], Gabrielle Thompson[3], Timothy Davies[4], Stephen Williams[4], Amr Abdelhamid[5], Rajeev Advani[6], John De Carpentier[7], Archana Jaiswal[5], Raj Bhalla[5], Rohini Aggarwal[5], Bilal Anwar[5]

[1]Salford Royal Hospital, Royal Preston Hospital, [2]Salford Royal Hospital, Royal Preston Hospital, UK, [3]North West England ENT Trainees, [4]Aintree University Hospitals, UK, [5]Salford Royal Hospital, UK, [6]Preston Royal Hospital, UK, [7]Royal Preston Hospital, UK

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: Although intracranial complications following frontal sinusitis are rare, however they are associated with significant morbidity. There is no consensus regarding the surgical treatment of this patient cohort and there is a lack of high-quality evidence due to the rarity of the condition. We present the largest adult only series in the current literature and describe the presentation and management of these patients across skull-base units across the Northwest of England.

Methods: A retrospective analysis over a 5-year time period was performed on all adult patients presenting with acute frontal sinusitis with intracranial complications across three skull-base units across the Northwest of England (Salford Royal Hospital, Aintree University Hospital, Royal Preston Hospital).

Results: A total of 44 patients were identified. The mean inpatient stay was 45 days (range 7 – 210). 98% presented with headache with 77% having focal neurology. The most common intracranial complication was subdural abscess (59%). ENT management of the frontal sinus varied significantly. The revision rate and length of hospital stay was lowest in the group that had frontal trephine only. There was significant long term neurocognitive morbidity (38%) and physical disability (27%).

Conclusions: There is significant morbidity and mortality in this patient cohort and they should be managed collaboratively with neurosurgery. There is variation in the ENT management and the rate of revision surgery is high. Frontal sinus trephine alone in the acute setting could be sufficient. Prospective large scale collaborative studies are required to guide future research and standardize treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4162

Atypical process of orbital complication in acute rhinosinusitis

Květoslav Červený[1], Balatková Z.[2], Plzák J

[1]1 Department of Otorhinolaryngology and Head and Neck Surgery 1st Faculty of Medicine, Charles University, Faculty Hospital Motol [2] Department of Otorhinolaryngology and Head and Neck Surgery, 2nd Faculty of Medicine Charles University in Prague and Motol University Hospital

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: Infection of the soft tissue of the orbit as an extension of acute bacterial rhinosinusitis (ABRS) is serious complication, with high risk of visual loss or progression into intracranial spreading making it life threating condition. Despite being relatively rare thanks to adequate antibiotic treatment, orbital cellulitis still accounts of almost 80% of all complications associated with ABRS.

Case report: Our case describes unusual process of orbital cellulitis in 31 years old man with ABRS complicated by formation of abscesses in the submucosal space of nasal septum, medial and lateral part of the orbit. Patient underwent CT scan and the examination by ophthalmologist and was immediately hospitalized and operated on the same day. Several control imaging methods (including MRI) were performed after the operation revealing formation of another abscess laterally from the bulb requiring combination of endoscopic and external approach. Patient condition in the upcoming period was gradually improving leaving him without any visual impairment.

Discussion: Management of orbital complications due to ABRS highly depends on the fast and proper diagnosis, based on the endoscopic examination and findings on the imaging methods following aggressive treatment with antibiotics and, when indicated, early surgical procedure. Adequate follow-up is an important part of the management.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4350

Vision Loss secondary to a sphenoid sinus fungal ball – A rare presentation

Marios Stavrakas, Ra'ed Al-ashqar[1], Hisham Khalil[1], Yazan Kanaan[1]
[1]University Hospitals Plymouth NHS Trust

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Background: Isolated sphenoid sinus infections can be dangerous, leading to significant morbidity owing to the proximity to vital structures. Sphenoid sinus fungal balls are a rare form of these infections which can lead to significant sequelae. As such, early recognition of these cases with prompt management is crucial to avoid serious complications. We present the case of a 79-year-old immunocompromised patient, who presented with progressive right sided vision loss secondary to a sphenoid sinus fungal ball, managed with surgical drainage, leading to return of vision.

Case Presentation: A 79-year-old woman with history of pauci-immune necrotizing glomerulonephritis, on long-term azathioprine, presented to our department with a complaint of progressive right sided vision loss. Her only symptom prior to this was mild deep-seated headaches. MRI imaging showed dural enhancement next to an area of bony erosion involving the right posterolateral sphenoid sinus wall, closely related to the optic nerve, with possible resultant compression of the optic nerve. This was associated with opacification of the sphenoid sinus with fungal contents. She underwent emergency endoscopy drainage of the sphenoid sinus, where pus and fungal debris were found and cleared. Histopathology confirmed aspergillus. The patient was treated with a 12-week course of Isovuconazole, and her vision showed significant improvement over the treatment period. She has since been discharged from our rhinology service.

Conclusion: This case highlights the importance of early recognition and prompt management of isolated sphenoid sinus disease, with timely intervention to prevent significant morbidity such as permanent vision loss, improving overall outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4402

Review of the Management of Intracranial Complications of Acute Bacterial Frontal Sinusitis

Jadin Chahade[1], Edward Noon[2], Erin Wright[2]

[1]Faculty of Medicine and Dentistry, University of Alberta, Edmonton, AB, Canada, *[2]Division of Otolaryngology Head and Neck Surgery, University of Alberta, Edmonton, AB, Canada*

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Objective: Intracranial complications of acute bacterial sinusitis are rare in the era of antibiotics but pose significant risk for morbidity. Despite advances in treatment, no consensus exists on optimal management of the involved frontal sinus in these cases. This review aims to elucidate when intracranial complications can be managed medically versus when surgical intervention is warranted. We investigated the appropriate timing and surgical approach, given the challenges associated with opening the acutely infected frontal sinus.

Data Sources: We reviewed the literature on MEDLINE, PubMed, and Embase databases from inception to October 2024. A combination of keywords related to “frontal sinusitis”, “intracranial complications”, “sinus surgery” and “medical management” were included.

Results: Medical management alone with CNS-penetrating antibiotics targeting aerobic and anaerobic bacteria appears appropriate in select cases such as small (<1 cm) epidural abscesses without significant neurological impairment, meningitis/cerebritis, or when rapid improvement is observed. Surgical intervention—such as endoscopic sinus surgery, trephination, or craniotomy with cranialization—is recommended for larger abscesses (>1 cm), significant neurological deficits, or failure of medical therapy. Balloon sinuplasty has also proven successful for drainage, particularly in pediatric populations. We provide a summary table of the reviewed literature and a management algorithm to guide clinicians in evidence-based decision-making.

Conclusion: Our review highlights that the management of acute frontal sinusitis remains an unresolved area of investigation with some recommendations that can be made as outlined above. There is a paucity of high-quality evidence, which underscores the need for prospective studies (ideally multicentered) to establish guidelines, ensuring timely and resource-optimized care.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4506

Subperiosteal Orbital Abscess in Non-Medial Locations: A Twelve-Year Retrospective Study of Pediatric Cases and a Systematic Review of the Literature

Stavroula - Alexandra Faliagka[1], Athina Peponoula[1], Socratis Kolios[1], Charoula Karantana[1], Agapi-Iliana Skouloudaki[1], Chara Kakosimou[3], Valentinos Sofokleous[2]

[1]ENT resident, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece, *[2]Director, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece, [3] Consultant, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece*

Poster Session | Acute Rhinosinusitis | 22 June – 25 June, 2025, All day

Introduction: This study examines the clinical presentation, diagnosis, and management of pediatric Subperiosteal Orbital Abscesses (SPOAs) in non-traditional locations through a comprehensive analysis of a 12-year cohort and a thorough literature review. It presents insights into disease patterns, evaluates treatment strategies, and examines the impact of COVID-19 on case incidence.

Material & Methods: We conducted a retrospective study of pediatric cases (ages 0–15) treated in our department from 2012 to 2023. Data on demographics, clinical findings, imaging, treatment, and outcomes were collected and analyzed. We also analyzed differences between the pre- and post-COVID-19 era.

Results: We identified 11 patients (55% male) aged 1.5–15 years (mean: 12.7 years). All received IV antibiotics and underwent open or combined (open/endoscopic) surgery. The average hospital stay was 15 days, with full recovery except for one child with irreversible vision loss. A more than tenfold increase in cases was observed in the post-COVID-19 era. Unlike medial wall abscesses, which can sometimes be treated conservatively, the literature advocates for immediate surgical intervention for non-medial SPOAs, typically employing open techniques.

Conclusions: Non-medial SPOAs present generally with greater severity and pose more challenges for endoscopic treatment compared to medial abscesses. As a result, a combined open and endoscopic approach is frequently necessary. Additionally, the notable increase in cases observed post-COVID-19 may be attributable to the "immunity debt" resulting from the containment measures implemented during the pandemic.



Allergic Rhinitis

3616

Epidemiological Features, Clinical Manifestations, Diagnostic Approach and Quality of Life of Pediatric Patients with Allergic Rhinitis

Konstantina Chrysouli[1], Georgios Kokolakis[3]

[1]Sismanogleio General Hospital, Athens, Greece, *[2]ENT Department, Penteli Children's Hospital*, *[3]ENT Department, Penteli Children's Hospital*

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Allergic rhinitis affects approximately 40% of children. This study aimed at determining the prevalence, sociodemographic features, clinical manifestations, diagnostic approach, comorbid illnesses, complications and quality of life in children referred to the outpatient clinic of ''Allergic Rhinitis'' in Penteli Children Hospital, Athens, Greece.

Case study: We analyzed 590 pediatric patients referred to the outpatient clinic of ''Allergic Rhinitis'' in Penteli Children Hospital, Athens, Greece from 26/01/2012 to 20/11/2022. The diagnostic procedure included the same questionnaire used at the time of diagnosis, nasal endoscopy, Skin Prick Test, measurement of total blood serum IgE levels, eosinophils from nasal secretions and Radioallergosorbent Test (RAST) in some only non-diagnostic cases.

Results: Allergic rhinitis was reported in 78% of studied children, affected all pediatric age group and was frequently characterized by significant morbidity. There were associated epidemiological features, clinical manifestations, comorbid illnesses, complications and affectation of the quality of life in children. Treatment of allergic rhinitis leads to improvement on the clinical features. Immunotherapy was effective in 100% of the patients. 54% of asthmatic children were diagnosed allergic rhinitis, while 16% of allergic rhinitis children were diagnosed with asthma. Skin tests were important diagnostic tools, not being necessary the measurement of total IgE in plasma. The most frequent aeroallergen sensitization were trees followed by Grass Mixture, mites, other grass pollen, Cereal Mixture, Pellitory, Parietaria sp., Mugwort, Groosefoot, Rye, fungis and animal dander. Local allergic rhinitis (LAR) was diagnosed in 19% of the children with nondiagnostic or negative Skin test.

Conclusion: Early referral is highly recommended to the specialist to avoid further complications. Further studies on the general population should be carried out in order to understand the pathophysiologic mechanisms of allergic rhinitis more comprehensively.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3746

An analysis of factors of dropout from Japanese cedar pollen sublingual immunotherapy

Fujii Tatsuya[1], Ryota Morozumi[2], Ishitani Keisuke[3], Seiichiro Kamimura[4], Kitamura Yoshiaki[3]

[1]Department of Otolaryngology, JA Kochi hospital, 1-526 Nakano Myoken, Kochi 783-8509, Japan, [2]Department of Otolaryngology, Institute of Biomedical Sciences, [4]Department of Otolaryngology, Institute of Biomedical Sciences, Tokushima University Graduate School, 3-18-15 Kuramoto, Tokushima 770-8503, Japan, [3]Department of Otorhinolaryngology – Head and Neck Surgery

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: We investigated the factors of dropout from sublingual immunotherapy (SLIT) with Japanese cedar (JC) pollen tablets.

Method: Eighty six patients who started JC pollen SLIT from 2018 to 2020 were categorized into 3-year completed group and dropout group. Age, the efficacy of JC pollen SLIT, and adverse events were evaluated between 3-year completed group and dropout group. Then, 3-year compliance rate was analyzed among 5-9 years, 10-19 years and 20 years and older. Moreover, the rate of 10-19 years was compared between 3-year completed group and dropout group.

Result: 31.4% patients discontinued JC pollen SLIT before completing 3-year therapy. 3-year compliance rates were 100% in 5-9 years, 44% in 10-19 years, 59.4% in 20 years and older. The rate of 10-19 years in dropout group was significantly high compared with that in 3-year completed group. Both 3-year completed group and dropout group significantly improved allergic rhinitis symptoms and all QOL scores from the first JC pollen season compared with those before JC pollen SLIT started. Moreover, there was no significant difference in scores of allergic symptoms and QOL both in pre-SLIT and the first JC pollen season between 3-year completed group and dropout group. There was no significance in adverse events between 3-year completed group and dropout group.

Conclusions: The present study showed that age was related to dropout from JC pollen SLIT. On the other hand, it was suggested that the efficacy, and adverse events were not the main factor for dropout from JC pollen SLIT.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3951

Autonomic dysfunction in allergic rhinitis and non-allergic rhinitis: a systematic review and meta-analysis

Tung-Lin Lee[1], Yi-Tsen Lin[2]

[1]Department of Otolaryngology, National Taiwan University Hospital, No. 7, Chung-Shan South Road, Taipei, 10002, Taiwan, *[2]1 Department of Otolaryngology, National Taiwan University Hospital, No. 7, Chung-Shan South Road, Taipei, 10002, Taiwan, 2 College of Medicine, National Taiwan University, Taipei, Taiwan*, *[3]National Taiwan University Hospital*

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Dysregulation of the autonomic nervous system (ANS) has been implicated in the pathophysiology of allergic rhinitis (AR) and non-allergic rhinitis (NAR). The present review sought to compile the existing literature on the relationship between autonomic function and AR or NAR.

Material & Methods: A comprehensive search from inception to 2024 in the PubMed, Web of Science, and EMBASE databases was performed. Any study that described the association between autonomic function and rhinitis was included. Meta-analyses were conducted on studies which evaluated autonomic function utilizing heart rate variability (HRV) parameters.

Results: After screening 1112 citations, 15 articles were included. Eleven studies compared rhinitis patients with healthy counterparts regarding autonomic function. Six documents demonstrated the effects of treatments for rhinitis on the ANS. In a meta-analysis comparing HRV between AR patients and healthy controls, the high frequency component of the HRV spectrum was significantly higher while the low-to-high frequency ratio was significantly lower in AR patients; the pooled mean differences were 0.71 (95% confidence interval [CI] [0.33, 1.08]) and 0.87 (95% CI [1.60, 0.15]), respectively. In another meta-analysis of two randomized controlled trials, HRV parameters indicated sympathetic hyperactivity in AR patients after sauna treatment or aquatic exercise.

Conclusions: This systematic review consolidates the evidence linking autonomic dysfunction to rhinitis and highlights implications for the management of rhinitis. However, evidence of autonomic imbalance in NAR and direct comparisons between AR and NAR remain limited. Further research is warranted to elucidate these relationships and to explore therapies targeting autonomic modulation in rhinitis patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3969

Local Allergic Rhinitis: Solving The Enigma

Natasa Kusic[1], Vojislav Djuric[2], Rajica Stosovic[2], Milan Dimitrijevic[1], Vesna Tomic-Spiric[2]

[1]1 Clinic of Allergy and Immunology, University Clinical Centre of Serbia, [2]1 Clinic of Allergy and Immunology, University Clinical Centre of Serbia; 2 Faculty of Medicine, University of Belgrade

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

BACKGROUND and AIM: Local allergic rhinitis (LAR) is defined by a clinical history suggestive of allergic rhinitis in patients without systemic evidence of atopy. It is a complex entity that remains largely misdiagnosed and mistreated. The gold standard for its diagnosis is nasal allergen provocation test (NAPT). We present a case of a patient with LAR, whose condition had been a diagnostic challenge for years.

CASE REPORT: A 28-year-old female patient with a long history of chronic rhinitis was referred to an allergist, after the unremarkable findings on the comprehensive otorhinolaryngological diagnostic assessment. Her symptoms persisted throughout the year, exacerbating in the winter season and aggravating in contact with dust. Laboratory evaluation showed normal eosinophil count and total serum immunoglobulin E (IgE) level. Skin prick test and specific serum IgE were positive for Ambrosia elatior (A. elatior). As these results were inconsistent with clinical history, we performed NAPT with A. elatior, which was clearly negative and then also with house dust mite (HDM). Subjective symptom scores were assessed as negative, however objective measurement via an active anterior rhinomanometry (AAR) was positive, with flow decrease of 60%. The patient was diagnosed with LAR to HDM and sensitization to A. elatior without clinical significance. HDM sublingual allergen immunotherapy was initiated with a promising therapeutic response.

CONCLUSION: Diagnosis of LAR relies on a detailed medical history and positive NAPT. The correct interpretation of NAPT is fundamental in the assessment of the right diagnosis and subsequent therapy. AAR may be the key diagnostic tool for the diagnosis of LAR.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4004

Efficacy Of Combined Corticosteroid And Antihistamine Nasal Sprays In The Treatment Of Allergic Rhinitis: A Systematic Review

Maria Karela[1], Myriam Metaxa[2], Panagiotis Gonatidis[3], Pinelopi Skourti[3], Vasiliki Demosthenous[3], Vasiliki Gkoulioni[1], Eleni Chalkiadaki[4], Georgios Grivas[1]

[1]Consultant, ENT department of "pammakaristos" hospital, Athens, Greece , [2]Intern, ENT department of "Pammakaristos" hospital, Athens, Greece, [3]Intern, ENT department of "pammakaristos" hospital, Athens, Greece , [4]Director, ENT department of "pammakaristos" hospital, Athens, Greece

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Allergic rhinitis is an inflammatory disease of the nasal mucosa that affects 23 - 30% of the population in Europe and 15 - 30% in the USA. The present study aims to gather and investigate the latest data available regarding the effectiveness of the nasal corticosteroids and antihistamines combination in the treatment of allergic rhinitis, through a literature review.

Material – Methods: A systematic review of the literature in Pub Med was conducted on the latest data concerning the treatment of allergic rhinitis through the combination of nasal corticosteroids and nasal antihistamines, the effectiveness of the method, compared to other treatments or placebo. Studies were selected within the last decade.

Results: In the studies reviewed, the effectiveness of the combination of corticosteroids and antihistamines administered intranasally was compared to either intranasal corticosteroid or intranasal antihistamine use in relation to placebo. The aforementioned combination was also compared to the administration of a combination of intranasal corticosteroid and oral antihistamine. Factors that were mainly taken into consideration were the reduction of nasal and ocular symptoms, as well as the time of response to treatment.

Conclusions: In all studies reviewed, it is apparent that the combination of corticosteroids and antihistamines intranasally is a fairly safe therapeutic method that is more effective compared to other forms of treatment or placebo. However, regarding long-term use, further research is necessary to conclude more secure evidence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4428

Blue laser inferior turbinate reduction and Blue laser Posterior Nasal Nerve Neurolysis in the management of Chronic Rhinitis: Our experience

Wu ChengJung[1], Lokyeejoyce Li[2]

[1]Department of Otolaryngology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, *[2]Department of Environment and Occupational Medicine, National Taiwan University Hospital Hsin-Chu Branch*

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: This study aimed to evaluate the outcome of Blue laser inferior turbinate reduction (BITR) combined with Blue laser Posterior Nasal Nerve Neurolysis (BPN3) in comparison with Blue laser inferior turbinate reduction alone in the treatment of patients with chronic rhinitis unresponsive to pharmacological therapy

Methods: This study was conducted in the Shuang Ho Hospital in 2024. 31 patients with inferior turbinate hypertrophy refractory to medical management were selected. A Blue laser was used at 2.5 W in continuous mode, with a spot size of 0.6-1 mm, and energy delivered through a 400-µm optical fiber. A follow-up was done at 1 month and 3 months. The total 24-h reflective total nasal symptom score and Nasal Obstruction Symptom Evaluation scores were assessed before surgery and at each follow-up visit.

Results: A total of 31 patients were included. Overall, 15 patients underwent BITR and BPN3, and 16 patients underwent BITR alone. The rTNSS had improved by 75 % and 63% in BITR with BPN3 and BITR alone groups, respectively. The NOSE score had improved by 90% and and 84% in the BITR with BPN3 and BITR alone groups, respectively. Patients in the BITR with BPN3 group demonstrated statistically significantly better results after 3 months than patients in the BITR alone group ($p < 0.05$). The response rate was 94% in the BITR with BPN3 group after 3 months.

Conclusions: BITR with BPN3 is a safe, effective, and minimally invasive procedure in the treatment of allergic inferior turbinate hypertrophy.



4444

Good patient adherence to sublingual immunotherapy for allergic rhinitis can be achieved, when ENT-physicians collaborate with pharmacies in a straightforward adherence programme

Cor Stengs[1], Peter Vis[2], Caroline Seinen[3]

[1]Rijnstate Hospitals, *[2]Arnhem Pharmacologist group*, *[3]Rijnstate Hospitals Pharmacologist*

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

C.H.M. Stengs1, P.M.J. Vis2, H.A.M. Seinen31. Rijnstate Allergy centre & department of ENT, Rijnstate; 2. Cooperative pharmacists Association Arnhem & Pharmacy De Laar; 3. Polyclinical pharmacy, Rijnstate Hospital; all Arnhem, The Netherlands Introduction (Background & aim)Adherence decreases with treatment duration; however, 3-years sublingual immunotherapy tablet (SLIT) treatment is essential for optimal allergic rhinitis treatment efficacy.

Our goal is to systematically coach and motivate patients to improve adherence and provide patients with the full benefits of SLIT treatment.

Materials & methods: The ENT department, the polyclinical pharmacy, and a 40 pharmacies' network established a SLIT-treatment adherence programme. The physician verified eligibility, prescribed SLIT using a special prescription form, conducted annual review, and 1 call if no show.The form specifies start, refill frequency (90 days), duration (3 years), and care pathway (discussing with patients scope, expectations, goals, consent, and initial tablet handout). Subsequently, administration, support needs, follow-up, and handling side effects were addressed. Pharmacies contacted patients at days 0, ±3, ±90, ±170, ±240, and ±365; subsequently, twice a year. Definitions: completion 1000 tablets collected, discontinuation 91 days late for refill.

Results: Treatments (n=213) were initiated from 2021 and continued at the polyclinic pharmacy (n=68) or pharmacy network (n=145). Eighty-six treatments were discontinued , which could be divided in real stoppers (n=45) or treatments transferred to non- participating pharmacies (still on therapy, n=11, 5%) or switched to subcutaneous immunotherapy (still on therapy, SCIT= 26, 12%), or biologicals (n=2, 1%), or moving houses (n=2, 1%). At least 164 (77%) treatments of immunotherapy were completed.

Conclusions: Three-year patient adherence rates (77% of patients completed SLIT treatment) exceed rates previously reported. This highlights how ENT physicians and pharmacies may collaborate efficiently and improve patient adherence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4508

Safety of nasal allergen challenge using standard and up to 10-fold concentrated allergen solutions

Igor Stenin[1], Kathrin Scheckenbach[1], Martin Wagenmann[1]
[1]*Düsseldorf University Hospital, Department of Oto-Rhino-Laryngology*

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Nasal allergen challenge (NAC) replicates the allergic reaction of the nasal mucosa and is a valuable tool for the diagnosis of allergic rhinitis. However, there is only limited data available on the appropriate allergen dose and the safety of the NAC.

Materials and Methods: A retrospective analysis was performed on charts of 687 patients, 489 adults and 198 children under the age of 18. Of 687 patients, 309 had a known history of asthma. The NACs were performed and evaluated according to a modified German NAC guideline protocol. The first NAC was carried out using 140 µL of a standard 5,000 BU/ml allergen solution as per the manufacturers' guidelines. If this first NAC yielded a negative result, subsequent NAC procedures were performed with increased allergen concentrations of 25,000 BU/ml and/ or 50,000 BU/ml. The occurrence of adverse events (AE) and their treatment were evaluated.

Results: The 687 patients underwent a total of 865 NACs, of which 479 NACs were performed with 5,000 BU/ml, 237 NACs with 25,000 BU/ml and 149 NACs with 50,000. Two AEs were recorded, which results in an incidence rate of 0.2%. The AEs were local symptoms in the upper and lower respiratory tracts and throat, and occurred early (i.e. within 30 minutes) after NAC, one of which was performed with 5,000 BU/ml and the other with 25,000 BU/ml. The two AEs resolved after treatment with inhalative steroids/SABA and oral antihistamines respectively, without sequelae.

Conclusions: The NAC, with standard and even 10-fold concentrated allergen solutions, is a safe diagnostic procedure for adults and children with and without asthma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4545

Sinonasal Fungal Balls: Diagnostic Challenges and Therapeutic Strategies

Safa Nefzaoui[1], Wejdan Mohamed Trabelsi[1], Dorra Chiboub[1], Nadia Romdhane[1], Ines Hariga[1], Chiraz Mbarek[1]
[1]ENT departement of habib thameur hospital . Tunis .tunisia

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Fungal sinusitis has become increasingly due to a better understanding of its pathophysiological mechanisms and advancements in diagnostic tools. Fungal ball represents the common form of non-invasive fungal rhinosinusitis, typically occurring in immunocompetent adults.

Methods: We conducted a retrospective study of 23 cases of fungal ball, treated and followed over a 16-year period from 2006 to 2022.The aim was to describe the clinical, biological, radiological, and histological characteristics of fungal balls.

Results: The mean age was 49.4 years, with a sex ratio of 0.37. The common medical history was dental pathology (63%). The average consultation delay was 14 months. The most frequent symptoms included pain (82%), rhinorrhea (73%). Endoscopy revealed osteomeatal involvement in 54% of cases.CT scan was conducted in all cases, showing maxillary localization as the frequent site (64%), sphenoidal in seven cases (32%) and frontal in 1case. The most common radiological finding was total sinus opacification with intrasinus calcifications in 14 cases (64%).MRI was performed in 7 cases (32%), primarily for suspected sinonasal tumors (3 cases), atypical or high-risk locations for complications (3 cases), and multiple bone erosions with suspected extrasinus extension (1 case).All patients underwent surgical treatment, with an endoscopic endonasal approach in 20 cases (91%) associated to canine fossa puncture in 3cases. Histopathological examination confirmed the diagnosis in 15 cases (68%). The mean follow-up of 5.7 years and no recurrences reported.

Conclusion: The clinical presentation and endoscopic findings of fungal balls are non-specific. However, imaging evaluation, based on characteristic findings, can lead to an accurate diagnosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3794

Stapokibart reduces predicted need for surgery in patients with chronic rhinosinusitis with nasal polyps

Luo Zhang[1] Mi Lu[1], Shen Shen[1], Bing Yan[1], Ming Wang[1], Di Wu[1], Yingshi Piao[1], Jun Tang[2], Xiangli Yang[3], Zhiwei Cao[4], Jinmei Xue[5], Wen Liu[6], Shixi Liu[7], Li Shi[8], Guangke Wang[9], Xicheng Song[10], Yongtian Lu[11], Jianjun Chen[12], Luyun Jiang[13], Jing Ye[14], Shaoqing Yu[15], Yucheng Yang[16], Hongyan Fang[17], Jiping Li[18], Haibo Shi[19], Jiangang Fan[20], Hongyue Yan[21], Haifei Wang[21], Bo Chen[21], Chengshuo Wang[1]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [2]The First People's Hospital, Foshan, Guangdong, China, [3]Tianjin Union Medical Center, Tianjin, China, [4]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China 5 The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [5]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [6]Zibo Central Hospital, Zibo, Shandong, China, [7]West China Hospital Sichuan University, Chengdu, Sichuan, China, [8]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China, [9]Henan Provincial People's Hospital, Zhengzhou, Henan, China, [10]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China, [11]Shenzhen Second People's Hospital, Shenzhen, China, [12]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [13]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [14]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China, [15]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China, [16]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China, [17]Chongqing General Hospital, Chongqing, China, [18]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [19]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China, [20]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, [21]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | Allergic Rhinitis| 22 June – 25 June, 2025, All day

Introduction: Repeat sinus surgery is often required for patients with chronic rhinosinusitis with nasal polyps (CRSwNP) refractory to medical intervention. Stapokibart, a novel anti-IL-4Rα monoclonal antibody, has recently received its approval for the treatment of adults with severe uncontrolled CRSwNP in China. This post-hoc study aimed to evaluate the effect of stapokibart treatment on reduced need for surgery in patients with CRSwNP.

Methods: In the phase 3 CROWNS-2 study (NCT05436275), eligible patients were randomized to receive subcutaneous stapokibart 300 mg or placebo (1:1) every 2 weeks for 24 weeks, in addition to daily mometasone furoate nasal spray. Reduced need for surgery through week 24 was defined as patients achieving a Nasal Polyps Score ≤4 (each nostril ≤2) and a Sinonasal Outcome Test-22 improvement of ≥8.9 points (the minimum clinically important difference). The probability of reduced need for surgery by week 24 was assessed with the Cox proportional hazards model. The between-group difference in the proportion of patients with reduced need for surgery at week 24 was estimated using logistic regression.

Results: A total of 179 patients received ≥1 dose of stapokibart (n = 90) or placebo (n = 89). Of which, 64.4% (58/90) and 62.9% (56/89), respectively, had previously undergone sinus surgery. During the 24-week treatment period, patients treated with stapokibart experienced an over three-fold higher probability of reduced need for surgery (HR [95% CI]: 4.4 [2.8-7.0]; P



Benign Nasal Tumors

3620

Organized hematoma of maxillary sinus - a maxillary sinus pseudotumour

Wan Qi Lim[1], Ming Yann Lim[2]

[1]Ministry of Health Holdings, Singapore, *[2]Tan Tock Seng Hospital, Singapore*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Organized hematoma of maxillary sinus (OHMS) is a rare benign disease that can be locally agressive with bony destruction. It may be mistaken for a malignant tumour. A 67-year-old Chinese female presented for 1 month duration of right sided blood stained nasal discharge. Of note, she is on apixaban for atrial fibrillation. Nasoendosocpy showed a fleshy mass at the right middle meatus. On computed tomography (CT) sinuses, complete opacification of the right maxillary sinus is seen with an isodense to slightly hyperintense expansile mass measuring up to 4.7cm. There were bony defects in the anterolateral wall of the right maxillary sinus. Magnetic reonance imaging (MRI) of the sinuses revealed a right sinonasal heterogeneous mass with peripheral T2-weighted hypointensity. BIopsy of the polyp showed focal hyperplastic surface epithelium which was unlikely representative, and hence she underwent endoscopic resection under general anesthesia. Intraoperatively there was an organized hematoma occupying the entire right maxillary sinus with mass effect. Histology was that of a hematoma. DIagnosis of OHMS can be challenging, and pathogenesis remains unclear. Recurrent hemorrhage within the maxillary sinus has been postulated. DIagnosis includes a polypoidal nasal mass or bleeding, an expansile lesion with local destruction, heterogeneity, and histology findings of dilated vessels, hemorrhage, and fibrin. Treatment is complete surgical excision and correction of any bleeding diathesis.



3633

Diagnosis and Management of Giant Ethmoidal Sinus Osteoma: A Case Study from the National Ear, Nose, and Throat (ENT) Center of Georgia

Nino Besiashvili[1], Grisha Topuria[1]
[1]*National Center Of Otorhinolaryngology, Japaridze-Kevanishvili Clinic*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Ethmoidal sinus osteomas are rare, benign tumors that typically remain asymptomatic but can cause significant symptoms when they compress adjacent structures, such as the orbit. Giant ethmoidal sinus osteomas pose diagnostic and surgical challenges due to their proximity to critical anatomical structures. This case study outlines the diagnosis and management of a giant ethmoidal sinus osteoma, highlighting clinical challenges and the importance of a multidisciplinary approach.

Case study: A 37-year-old female presented with deviation of the left eye, without a history of trauma, recurrent rhinosinusitis, or chronic allergies. A CT scan revealed a giant ethmoidal sinus osteoma with significant deviation of the nasal septum and left orbit. The patient had previously undergone an open surgical approach in 2022, performed by neurosurgeons. A second surgery was required due to persistent symptoms. The second procedure, conducted at the National ENT Center of Georgia, utilized a minimally invasive endoscopic endonasal approach. The osteoma, which exceeded the diameter of the nostril, was carefully separated from the ethmoidal and orbital regions using a bore machine. The orbital defect was repaired.

Results: The patient had immediate postoperative resolution of orbital deviation, with no vision impairment or diplopia. Histopathological analysis confirmed a benign osteoma. At the six-month follow-up, the patient remained symptom-free with no recurrence or complications.

Conclusion: This case highlights the efficacy of a minimally invasive endoscopic approach in managing giant ethmoidal sinus osteomas. The approach minimizes morbidity, accelerates recovery, and underscores the importance of multidisciplinary collaboration and precise imaging in complex cases.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3967

Insights into the world of sinonasal papilloma

Shruti Aggarwal[1], Balakrishnan R.[2], Rohit Singh[3]

[1]Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, ManipalClinic, [2]Professor and Rhinology unit head, Department of Otorhinolaryngology and Head and Neck Surgery, Kasturba Medical College Manipal, Manipal Academy of Higher Education, Manipal, [3]Professor and Head Otorhinolaryngology, Kasturba Medical College Manipal, Director-Alumni Relations, Manipal Academy of Higher Education, Manipal

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Background- World Health Organization (WHO) classifies sinonasal papilloma into inverted, exophytic and oncocytic type. Out of which, Inverted sinonasal papillomas are rare, benign locally aggressive tumors accounting for 0.5 - 4% of all sinonasal neoplasms, with an incidence of usually 0.2 - 1.5/100,000 per year. They have a male preponderance, with a positive HPV 6,11,16,18 correlation, with a malignant transformation potential of 8-10%.

Aims and objectives- To evaluate the clinical presentation, radiological extent, surgical management and recurrence follow up, of patients with inverted sinonasal papilloma in South Indian population.

Materials and Methods: A retrospective review of adult patients that were hospitalised in a tertiary care hospital from January 2016 to January 2025, with unilateral nasal block and nasal discharge secondary to endoscopic presence of a nasal mass which bleed on probing, extent radiologically confirmed were studied.

Results: Eighteen patients with endoscopically confirmed pale, friable, fleshy mass arising from lateral wall of nasal cavity were included in the study. All patients were treated surgically through an open or endoscopic approach. All patients with T1 (13), T2 (2), T3 (1) Krouse staging system underwent endoscopic medial maxillectomy and T4 (2) recurrent case underwent external open approach medial maxillectomy with lateral rhinotomy.

Conclusions: Inverted sinonasal papillomas have a high tendency for recurrence (14%), recurrence can be caught early with MRI scans, though histopathology is the mainstay of diagnosis. More prospective studies are required to investigate the molecular markers responsible for malignant transformation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3699

Clinical and imaging correlations of inverted papilloma and chronic rhinosinusitis

Adriana Neagos[1], Cristian Mircea Neagos[2]

[1]GEORGE EMIL PALADE University of Medicicne Pharmacy, Science and technology, *[2]GEORGE EMIL PALADE University of Medicicne Pharmacy, Science and technology, ENT Departement*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction Inverted papilloma is a type of benign tumor, which is formed from the nasal epithelial mucosa or paranasal sinus mucosa. This tumor can be locally destructive and has frequent recurrences. These papillomas are quite rare, accounting for only 0.4%-4.7% of all naso sinusal tumors, and they can transform malignantly into squamous cell carcinoma, with a mortality risk of 5%-15%.

Material and Method The motivation of the present research consists in the efficiency of the correct diagnosis of the inverted Schneiderian papilloma Thus, the management of patients can be mismanaged, the incorrect treatment given, which can increase the occurrence of complications. The consequences of this can lead to recurrence or malignant transformation of the tumor The selection criteria consisted of: admission diagnosis of chronic rhinosinusitis, chronic rhinosinusitis with polyps and the histopathological result of inverted papilloma. The sample size is 68 participants, aged between 23 and 62 years (mean 41.78).

Results: There is a statistically significant difference between the mean age values in subjects with chronic rhinosinusitis and those with chronic rhinosinusitis with polyps. There is a statistically significant difference between the mean age values in subjects with chronic rhinosinusitis and those with inverted papilloma. There is no statistically significant difference between the mean age values in subjects with chronic rhinosinusitis with polyps and those with inverted papilloma.

Conclusion: There are no association relationships between chronic rhinosinusitis, polypous chronic rhinosinusitis, and inverted papilloma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3717

Use Of Topical 5-Fluorouracil In Revision Surgery Of Inverted Papilloma With Attachment To Skull Base

Martin Škrlec[1], Jure Urbančič[1], Domen Vozel[1]
[1]*University Medical Centre Ljubljana*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Inverted papillomas (IP) of paranasal sinuses are benign tumors that grow locally aggressively and tend to cause malignant alteration. Treatment requires surgical removal of the tumor and drilling of the attachment site. Recurrence of IP varies and mostly depends on surgical technique. Certain nasal and paranasal cavity areas are challenging to reach, and total removal cannot be performed. In this case, chemotherapeutic 5-fluorouracil (5-FU) can reduce the chance of recurrence. It was first used as an addition to surgery in treating adenocarcinomas in nasal and paranasal regions; however, lately, it has also been used as an addition to surgical removal of IP.

Case report: The authors present a case of recurred IP in the frontoethmoid region. Prior surgery was complex due to the attachment of the tumor to the skull base (fovea ethmoidal and frontal recess), with cancer reaching inside of the frontal sinus. Despite meticulous removal of the tumor, DRAF III procedure, orbital decompression, and drilling of the skull base, the cancer recurred in less than 2 months after surgery. Since extensive scale surgery would require transcribriform resection, a multidisciplinary skull baseboard suggested the administration of topical 5-FU after another removal of the tumor. Results: Revision surgery and application of 5-FU on tumor attachment were performed without complications, followed by four additional outpatient administrations of topical 5-FU. Observations showed no signs of recurrence, with 8 months of disease-free time.

Conclusions: Topical application of 5-FU can contribute to lower recurrence of IP after surgery, particularly in areas where total removal and drilling of tumor origin are difficult to achieve.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3792

Endonasal endoscopic management of pterygopalatine fossa schwannoma

Karina Rapsa[1]

[1]*Lipex Aesthetic Surgery clinic, Riga, Latvia*

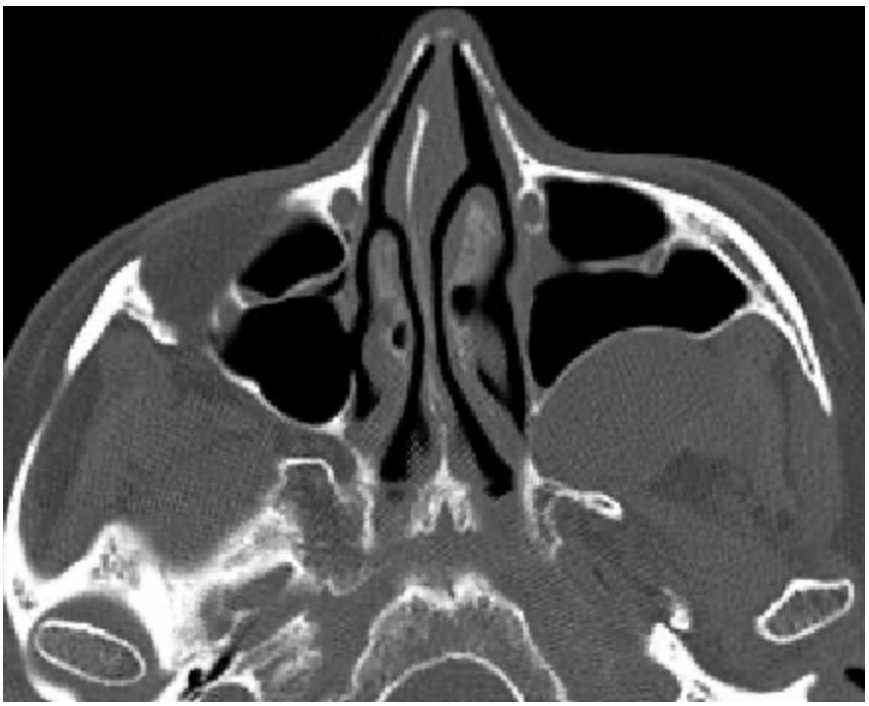
Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Schwannoma is a benign tumor arising from Schwann cells of nerve sheath. In 25% of cases it is located in head and neck region. Pterygopalatine fossa (PPF) is very rare origin of schwannoma. According to complex anatomical location, there are various strategies for surgical management of PPF schwannoma.

Case description: This is a case of 52-years-old woman presented to otorhinolaringologyst complaining on pressure sensation in left side of her face for several months, mostly above the projection of maxillary sinus. On endoscopic examination of nasal cavity no pathological changes were detected. On computed tomography (CT) 1.8 x 3 cm well-delineated mass in left PPF was visualised. Posterior wall of the left maxillary sinus was protruded by mass. On magnetic resonanse (MR) homogenous enhancement of the lession after gadolinium injection was present. Radiologist mentioned a great probability of the lession to be V II cranial nerve schwannoma. Endonasal endoscopic approach was chosen for management of the lession. Medial maxillectomy, preserving the head of the inferior turbinate, was performed. Posterior wall of the maxillary sinus was protruded by lession mass. Fine remaining bone was gently removed from the surface of the lession. Tumor was completely removed via endonasal route. Mild bleeding from sphenopalatine artery occurred, controlled by electrocautery. No major complications occurred inpraoperatively or in postoperative period. The patient discharged from the hospital on the third postoperative day.

Results: On histopathological examination diagnosis of schwannoma was confirmed. Endoscopically complete healing of the mucosa in postoperative deffect was detected. On control MR no tumor recurrence was detected.

Conclusion: Endoscopic endonasal approach is beneficial for PPF schwannoma management. It provides good accessibility and visualisation for surgeon, and low postsurgical morbidity and discomfort for patient.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3805

Pleomorphic adenoma of the nasal septum: a rare case

Stylianos Varagkas[1], Aikaterini Tsiliggeridou[1], Ioannis Skoumpas[1], Chrysoula Vardaxi[1], Ioannis Emmanouil[1], Georgia Chainoglou[1], Aimilios Chatzinikolaou[1], Spyridon Gougousis[1]

[1]General Hospital of Thessaloniki "G. Papanikolaou", Thessaloniki, Greece

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Pleomorphic adenomas are the commonest neoplasms of the salivary glands. They most frequently involve the major salivary glands, with the parotid gland constituting 60% of all cases. They can also arise from minor salivary gland tissue, mostly in the palate and the upper lip. Rarely, pleomorphic adenomas can develop in other sites where minor salivary glands exist, such as the nasal cavity, pharynx, trachea or lacrimal gland. We present a rare case of pleomorphic adenoma of the nasal septum managed in our clinic.

Case study: A 35-year-old woman presented with a history of left-sided nasal obstruction, foreign body sensation and epistaxis for the past year. Her past medical history was unremarkable. Physical examination revealed an oval, elastic, rigid, mucosa-covered mass pedunculated at the anterior portion of the left nasal septum. No other abnormal findings were noted during the examination. A computed tomography scan confirmed the presence of a mass in the left anterior nasal cavity, measuring about 16mm in its greatest dimension.

Results: The tumor was removed endoscopically with adequate safety margins under general anesthesia. Histopathologic examination confirmed the diagnosis of pleomorphic adenoma, cellular subtype.

Conclusions: Pleomorphic adenoma in the nasal cavity is extremely rare, with only a couple of case series and few isolated case reports reported in the literature. Nevertheless, it should always be included in the differential diagnosis due to its potential for recurrence, metastasis and malignant transformation. Long-term follow-up is therefore necessary even if the tumor is completely resected.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3856

Endoscopic Management of Sinonasal Solitary Fibrous Tumor: A Rare Case Report

Santiago Almanzo[1], Saúl Astray Gómez[1], Lucas Fito Martorell[1], Alfonso García Piñero[1]
[1]*Hospital Universitario y Politécnico La Fe*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background and Aim: Solitary fibrous tumors (SFTs) are rare mesenchymal neoplasms, primarily originating in the pleura but occasionally occurring in extrapleural sites, including the sinonasal cavity. Sinonasal SFTs account for less than 6% of head and neck SFTs, often mimicking other sinonasal pathologies. This case highlights the clinical presentation, radiological features, surgical management, and histopathological findings of a sinonasal SFT, emphasizing the importance of a multidisciplinary approach for accurate diagnosis and optimal treatment.

Case Study: A 59-year-old woman presented with progressive left-sided nasal obstruction, epistaxis, facial paresthesia, and anosmia. Imaging revealed a well-defined, hypervascular mass (44 × 18 × 43 mm) occupying the left nasal cavity and extending into adjacent sinuses. Given its prominent vascularization, preoperative embolization was performed to reduce intraoperative bleeding risk. Endoscopic resection was successfully achieved, and histopathological analysis confirmed an SFT with clear margins. Immunohistochemistry showed CD34 and STAT6 positivity, with a low Ki-67 proliferation index, indicating low metastatic potential. The postoperative course was uneventful, and the patient remains asymptomatic and recurrence-free after 12 months of follow-up.

Results: Histopathological and immunohistochemical findings confirmed the diagnosis of SFT. The patient had no perioperative complications, and no recurrence has been observed. Long-term follow-up remains crucial to detect potential late recurrences.

Conclusions: Sinonasal SFTs are rare and diagnostically challenging tumors. A comprehensive approach integrating imaging, immunohistochemical analysis, and meticulous surgical planning—including preoperative embolization for hypervascular lesions—is crucial for optimal management. Complete surgical excision remains the gold standard, offering a favorable prognosis, but long-term surveillance is essential.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3902

Sinonasal Inverted Papilloma- Relevance Of Radiological Anatomy In Disease Recurrence

Lalee Varghese[1], Rakesh Bright[1], Madhavi Kandagaddala[2], Lisa Mary Cherian[1], Regi Kurien[1], Belavendra Antonisamy[3], Aparna Irodi[2], Vedantam Rupa[1]

[1]Department of Otorhinolaryngology, Christian Medical College, Vellore, [2]Department of Radiology, Christian Medical College, Vellore, [3]Department of Biostatistics, Christian Medical College, Vellore

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Sinonasal inverted papillomas are locally aggressive, benign tumors with high rates of recurrence. This study aims to describe radiological anatomy of patients with inverted papilloma (IP) and to evaluate association between radiological findings and disease recurrence.

Methods: A retrospective observational study was conducted at a tertiary care hospital on patients with inverted papilloma who underwent surgery between January 2010 and December 2019. Patients were grouped as primary and recurrent cases and later at follow up, depending on disease status, they were subcategorized into 'primary with no recurrence' (PnR), 'primary with recurrence' (PwR), 'recurrent with no further recurrence' (RnR), and 'recurrent with further recurrence' (RwR) groups. Radiological and surgical data were collected and analyzed.

Results: Among the 117 patients, zygomatic recess was the most prevalent maxillary recess. The commonest recess affected in both primary and recurrent groups was palatonasal recess. Anterior ethmoid (p=0.047), frontal recess (p=0.017) and frontal sinus (p=0.026) showed significantly higher radiological involvement in recurrent cases compared to primary cases. Among the recurrent cases, involvement of posterior ethmoid (p=0.030), frontal recess (p=0.017), intraorbital extraconal compartment (p=0.036) and Krouse stage T4 (p=0.002) were significantly higher in those with repeated disease recurrence (RwR). Within the maxillary sinus, the most common sites of recurrence were the lateral wall and floor.

Conclusion: In recurrent IP, predictors of repeated recurrence include site of origin of disease being frontal recess/sinus region, involvement of posterior ethmoid, frontal recess and intraorbital extraconal compartment and Krouse stage T4 at time of diagnosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3903

Is there an environmental etiology for Schneiderian papillomas?: A case report of 2 household partners developing Schneiderian papillomas

Jing Ying See[1], Kaijun Tay[1], Abhilash Balakrishnan[1], Lu Hui Png[1], Neville Teo[1]
[1]Singapore General Hospital

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Schneiderian papillomas (SP) are benign tumours of the nasal cavity and paranasal sinuses. Attempts have been made to understand the etiology of SP development, with studies demonstrating an association of SP with human papillomavirus (HPV), environmental exposures, angiogenic factors and chronic inflammation. To the best of our knowledge, there has not yet been reports on the development of SP in household partners.

Case Study: We report a case of 2 household partners who presented to our centre for treatment of SP. Patient 1 is a 69 year old gentleman with previous right inverted papilloma (IP) and underwent endoscopic resection in 1996. He returned in October 2023 with recurrent right IP and underwent repeat endoscopic resection. Of note, he is the household partner of patient 2, a 64 year old lady who presented with right SP in Oct 2024 and underwent endoscopic resection in Dec 2024. Histology revealed an oncocytic papilloma.

Discussion: SPs are generally rare, accounting for 0.4-4.7% of all sinonasal tumours. Although there is a statistical chance for sporadic development of SP in household members, such an instance would be rare. Our patients have no commonly described risk factors for SP development and as household partners also do not share any genetic background. This occurrence thus provokes one to think about other possible underlying etiologies of SP, including between inverted and oncocytic papillomas

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3956

Incidental Finding of a Nasal Schwannoma: A Case Report and Literature Review

Kelvin Lim[1], David Kok Teik Loke[1]

[1]Khoo Teck Puat Hospital Department of Otorhinolaryngology, Singapore 2Tan Tock Seng Hospital Department of Pathology, Singapore

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Kelvin Yong Jie Lim, MBBS, MRCS(Edin), MMED(ORL)1, David Kok Teik Low, MB ChB(UK), MRCS(Edin), FRCS(Edin), FRCS ORL HNS(UK), FAMS (ORL HNS)11Department of Otorhinolaryngology, Khoo Teck Puat Hospital, Singapore Schwannomas are benign nerve sheath tumours arising from Schwann cells, accounting for less than 4% of sinonasal tumours. They typically present with nasal obstruction, epistaxis, or facial pain, while asymptomatic cases are rare. We report an 84-year-old Malay female with no significant medical history, who was incidentally found to have a nasal polypoidal lesion on a CT brain performed for unrelated reasons. She denied nasal obstruction, rhinorrhoea, epistaxis, anosmia, or other sinonasal complaints. Nasoendoscopy revealed a well-defined tumour attached to the medial surface of the left middle turbinate and nasal septum, without skull base or posterior choana extension. CT imaging showed a 2.2 × 1.4 × 2.1 cm polypoidal lesion originating from the left middle meatus, extending posteriorly to occlude the sphenoethmoidal recess and abutting the superior part of the left inferior turbinate. Histopathology demonstrated a biphasic spindle cell tumour with Antoni A and B areas, hyalinised blood vessels, and wavy buckled nuclei, consistent with schwannoma. No significant atypia, mitotic activity, or necrosis was seen. Complete surgical excision is the treatment of choice, with the endoscopic endonasal approach preferred for its minimal morbidity and excellent visualisation. If untreated, sinonasal schwannomas can enlarge, causing nasal obstruction, chronic infections, orbital invasion, or skull base extension. Recurrence is rare following total excision. This case highlights the importance of considering rare neoplasms in the differential diagnosis of nasal masses, even in asymptomatic patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3987

Rhinolith with oronasal fistula

Vladimir Vranjes[1]

[1]University Clinical Center of the Republic of Srpska Banja Luka

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

A rhinolith, a nasal concretion or stone, is an unusual foreign body in the nasal cavity that can remain asymptomatic for a long period of time, often does not cause significant discomfort, is discovered accidentally, and most often causes unilateral nasal obstruction. A foreign body that has been in the nasal cavity for a long time serves as a nucleus around which calcium and magnesium salts from nasal secretions and organic components are coated, and in this way rhinolith is formed. A foreign body can be of endogenous or exogenous origin. When left untreated, rhinoliths can cause unilateral nasal obstruction, rhinorrhea, nasal discharge, epistaxis or, in rare cases, progressive destruction of surrounding structures, resulting in perforation of the septum and/or hard palate or oroantral fistula. Surgical treatment is the only effective treatment method with rarely reported complications. This case report describes a 54-year-old man who came to the ENT clinic due to years of nasal obstruction accompanied by occasional purulent and blood-tinged secretions, while a month ago fluid and tobacco smoke had also penetrated from the oral cavity into the nasal passages. Clinical examination revealed the existence of rhinoliths and oronasal fistula. The patient was operated on successfully. Rhinitis is an unusual clinical etiology that, if not diagnosed, can lead to a progressive destructive disease and various complications, and it is necessary to perform a CT diagnosis in case of any suspicion, and when proven, surgical treatment has a high success rate with rarely reported complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4009

Our experience in management of advanced stages of juvenile nasal angiofibromas

Olga Romanova[1], Marina Nersesyan[2]

[1]European Medical Center, [2]Peoples' Friendship University of Russia

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Juvenile nasal angiofibroma (JNA) is a rare benign, fibro-vascular, locally aggressive tumor with invasive growth patterns and high probability of recurrence up to 52%. JNA presents exclusively in adolescent boys between 9 and 19 years old, total about 0.05% of head and neck tumors.

Materials and methods: 200 patients with JNA had been treated surgically from 2002 to 2025 at N.N. Burdenko National Medical Research Center for Neurosurgery. All patients (primary and recurrences) were males of the age 7—38 years (16.1 [11.3; 19] years) had been treated surgically. 155 from 200 patients had been treated previously in other clinics and come to us with recurrence JNA. Of 146 patients with advanced stages JNA, 70 patients (with the stage III- VM) had been treated pure endonasally endoscopically and 74 patients (with III-VL stages, including 21 with intracranial spreading). The aim of the study was to analyze our experience in surgical treatment of advanced stages of JNA, to create algorithm of its differential management according with its stage and blood supply.

Results: Embolization was performed to all patients (exclude 8 patients who had previously sutured ECA). The median blood loss was 1449 (400-4900) ml, comparing with not embolized patients 4250 (1500-8500) ml. The amount of operative blood loss was depended on degree of its devascularization. Surgeries for recurrences were not only technically more difficult, but accompanied with more operative blood loss (W=2628). Because of massive blood loss we used the following blood saving methods: hardware reinfusion (with cell-saver), iso- or hypovolemic reinfusion, arterial hypotension. This approach helped to minimized hematransfusion in 79 cases (39,5%) and not to use it in 121 patients (60,5 %). Effectiveness of endoscopic surgeries were 81%, 38 (19%) patients had recurrences. Effectiveness of combined approach was 84,5%, 31 (15,4%) patients had recurrences. All the patients were followed every 6

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4029

Sinonasal hemangiopericytoma (Glomangiopericytoma): review of our four cases

Olga Romanova[1], Marina Nersesyan[2], Valentine Popaduk[2]

[1] European Medical Center – mesical school, [2]Peoples' Friendship University of Russia, [3] European Medical Center

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Glomangiopericytomas, type of Hemangiopericytomas (HPCs) are uncommon vascular lesions that arise primarily in the lower extremities, retroperitoneum, and pelvis. However, 5-7 % occur in the nasal cavity. This type of hemangiopericytoma is usually of low malignant potential but quite common relapsing. The main factor incriminating relapses is the complete or incomplete resection. Other factors that may also increase the risk of recurrence are large tumor size, bone involvement, severe nuclear pleomorphism, and high mitotic index. The optimal treatment includes complete surgical resection. By literature, mostly external approach is described. HPC is prone to hemorrhage.

Objectives: The aim of this topic is to present four cases with HPC adding to the world literature of this rare tumour with demonstrating the surgical technics and follow-up results.

Materials: 4 patients with sinonasal hemangiopericytomas treated 2018-2025 yrs (anamnesis, endoscopy, CT and MRI results, treatment and follow-up). Results: all of four patients treated by endoscopical sinus surgery. Revision surgery was performed in 1 patients twice: 1,5 years after by Denker technic and 6 month later with maxillar bone exenteration by maxillarfacial surgeon. To date the patient is free of recurrence. The three remaining patients are without any residual tumor.

Conclusion: PHC are uncommon neoplasms of vascular origin. The prognosis is mainly determined by initial tumor size and expansion as well as primary complete resection. Endoscopical technic is safe and precise to control bleeding and total mass removal. Every 6-month follow-up is necessary to realize recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4034

Do not be deceived by inflammatory polyps: A giant inverted papiloma

Javier Morales[1], Mª Pilar Benavent[1], Nuria Arnaiz[2], Gonzalo Díaz[2], Jessica M. Santillán[2], Álvaro Sánchez[2]

[1]H. U. Fundación Jiménez Díaz, [2]H. U. General de Villalba

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Schneiderian papillomas are rare benign sinonasal tumors that originate in the epithelium lining the lateral walls of the nasal and paranasal sinuses. Their large size or variegated location can sometimes pose a challenge to even the most experienced surgeons.

Case report: A 56-year-old man with hypertension, smoking, chronic obstructive pulmonary disease (occupational exposure to wood) was seen at the ENT-office due to a friable polypoid lesion that appears through the right nostril.Biopsy revealed polyps with ulceration and endophytic growth, and inflammatory infiltrate. CT and MRI revealed soft tissue lesions in both the frontal and anterior ethmoid sinuses, as well as erosion of the medial walls of both orbits, which is consistent with an inverted papilloma. As a result of the findings, a radical endoscopic approach using DRAF III was chosen to undergo surgical resection.

Discussion & Conclusions: It is estimated that inverted papillomas account for between 0.4 and 4.7% of all nasal tumors and approximately 70% of sinonasal papillomas. The incidence varies from 0.2 to 1.5 cases per-100,000 people/year. Predominantly, it occurs in men between the ages of 50 and 60 (2-5:1). Despite adequate surgical resection (0-86%), they often recur, and they have a substantial potential for malignant transformation. Over the past 20 years, the concept of surgical resection has changed significantly. The complete resection of the papilloma, including the removal of all sinus mucosa and the bone of all sinus walls, was previously considered to be essential. An approach that focuses on the tumor pedicle and unifocal location is now being proposed.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4043

Giant Ethmoid Osteoma with Orbital Extension: Case Report and Literature Review

Maria Beatriz Castanheira[1], Eduardo Franco[1], Vitor Oliveira[1], Cristina Caroça[1], Diogo Oliveira e Carmo[1]
[1]*Hospital Cuf Tejo*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background and Aim: Osteomas are the most common benign tumors of the sinonasal region, with ethmoid involvement occurring in 20-25% of cases. They represent approximately 3% of all paranasal sinus tumors, with male predominance. Giant osteomas (>30mm or>g) can cause significant complications due to local extension. We aim to present a case of giant ethmoid osteoma with orbital invasion and review current literature regarding surgical approaches and outcomes.

Methods: We present a case of a 16-year-old female with left ocular pruritus, nasal obstruction, rhinorrhea, and exophthalmos. A literature review was conducted using PubMed and MEDLINE databases focusing on ethmoid osteomas with orbital involvement, their surgical management, and outcomes. Imaging studies in our case (CT and MRI) revealed a 3.5 x 3.9 x 3.8cm calcified lesion involving the left ethmoid cells with orbital extension.

Results: A two-stage endoscopic approach achieved complete tumor removal. Literature review revealed that while open approaches were historically preferred for orbital cases, endoscopic techniques have shown comparable efficacy with reduced morbidity in selected cases. Our patient's post-operative assessment showed symmetric and normally positioned eyeballs with preserved ocular movements. Follow-up MRI confirmed complete tumor removal.

Conclusion: Giant ethmoid osteomas with orbital extension can be successfully managed through staged endoscopic approaches. Current literature supports endoscopic resection as a viable alternative to open surgery in appropriately selected cases, offering excellent functional and cosmetic outcomes while minimizing surgical morbidity.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4045

Distinctive Histopathological Features and Diagnostic Criteria of Inverted Papilloma: A Systematic Review

Ibrahem Erwe[1]

[1]Otorhinolaryngology, Head and Neck department, Aseer Central Hospital, Aseer region, Abha City. Saudi Arabia

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Sinonasal IP represents an unusual neoplastic process that exhibits a relatively high proliferation index, high local recurrence rates, and a tendency to evolve into malignancy. However, since IP diagnosis and management have improved over time, it is more likely there are no specific diagnostic criteria for IP, and the tumor can be confused with other sinonasal neoplasms.

Methods: The present systematic review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. PubMed, Cochrane Library, and Google Scholar databases were searched using keywords and MeSH terms to identify the published relevant studies in English. The Newcastle-Ottawa Quality Assessment Scale was used to assess the study's quality, and the results were analysed qualitatively and quantitatively.

Results: 12 studies were selected and involved 792 patients with sinonasal inverted papilloma. By histopathological evaluation, various characteristics were associated with recurrence and malignant change, High specificity was observed with Sp100 and SCC antigens at 63%. The recurrence rate varied from 13.9% to 52%. The risk of malignant transformation ranged between 7,4% and 12,9%. Using Kaplan-Meier curves, it was established that there was poor recurrence-free survival for patients with hyperostosis ($p = 0.023$).

Conclusion: The sinonasal inverted papilloma has characteristic histopathological and radiologic features that improve diagnostic accuracy and clinical outcome when added to diagnostic indices. One of the main issues that still require a focus is the ability of NSCLC to recur and transform into malignant forms that require careful extirpation and further observation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4054

"Lateral Nasal Wall Cantilever Graft: A Novel Solution for Post-Oncologic Nasal Reconstruction"

Hammaad Khan[1], Yinan Zhu[1], Alison Lim[1], Saleh Okhovat[1]
[1]*Queen Elizabeth University Hospital Glasgow*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Aims: To present the Lateral Nasal Wall Cantilever Graft as an effective technique for complex nasal reconstruction following multimodality treatment for sinonasal malignancies. This method restores structural integrity, supports the internal nasal valve, and improves both function and aesthetics in patients with significant bony and cartilaginous loss.

Methods: The technique involves securing an autologous or cadaveric rib graft to the midvault, creating a cantilever mechanism that reinforces the internal nasal valve. Pyriform aperture support is re-established, restoring nasal airflow and contour. We illustrate this approach through case examples and highlight technical pearls for successful application.

Results: Case examples demonstrate improved nasal structure, stability, and airflow post-reconstruction. The graft effectively prevents internal and external nasal valve collapse, providing long-term functional and aesthetic benefits. Patients report enhanced breathing and satisfaction with nasal contour. No significant complications or graft failures were observed.

Conclusions: The Lateral Nasal Wall Cantilever Graft offers a reliable and reproducible solution for complex nasal reconstruction in post-oncologic patients. By restoring nasal support and airflow, this technique addresses key functional and aesthetic challenges associated with sinonasal malignancy treatment. This technique provides a novel, structured approach to nasal reconstruction in challenging cases where conventional methods may be insufficient. By utilizing a cantilever mechanism, it enhances nasal stability and function, offering an effective solution for patients with extensive structural loss following cancer treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4066

Osteomas of paranasal sinuses incidence: a systematic review

Maria Karela[1], Myriam Metaxa[3], Pinelopi Skourti[3], Vasiliki Demosthenous[3], Panagiotis Gonatidis[3], Vasiliki Gkoulioni[1], Eleni Chalkiadaki[4], Georgios Grivas[1]

[1]Consultant, ENT department of "Pammakaristos" hospital, Athens, Greece, *[2]Consultant, ENT department of "Pammakaristos" hospital, Athens* , *[3]Intern, ENT department of "Pammakaristos" hospital, Athens, Greece*, *[4]Director, ENT department of "Pammakaristos" hospital, Athens, Greece*, *[5]Intern, ENT department of "Pammakaristos" hospital, Athens*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Osteomas are benign lesions, the majority of cases are discovered as incidental findings after imaging examination. They constitute the most common type of benign tumor of the paranasal sinuses. The aim of this study is to determine the most recent data regarding the incidence and epidemiology of paranasal osteomas through a literature review.

Material-Methods: A systematic review of the literature in Pub Med was performed regarding the latest epidemiological data on the incidence of paranasal osteomas. Studies from the last 10 years were selected.

Results: Most of the studies reviewed assessed the method of diagnosis, growth rate, location, demographic factors such as age and gender that affect the appearance and severity of the condition. Furthermore, other studies assessed different types of factors, such as treatment methods and the association of the appearance of paranasal osteomas with coexisting anatomical variations.

Conclusions: Paranasal osteomas are usually asymptomatic and diagnosed as incidental findings on computed tomography. The most common sites of localization are the frontal sinus and ethmoid, they have a low growth rate, occur slightly more often in men and the surgical treatment is reserved for symptomatic patients. As there are no meta-analyses and systematic reviews regarding the epidemiology and incidence of the disease in the last decade, further research is needed to lead to more secure conclusions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4110

Inverted papilloma of paranasal sinuses: risk factors of local recurrence after surgical resection - a systematic review

Maria Karela[1], Myriam Metaxa[2], Vasiliki Gkoulioni[1], Panagiotis Gonatidis[2], Pinelopi Skourti[2], Vasiliki Demosthenous[2], Eleni Chalkiadaki[3], Georgios Grivas[1]

[1]Consultant, ENT department of "Pammakaristos" hospital, Athens, Greece, *[2]Intern, ENT department of "Pammakaristos" hospital, Athens, Greece*, *[3]Director, ENT department of "Pammakaristos" hospital, Athens, Greece*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Inverted papillomas are predominantly non-malignant tumors of nasal cavity and parasinuses and are usually found unilaterally. Despite their non-malignant character 5-15% can transform to malignant and 13-35% of inverted papillomas reoccur despite surgical excision. The aim of this study is to determine the most recent data regarding the main factors contributing to local recurrence of the disease after surgical treatment.

Material-Methods: A systematic review of the literature in PubMed was conducted on the latest data regarding the risk factors for local recurrence of the disease after surgical resection. Studies over the last 5 years were used to extract conclusions.

Results: In most of the studies reviewed, incomplete tumor resection, non-free resection margins, the presence of one or more previous operations in the nasal cavity and paranasal sinuses, the presence of disease in the frontal sinus, the onset of the disease at a young age, and the presence of craniofacial dysplasia are factors that influence the recurrence of the disease, as they increase its frequency. On the other hand, demographic factors and the advanced Krouse staging system do not seem to affect the frequency of recurrence.

Conclusions: The main factors associated with the possibility of recurrence of the disease after surgical treatment are the number of previous operations, the location of the disease and the free margins of resection in the initial treatment. As there are no meta-analyses and systematic reviews concerning the risk factors for local disease recurrence in the last five years, further research is needed to lead to more secure conclusions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4117

Sphenoidal Sinus Mucocele with Optic Nerve Dehiscence: A Case Report

Asier Blanco[1], Maria Pilar Benavent[1], Hander Acosta[1], Marta Santiago[1], Javier Morales[1], Luz Lopez[1], José Miguel Villacampa[1]
[1]Hospital Universitario Fundación Jiménez Díaz

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Paranasal sinus mucoceles are rare, benign lesions that can present with diverse clinical manifestations depending on their location. Despite their slow growth, they have the potential to erode and displace adjacent structures, making early diagnosis and treatment crucial to prevent complications. Mucoceles most commonly affect the frontal sinus, followed by the ethmoidal sinus, with sphenoidal involvement occurring in less than 5% of cases. We present a case of a sphenoidal sinus mucocele with optic nerve dehiscence.

Case Report: We report the case of a 42-year-old woman with no prior medical history who presented to our hospital with reduced visual acuity and floaters for four months. Ophthalmologic examination, including visual field testing, revealed no abnormalities. Given the absence of ocular pathology, a cerebral CT scan and MRI were performed. The rest of the neurological exploration was normal.

Results: Imaging revealed a hypodense, hypointense nodular lesion in the right lateral sphenoidal sinus, suggestive of mucocele, with bone erosion of the lateral optic nerve canal. After complete ENT evaluation, the patient was informed about the diagnosis and treatment options. A transnasal endoscopic sphenoidectomy was performed, with mucocele evacuation and marsupialization. Postoperative follow-up showed complete resolution of symptoms, with no recurrence observed at six months.

Conclusion: Sphenoidal sinus mucoceles should be considered in the differential diagnosis of persistent visual symptoms with normal ophthalmologic findings. Computed tomography and magnetic resonance imaging are essential for accurate diagnosis. The treatment of choice is transnasal endoscopic sphenoidectomy, which facilitates mucocele evacuation, while marsupialization ensures proper drainage and reduces risk of clinical recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4118

Treating People Vs. Patology: A Patient-Centered Approach To Sinus Mucoceles

Marta Santiago Horcajada[1], María Pilar Benavent Marín[1], Virginia Vasallo García[1], Daniela Cristina Páez Mantilla[1], Luz López Flórez[1], José Miguel Villacampa Aubá[2], Javier Morales Domínguez[1], Asier Blanco Goñi[1]

[1]Hospital Universitario Fundación Jiménez Díaz, [2]Rhinology and Skull Base Surgery Unit. Otorhinolaryngology Department. Hospital Universitario Fundación Jiménez Díaz. Madrid, Spain

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

INTRODUCTION: Mucoceles are benign, slow-growing, expansive cystic formations whose capsule is composed of healthy mucosa from the paranasal sinus. They can lead to the destruction of adjacent tissues, causing aesthetic structural defects. Although endoscopic surgery is the preferred approach, if complications are present, combined external reconstruction and endoscopic surgery is an option. Age and patients´ comorbidities must be considered to decide which approach is best.

MATERIAL AND METHODS: An 80-year-old patient with chronic ischemic cardiopathy and no previous nasal surgery presents a history of pain in the right frontal region, along with noticeable swelling in the area over the past six months. MRI revealed a well-defined, fluid-filled expansive soft tissue lesion centered in the right frontal sinus, with signs of bone remodeling and destruction of the frontal bone, extending to adjacent extracranial soft tissues.

RESULTS: A right endoscopic surgical approach with a Draf IIB procedure was proposed, including the placement of a corticosteroid-releasing absorbable implant in the frontal ostium. After offering the patient different surgical options, considering his age and comorbidities we opted for surgery without bone defect reconstruction, arguing possible growth of adjacent tissues after surgery. Early follow-up showed the absence of clinical disease with no signs of abnormal scarring or inflammation.

CONCLUSIONS: Here, we aim to highlight the possibility of eliminating the need for reconstruction in fragile patients because of the absence of serious consequences if not performed and if it's possible the regeneration of the affected adjacent tissues by preserving the mucocele external capsule with healthy mucosa.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4132

Extraosseous ameloblastoma of the maxillary sinus

Oleksandra Tytarchik[1], Iryna Tsvirinko[1], Diana Zabolotna[1]

[1]State institution "O.S. Kolomiychenko Institute of Otolaryngology of National Academy of Medical Sciences of Ukraine", Zoolohichna street, 3, Kyiv, Ukraine, 03057

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Ameloblastoma is a rare benign epithelial tumor characterized by slow but aggressive local growth. It accounts for 1-3% of all jaw tumors, with 80% affecting the mandible and only 20% involving the maxilla. Due to its aggressive behavior and a recurrence rate of up to 50% within five years post-treatment, ameloblastoma requires radical surgical excision. This report presents a rare case of an extraosseous ameloblastoma in the maxillary sinus.

Case Study: A 61-year-old male presented with nasal congestion, impaired nasal breathing, purulent nasal discharge, and episodic headaches. Clinical examination revealed a pale-pink tissue mass in the right half of nasal cavity. A biopsy was initially non-informative. CT imaging identified a soft-tissue mass with irregular contours extending from the maxillary sinus into the nasal cavity, choana, ethmoid cells, and frontal sinus (Figure 1). The tumor was surgically excised via an endoscopic endonasal approach, and histological analysis confirmed extraosseous/peripheral ameloblastoma.

Results: Postoperative histopathological examination revealed multiple tumor cell islands surrounded by basal-like cells with disrupted polarity. The absence of severe cellular atypia and mitotic figures confirmed the benign nature of the tumor. The patient was scheduled for regular observation due to the high risk of recurrence associated with ameloblastoma.

Conclusions: Ameloblastoma remains an underexplored yet clinically significant tumor, particularly in rare localization in the maxillary sinus. Complete surgical resection remains the treatment of choice, reducing recurrence rates. Given its potential for aggressive growth and recurrence, long-term monitoring of patients is essential to prevent complications and ensure early detection of possible recurrences.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4168

Desmoid Tumour Mimicking Nasal Polyposis - A Rare Diagnosis to Consider

Mónica Teixeira[1], Rita Vaz Osório[1], Catarina Gomes Pinto[1], Edite Ferreira[1], Sandra Alves[1], Pedro Oliveira[1]
[1]*Unidade Local de Saúde Gaia/Espinho*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

INTRODUCTION: Desmoid tumours are rare, slow-growing masses that most commonly occur in the abdomen, with only 10-15% arising in the head and neck region. Involvement of the sinonasal tract is particularly uncommon, with the maxillary sinus being the most frequently affected site, followed by the nasal cavity. Despite its benign nature, the true harmful potential lies in its local aggressiveness and high recurrence rate.

CLINICAL CASE: We report a case of a 53-year-old woman who presented with a history of progressively worsening bilateral nasal obstruction, orthopnea and dysphagia. She had previously undergone topical corticosteroid therapy with no symptom relief. Physical examination revealed grade 3 bilateral nasal polyposis. Computed tomography imaging showed soft tissue density structures in both nasal cavities, occupying the inferior meatus and almost completely obstructing the choanae and nasopharynx. The patient underwent endoscopic sinus surgery. Intraoperatively, a large, firm polypoid mass was observed, originating from the left infundibullum and adherent to the inferior and middle turbinates, as well as the posterior wall of the nasopharynx. Due to its size and lack of mobility through the nasal fossae, an oropharyngeal approach was required for en bloc resection. Histological analysis established the diagnosis of sinonasal desmoid tumour. No recurrence was observed two years after surgery.

CONCLUSION: Sinonasal desmoid tumours can cause considerable morbidity and must be differentiated from both benign and malignant conditions. Surgical resection remains the primary treatment, followed by regular follow-up to monitor for local recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4207

Key Steps in the Endoscopic Resection of Juvenile Nasopharyngeal Angiofibromas

Coloma Grau van-Laak[1], Carolina Alfonso Carrillo[2], Beatriz Arana Fernández[3], Álvaro De Arriba Sánchez[4]

[1]ERS Junior Member, [2]ERS Member , [3]ERS Junior Member , [4]ERS Member

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Juvenile nasopharyngeal angiofibroma (JNA) is a rare benign tumour affecting young males. Despite its benign nature, it can be locally aggressive. Originating in the posterior nasal cavity, it may extend to adjacent structures, including the nasopharynx, sinuses, orbit, and skull base. Given its high vascularity, mainly supplied by the internal maxillary artery (IMA), preoperative embolization is crucial. Surgical resection is the treatment of choice, aiming for complete removal with minimal morbidity.

Material & Methods: We present the case of a 15-year-old male with stage II JNA. Preoperative embolization of the IMA's distal branches was performed. The key surgical steps in the endoscopic resection are described.

Results: A transnasal endoscopic approach is performed using a surgical navigation system. A partial middle turbinectomy, complete ethmoidectomy, medial maxillectomy, and nasolacrimal duct section are carried out. The posterior maxillary sinus wall is opened, exposing the pterygopalatine fossa. Upon opening the fascia, the IMA is dissected and ligated. A partial posteroinferior septectomy and a left sphenoidotomy is also performed. Coblator® is used to reduce tumour size and bleeding. After securing all vascular pedicles, a subperiosteal dissection is performed, isolating, and ligating the vidian artery. The tumour is excised, bone beds are drilled, and free mucosal grafts are used to cover implantation sites.

Conclusion: We present the surgical video of an endoscopic JNA resection to emphasize the key surgical steps of endoscopic tumour removal. The usefulness of Coblator® in reducing tumour size and intraoperative bleeding is demonstrated, highlighting its value in managing these hypovascularized tumours.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4211

Aneurysmal bone cyst of the ethmoid: a case report and literature review

Domenica Giunta[1], Michele Demaria[1], Bogdan Nacu[1], Sveva Introini[1], Roberto Sannasardo[1], Anna Ferrauto[1], Fabio Sovardi[2], Fabio Pagella[1]

[1]Otorhinolaryngology Unit, Fondazione IRCCS Policlinico San Matteo, 27100 Pavia, Italy - University of Pavia, Pavia, Italy, *[2]Otorhinolaryngology Unit, Fondazione IRCCS Policlinico San Matteo, 27100 Pavia, Italy*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Aneurysmal bone cysts (ABCs) are benign bone lesions characterized by aggressive local expansion, compromising not only the integrity of the affected bone but also of the surrounding structures. They mainly arise in long bones, spinal vertebrae and pelvis. ABCs arising in the head and neck region are rare; among these, mandible and maxilla are the most frequent sites, while the involvement of paranasal sinuses is rarer and in the literature it is reported only in case studies. Due to the proximity of critical anatomical structures, the potential complications can be life threatening.

Methods: Case report and literature review with pre- and post-operative image documentation.

Results: We report and discuss clinical and radiological findings of an ABC arising from the ethmoid sinuses in a 19-year-old boy, concentrating on its diagnosis (CT, MRI and biopsy) and surgical management (endoscopic transnasal excision of the lesion).

Conclusions: ABC is a benign condition and its occurrence in the nasal cavities is exceptional. Nevertheless, it must be considered when making a differential diagnosis, which can only be confirmed through histopathological examination of the specimen. Complete surgical excision is recommended.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4231

Antrochoanal Polyps: A decade of experience

Beatriz Rodrigues[1], Filipe Correia[1], Kaamil Gani[1], Catarina Morais[1], Pedro Escada[1]
[1]*Department of Otorhinolaryngology, Unidade Local de Saúde de Lisboa Ocidental*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Antrochoanal polyps are benign lesions with a cystic antral component and a solid extension into the nasopharynx. Surgical removal is the standard treatment, requiring complete excision of both the polyp and its insertion, which requires optimal intraoperative exposure. This study aims to analyze intraoperative decision-making and surgical approaches used in our department over the past 10 years, evaluating associated recurrence rates.

Materials and Methods: A retrospective review was conducted on patients with antrochoanal polyps treated in our department between 2015 and 2024.

Results: Eighteen patients with a mean age of 39 years were included, with follow-up ranging from 3 months to 10 years. Nasal endoscopy, CT scans of the paranasal sinuses and biopsy were part of the diagnostic workup and surgical planning but did not allow for the identification of the polyp's site of insertion in most cases, with the extent of the maxillary sinusotomy being determined intraoperatively. Primary surgery involved maxillary sinusotomy in 14 cases, with three recurrences (21.4%). Four patients were referred to our department following recurrence, requiring revision surgery, which included maxillary sinusotomy type III, mega-antrostomy and modified medial maxillectomy. Overall recurrence was 19%, diagnosed> year postoperatively. No predictive risk factors were identified. We present an algorithm to guide intraoperative decision-making and describe key steps of the different surgical approaches used for patients treated in our department.

Conclusions: Advances in surgical techniques improve sinus exposure, enabling complete removal and minimally invasive treatment if recurrence occurs. Tailored approaches are essential for polyps with challenging anterior insertions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4250

Inverted Papilloma of the Sphenoid Sinus: A Case Report

Coloma Grau van-Laak[1], Beatriz Arana Fernández[1], Blanca Mateos Serrano[1], Álvaro De Arriba Sánchez[1], Carolina Alfonso Carrillo[1]

[1]*Otolaryngology Department, La Paz University Hospital, Madrid, Spain*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Inverted papilloma (IP) is a rare benign sinonasal tumor with locally aggressive behavior, high recurrence rates, and potential malignant transformation. Its occurrence in the sphenoid sinus is uncommon, often presenting diagnostic and therapeutic challenges due to its deep location and proximity to critical structures. Endoscopic approaches have become the gold standard for treatment.

Case Report: We present the case of a 50-year-old woman with a history of breast cancer undergoing immunotherapy. A cranial CT scan performed for headaches revealed left sphenoid sinus opacification. The report described an expansile lesion in the left sphenoid sinus, with heterogeneous attenuation and areas of contrast enhancement, suggestive of inflammatory/infectious occupation, fungal ball, or mucocele. The patient had no nasal symptoms. Physical examination revealed thick nasal discharge draining from the left sphenoethmoidal recess. A transnasal sphenoidotomy was performed to drain the presumed mucocele. However, complete sinus occupation by inflammatory/granulomatous tissue was observed, with polypoid mucosal degeneration implanting on the anterior wall and floor of the sphenoid sinus. A wider sphenoidotomy was performed, and the lesion, including its implantation base, was completely resected. Histopathological analysis confirmed inverted papilloma.

Results: The postoperative period was uneventful. Due to the excellent endoscopic accessibility, the patient is currently undergoing nasal endoscopy for surveillance.

Conclusion: Although rare in the sphenoid sinus, IP should be considered in the differential diagnosis of sinus opacifications. Endoscopic resection is the preferred approach, allowing for complete removal with minimal morbidity. Close follow-up is essential due to the risk of recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4297

Nasolabial cysts : transnasal endoscopic marsupialization treatment - a systematic review

Maria Korodima[1], Georgios Grivas[1], Konstantina Chrysouli[2]

[1]ENT department of "Pammakaristos" hospital, Athens, Greece, [2]ENT department of Penteli Children's Hospital, Athens, Greece, [3] ENT department of "Pammakaristos" hospital, Athens, Greece

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: The nasolabial cysts are rare, non-odontogenic cysts that occur between the upper lip and the nasal vestibule and account for the 0,7% of all maxillary and mandibular cysts. The aim of this study is to present the latest data regarding the treatment method of transnasal endoscopic marsupialization.

Material and Method: A systematic review of literature was conducted using PubMed/Medline database regarding the transnasal endoscopic marsupialization treatment approach. Publications and studies of the last decade have been included.

Results: In the studies reviewed, factors such as the operation time, the postoperative pain, the recurrence rate and possible complications were considered and evaluated. Moreover, the effectiveness of the method was compared to the traditional sublabial excision approach in terms of the possible use of general anesthesia, the duration of hospital stay and the costs of the operation.

Conclusion: The transnasal endoscopic marsupialization treatment approach offers advantages such as sort operation time, decreased postoperative pain and fewer complications. The aforementioned surgical procedure seems to be an effective and safe treatment option but more research is required in order to obtain better results and reach safer conclusions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4341

Risk Factors for Malignant Transformation in Sinonasal Inverted Papilloma and Sensitivity of Classification Systems: A 20-Year Analysis from Oslo University Hospital

Sinan Dheyauldeen[1]

[1]*Oslo University Hospital- ENT department*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Sinonasal inverted papilloma (SNIP) is a benign but locally aggressive tumor with a risk of recurrence and malignant transformation. Identifying risk factors and the most sensitive classification system for malignant transformation is critical for optimizing patient management.

Methods: We retrospectively analyzed 137 patients diagnosed with SNIP at Oslo University Hospital from 2000 to 2020. Malignant transformation and recurrence rates were assessed based on demographic factors, smoking history, and tumor classification using Krus, Cannady, and Han systems.

Results: Malignant transformation occurred in 15 patients (11%). Among these, 10 developed squamous cell carcinoma and 1 adenocarcinoma. Malignant transformation was significantly higher in females (22% vs. 7%, p=0.015) and among smokers (53% vs. 20%). The mean time to malignant transformation was 40.3 months (±25.7, range 8-70).Regarding classification systems, the Han classification demonstrated the highest sensitivity for predicting malignant transformation, with Group IV showing a 66% malignancy rate. In contrast, the Cannady classification identified a higher malignancy rate in Group B (20%) and Group C (17%).

Conclusion: Female gender and smoking were significant risk factors for malignant transformation in SNIP. Among the classification systems, Han classification demonstrated the highest sensitivity in predicting malignancy, which may aid in risk stratification and treatment planning. These findings emphasize the need for tailored follow-up strategies for high-risk patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4378

Primary Sinonasal Ameloblastoma: case report

Diogo Cunha-Cabral[1], Diogo Almeida[2], Pedro Gomes[1], Teresina Amaro[2], Delfim Duarte[1], José Penêda[1]

[1]Otorhinolaringology department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal, *[2]Anatomical Pathology department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Ameloblastoma is a benign but locally aggressive odontogenic tumor that typically affects the mandible or the maxilla. In rare cases, it can originate from the sinonasal epithelium. To date, only a few cases of Primary Sinonasal Ameloblastoma (PSA) were reported.

Material and methods: We present a rare case of PSA.

Results: An 80 years-old man was referred to the otorhinolaryngology department because of a 1-year history of right-side nasal obstruction and persistent mucopurulent rhinorrhea. His right nasal fossa was occupied by a pale lesion that originated from the medial meatus and extended posteriorly to the right choana. An incisional biopsy performed under local anesthesia only revealed inflammatory tissue. Computed tomography scan and magnetic resonance imaging showed an expansive maxillary lesion with signs of erosion of the posterior wall of the maxillary sinus. The imaging findings suggested the diagnosis of inverted papilloma. The patient was submitted to an endoscopic sinus surgery. After piecemeal resection of the tumor, we found that the implantation point was in the prelacrimal recess. A type 3A transnasal endoscopic partial maxillectomy was performed and a complete macroscopic resection of the tumor was achieved.The histopathologic diagnosis of the lesion was of a sinonasal amelobastoma (mixed type). All the surgical margins were negative. The patient is now under clinical surveillance every 6 months.

Conclusion: Despite rare, PSA should be considered in the differential diagnosis of sinonasal tumors. Early diagnosis and complete surgical resection are essential to minimize local complications and minimize recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4386

Stuck in a Nosey Situation: Three Cases of Rhinolith

Ioanna Liokati[1], Anna - Maria Papadopoulou[2], Anastasia Liapi[3], Aikaterini Tsagkovits[3], Athanasia Marinou[3], Sotiris Papouliakos[3]

[1]ENT Department, General Hospital of Athens 'G.Gennimatas', Athens, Greece, , [2]ENT Department, General Hospital of Athens 'G.Gennimatas', Athens, Greece, [3]ENT Department, General Hospital of Athens 'G.Gennimatas', Athens, Greece.

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: A rhinolith is a benign mass that can be formed in nasal cavities after calcification of an endogenous or exogenous material. It is a rare condition and typically develops unilaterally, in the lower nasal cavity. It may be asymptomatic and thus can be found incidentally or cause long-standing symptoms, such as unilateral nasal congestion and obstruction, longstanding nasal malodour, foul-smelling discharge and halitosis, intermitted epistaxis and rhinorrhoea. It can also be found as an underlying cause while evaluating pathologies, such as resistant chronic sinusitis.

Material-methods: We present three interesting cases of a patient diagnosed with rhinolith and the experience of our department in managing them. We shed light on the common presenting symptoms, physical examination findings, proper diagnostic modalities and treatment options.

Results: The diagnosis should include detailed history, physical examination with nasal endoscopy; radiographic methods including computed tomography (CT) scan and conventional radiography are key modalities for localization. A CT scan is a crucial diagnostic tool because of its sensitivity and ability to determine the mass's features, evaluate surrounding structures and assist in the differential diagnosis. Surgical excision is usually the primary method of treatment which typically involves endonasal endoscopic surgical removal of the rhinolith, followed by postoperative medical intervention with antibiotic treatment and occasionally nasal cavity disinfection and corticosteroid medication.

Conclusion: Regardless its rarity, rhinoliths should be taken into consideration when a young patient presents with unilateral nasal obstruction or persistent nasal symptoms. Prompt diagnosis and treatment is essential in order to relieve symptoms and avoid complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4427

Endoscopic Approach of Inverted Papillomas: Indications and Limits

Catalina Voiosu[1], Viorel Zainea[1], Irina Gabriela Ionita[3], Andreea Rusescu[1], Ruxandra Oana Alius[1], Răzvan Hainărosie[4]

[1]"Carol Davila" University of Medicine and Pharmacy Bucharest, [2]"Carol Davila" University of Medicine and Pharmacy Bucharest ; "Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery Bucharest , [3]1 "Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery Bucharest 2 "Carol Davila" University of Medicine and Pharmacy Bucharest, [4]Carol Davila University of Medicine and Pharmacy Bucharest, Romania

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Inverted papillomas are benign tumors of the sinonasal region that pose a challenge to the ENT surgeon due to their aggressive behavior, the tendency to recurrence and the risk of malignant degeneration. The management of these patients is focused on complete surgical removal of the tumor, including the insertion area, thus avoiding local relapses. The progress of endoscopic techniques changed the paradigm concerning the surgical approach, allowing for minimal invasive procedures. Although more acceptable for patients and with good results, certain cases require a mixed or an open approach.

Material and Methods: This paper aims to discuss a series of cases of inverted papillomas, where a variety of approaches was used, custom-tailored to each case. In all cases the tumor was completely removed, but the type of intervention was adapted to the particularities of each case, taking into account the extension of the lesion and the local anatomy, especially in patients that were undergoing reinterventions. carried out and the subsequent follow-up plan are presented and underlined.

Results: As expected, the endoscopic approach was more easily accepted by patients, with superior functional results. In some cases, with malignant degeneration, an open approach was optimal, allowing the thorough control of the resection area.

Conclusions: The endoscopic approach was efficiently employed in the management of these patients, with a single case that required reintervention, but the biopsy result was negative, so no recurrence was demonstrated. However, we wish to emphasize the necessity to completely remove the insertion area.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4490

Hemangioma of the nasal sinuses. Challenges in diagnosis and treatment

Irina Gabriela Ionita[1], Viorel Zainea[1], Catalina Voiosu[1], Andreea Rusescu[1], Ruxandra Oana Alius[1], Raluca Oana Pulpa[1], Alexandra Sanda[1], Razvan Hainarosie[1]

[1]"CAROL DAVILA" University of Medicine and Pharmacy, Bucharest, Romania, *[2]"CAROL DAVILA" University of Medicine and Pharmacy, Bucharest, Romania*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Introduction: Hemangiomas are benign vascular lesions that usually affect the skin and soft tissue in the head and neck region. Hemangiomas are rarely encountered within the nasal cavities and paranasal sinuses. The symptoms are not specific and depend on the location and size of the tumor, but nasal bleeding and obstruction are frequently reported. The imagistic assessment of choice is enhanced CT which reveals the presence, the dimensions and the site of the lesion and its relation with the surrounding anatomic risk elements.

Material and method: The aim of the presentation is to highlight the challenges the ENT surgeon is facing during the phases of management process (pre-preoperative, intra-operative, follow-up) of such pathology.

Results: Due to the lack of specificity in terms of clinical presentation and location of hemangiomas within the nasal cavity and paranasal sinuses the index of suspicion for this diagnosis is low. The endoscopic approach is an efficient and safe method of ablating the tumor. The pathology report establishes the correct diagnosis after excluding other vascular-patterned proliferating lesions.

Conclusions: Hemangiomas of the nose and paranasal sinuses are rare vascular tumors with non-specific symptomatology that benefit from endoscopic sinus surgery. The histologic examination of the resected lesion is the key element for positive diagnosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4493

Choanal polyp: Microdebrider Assisted Technique

Mohannad Al-Qudah[1], Abdulaziz Alnemer[1]
[1]*Department of ORL-HNS, Jordan University of Science & Technology, Irbid, Jordan*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Objective: Choanal polyp (CO) is uncommon benign nasal mass that reaches the posterior nares. We aim to review our surgical experience in management CP using the trans- nasal endoscopic microdebider assisted technique (TEMT)

Method: Chart and electronic records were reviewed for all CP cases that being managed by the senior author using (TEMT) in university tertiary hospital. TEMT consists of excision the CP by three cutting steps in the CP using the microdebrider under endoscopic view.

Results: 56 Cases were identified. The average age of this series was 40 year old with 24 men and 32 women .Maxillary sinus was the origin of the polyp in 50 cases. All cases were managed by TEMT without reporting any major complications. At time of surgery, 8 cases had other associated sinonasal pathology and were managed with CP excision.

Conclusion: (TEMT) alone and without the need of using access through oral cavity is safe and effective method to surgically mange CP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4556

The Role of Preoperative Coiling and Embolization in Juvenile Nasopharyngeal Angiofibroma Surgery: Experience from a Tertiary Referral Center

Sinan Dheyauldeen[1]

[1]*Oslo University Hospital- ENT department*

Poster Session | Benign Nasal Tumors| 22 June – 25 June, 2025, All day

Background: Juvenile nasopharyngeal angiofibroma (JNA) is a rare, benign but locally aggressive vascular tumor primarily affecting adolescent males. Surgical excision remains the treatment of choice, but intraoperative bleeding poses a significant challenge. Preoperative embolization or coiling is often performed to reduce blood loss and improve surgical outcomes. However, the necessity of these interventions remains a subject of debate. Objective: To evaluate the impact of preoperative embolization (particles) and coiling on intraoperative blood loss, surgical outcomes, and complications in patients undergoing JNA resection.

Methods: A retrospective analysis of 43 patients treated for JNA at our institution from 2007 to 2024. Preoperative embolization was performed in 18 patients (46%), coiling in 9 patients (24%), while 12 patients (31%) underwent surgery without vascular intervention. Surgical approach, intraoperative blood loss, and postoperative complications were assessed.

Results: Preoperative embolization or coiling significantly reduced intraoperative blood loss. Coiling was associated with fewer side effects compared to embolization, with reduced risk of distal embolic complications. However, in select cases, particularly in smaller tumors (Stage I-IIa), surgical resection was successfully performed without preoperative vascular intervention. One patient experienced transient ischemic attack (TIA) post-embolization, and another suffered vision loss. No major complications were observed in the coiling group.

Conclusion: Preoperative vascular interventions play a crucial role in optimizing surgical outcomes in JNA. While both embolization and coiling reduce intraoperative blood loss, coiling appears to have a better safety profile with fewer complications. However, these procedures are not always necessary, particularly in less extensive tumors, and their routine use should be carefully evaluated based on tumor stage and vascular supply.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Biologics

3628

More than half of CRSwNP patients treated with dupilumab experience early and fast olfactory improvement within 28 days

Josje Janna Otten[1], Rik Johannes Leonardus van der Lans[1], Hester Beatrice Emilie Elzinga[1], Wytske Fokkens, Sietze Reitsma[1]
[1]*Amsterdam UMC, University of Amsterdam, Department of Otorhinolaryngology & Head and Neck Surgery, Meibergdreef 9, Amsterdam, The Netherlands 1*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction*:* Olfactory dysfunction is one of the main complaints of patients suffering from Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) and dupilumab effectively enhances olfactory function within six months of treatment. This study evaluates the speed and efficacy of this effect during the initial weeks of treatment.

Methods: 72 patients treated with dupilumab 300mg 1x/2weeks filled out a Visual Analogue Scale score on olfactory dysfunction in their health diary at baseline and at least another day during the first 28 days of dupilumab treatment. The outcomes of the Sniffin' Sticks-12 Identification Test (SSIT-12) were collected at baseline and after 28 days of treatment.

Results: At baseline, the median SSIT-12 score was 3 (IQR 2-4) indicating anosmia (Figure 1B). After 28 days, the median SSIT-12 score increased to 6 (IQR 3-9), Wilcoxon signed-rank test: $p<0.001$), with 50% of the patients having hyposmia or normosmia (Figure 1B). Similarly, 93.7% of patients reported a VAS score on loss of smell of>.2 at baseline, indicating olfactory dysfunction. Over the subsequent 28 days of treatment, this percentage significantly declined to 44.2% (Figure 1A: Pearson $r=0.924$, $p<0.001$). The mean VAS score in the first week of treatment significantly predicted the outcome of the SSIT-12 after four weeks of treatment (linear regression $F(1,97)= 6.7$, $p=0.01$).

Conclusion: As such, the data show a rapid olfactory function improvement in more than half of the patients treated with dupilumab, starting after 1-2 injections.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3635

Adverse events due to the use of biological therapy in patients with chronic rhinosinusitis with nasal polyps: a case series study.

Marcelo Enmanuel Dávila-Arango[1], Pedro Pablo Villarroel-Gonzalez[1], Laura Marti-Gomar[1]
[1]*Hospital Universitario de Poniente. ENT Unit. Almería, Spain*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

INTRODUCTION: Chronic rhinosinusitis with nasal polyps (CRSNP) is a type 2 inflammatory disorder, commonly associated with asthma and atopic conditions. It often requires systemic corticosteroids or surgery. Biologic therapies, such as Dupilumab and Mepolizumab, improve outcomes but carry risks, including hypereosinophilia and nasopharyngitis. This study evaluates adverse events (AEs) in CRSNP patients receiving these treatments.

METHODS: A retrospective case series analyzed medical records of CRSNP patients treated with biologics in the last two years. AEs occurring within six months of treatment initiation were assessed. Demographic and clinical data were collected, and missing information was obtained via telephone interviews. Descriptive statistics were used to analyze variables, including asthma relapses and drug-related complications.

RESULTS: Eighteen CRSNP patients (mean age 53.2 ± 10.1 years) were included; 61.1% received Mepolizumab, and 38.9% received Dupilumab. AEs included hypereosinophilia (27.8%), injection site reactions (27.8%), headache (16.7%), and mild dizziness (5.6%). Asthma relapses (22.2%) and nasal symptom exacerbations (11.1%) were reported. No significant association was found between aspirin-exacerbated respiratory disease (AERD) and asthma relapses.

DISCUSSION: Mepolizumab and Dupilumab were generally well tolerated in CRSNP patients, with mild AEs, including hypereosinophilia and injection site reactions. Asthma relapses and nasal symptom exacerbations highlight the need for continued monitoring. These findings align with prior studies, supporting the safety of biologics with proper management.

CONCLUSIONS: Mepolizumab and Dupilumab demonstrated a favorable safety profile in CRSNP patients, with mild AEs predominating. Continuous follow-up is necessary to optimize treatment outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3709

Eosinophilic Otitis Media: Insights from Two Cases and a Comprehensive Literature Review

Fiona Molnar[1], **Zsolt Bella**[1], Alper Elez[1], Eszter Erdelyi[1], Ágnes Szalenko-Tőkés[1], Zoltan Tobias[1], László Rovó[1], Ágnes Kiricsi[1]

[1]University of Szeged , [2]Kecskemét Hospital

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction (Background and Aim): Eosinophilic otitis media (EOM) is a rare, persistent form of middle ear inflammation characterized by highly viscous effusion, often linked with bronchial asthma and chronic rhinosinusitis. Driven by Type 2 inflammation in the respiratory tract, this complex condition opens the door to promising treatment possibilities with emerging molecular targeted therapies, offering new hope for improved patient outcomes.

Material and methods (or Case study): Two patients, 78-year-old male and 59-year-old female, diagnosed with EOM were evaluated based on clinical history, audiological testing, ear status, SNOT-22, NOSE HRQLQ and response to 300mg Dupixent. A comprehensive literature review was conducted using PubMed and relevant otolaryngology journals.

Results: Both cases demonstrated chronic otitis media, nasal polyps, asthma and aspirin intolerance with no improvement to conservative treatment. 78 male responded favorably to Dupixent therapy and after three years there was a significant reduction in nasal polyps and eosinophilic oesophagitis and a 76-point reduction in their SNOT-22 Score. Meanwhile, the 59 female presented initially with less severe complaints after 2 years of Dupixent therapy yet the right ear discharge complaints frequently relapsed and tympanic membrane perforation was seen. The literature review emphasizes the role of IL-4 and IL-13 inhibitors as promising treatment options.

Conclusions: These two cases highlight the complexity of EOM and the importance of recognizing its association with systemic inflammatory conditions. Molecular-targeted therapies may offer new avenues for treatment in refractory cases. Further research is warranted to establish standardized treatment protocols.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3727

Current data on conservative treatment of chronic rhinosinusitis.

Aikaterini Lianou[1], Dimitra Simou[2]

[1]Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece, *[2]Department of Otorhinolaryngology, Head and Neck Surgery, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis (CRS) is a common health problem, with a prevalence of 10.9% in Europe and 12% to 16% in the United States. In this review, we summarize the most recent scientific information on this enigmatic disease, highlighting the heterogeneity and complex nature of refractory chronic rhinosinusitis.

Material & Methods: An extensive review of the international literature was performed to identify published articles on persistent chronic rhinosinusitis and conservative measures for its treatment.

Results: The international scientific community is moving away from the differentiation between CRSsNP and CRSwNP and their treatment per se and is now based on endotyping and phenotyping. The main challenge is to find reliable biomarkers that determine type 2 inflammation and predict response to medication. With the advent of biologics, the diagnostic approach has been adapted, assessing CRS subtypes and using biomarkers, as therapeutic options are expanded with their use. The goal of the scientific community is to individualize endotype-based therapy for patients with moderate to severe CRSwNP, with or without asthma.

Conclusions: It is evident that the management of persistent CRS becomes much more complex and requires additional skills, including interpretation of endoscopy and CT scan after previous surgery, indications for reoperation or reboot surgery, a good understanding of immunology, and indications for the use of biologic agents. Often, patients suffer from additional manifestations of type 2 immune reactions, so their management in adequately specialized centers offers more advantages.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3755

Real-Life Effectiveness of Monoclonal Antibody Therapy in Severe Uncontrolled Chronic Rhinosinusitis with Nasal Polyps: A Prospective Study

Ellen Ketelaere[1], Manon Blauwblomme[2], Philippe Gevaert[2], Geert De Vos[3], Anne-Sophie Eeckels[2], Stijn Vanhee[1], Elke Vandewalle[4], Gabriele Holtappels[1], Natalie De Ruyck[1], Lara Derycke[1], Thibaut Van Zele[2]

[1]Upper airways research laboratory, Ghent University, Ghent, Belgium, *[2]Department of Otorhinolaryngology, Ghent University Hospital, Ghent, Belgium*, *[3]Department of Otorhinolaryngology, AZ Sint Lucas Hospital, Ghent, Belgium*, *[4]Upper Airways Research Laboratory - Ghent University*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a prevalent inflammatory condition affecting the nasal and sinus mucosa, significantly impacting quality of life and healthcare systems. Type 2 inflammation plays a central role in its pathophysiology, prompting the development of biologic therapies such as mepolizumab, omalizumab, and dupilumab. While these therapies have shown efficacy in clinical trials, real-world data on their effectiveness and practical considerations, including treatment switching, are limited.

Method: A prospective cohort of 110 patients with severe uncontrolled CRSwNP was followed. Baseline and follow-up data were collected, including nasal polyp score (NPS), Sino-Nasal Outcome Test-22 (SNOT-22), rescue medication usage, and olfactory function (UPSIT). Treatment response was assessed according to EUFOREA criteria.

Results: The study included 110 patients, with 35 initiating omalizumab, 64 mepolizumab, and 11 dupilumab. The cohort had a mean age of 52 years, 63% were male, and 83% had comorbid asthma. Additionally, 50% reported allergies, and 17% had aspirin intolerance. At baseline, the mean total NPS was 4.33 (1.83), and patients had undergone an average of two prior sinus surgeries. After six months of biologic therapy, significant clinical improvements were observed. The mean NPS decreased by 1.42 ($p<0.001$), SNOT-22 scores improved by an average of 19 points ($p<0.001$), and olfactory function, measured via UPSIT, significantly increased ($p<0.001$). Among the cohort, 84 patients continued their initial biologic therapy, 21 switched treatments, and 5 discontinued therapy.

Conclusions: This real-world study demonstrates the effectiveness of mepolizumab, omalizumab, and dupilumab as integral components of the treatment strategy for severe uncontrolled CRSwNP. These therapies significantly reduce nasal polyp burden, alleviate symptoms, and improve olfactory function and quality of life. The findings contribute valuable insights

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3806

Dupilumab Effectiveness Through Two Years in Patients with CRSwNP Treated in Real-World Practice: Results from the Global AROMA Registry

Eugenio De Corso[1], Jayant M. Pinto[2], Martin Wagenmann[3], Shigeharu Fujieda[4], Changming Xia[5], Megan McGraw[5], Mark Corbett[6], Amr Radwan[7]

[1]Otorhinolaryngology – Head and Neck Surgery, A. Gemelli Hospital Foundation IRCCS, Rome, Italy, [2]Department of Surgery, University of Chicago Medicine and Biological Sciences, Chicago, IL, USA, [3]Department of Otorhinolaryngology, Düsseldorf University Hospital (UKD), Düsseldorf, North Rhine-Westphalia, Germany, [4]Department of Otorhinolaryngology, Head and Neck Surgery, University of Fukui, Fukui, Japan, [5]Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA, [6]Sanofi, Bridgewater, NJ, USA, [7]Regeneron Pharmaceuticals Inc., Uxbridge, UK

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: We report long-term effectiveness of dupilumab in patients with chronic rhinosinusitis with nasal polyps (CRSwNP) from the AROMA global registry (NCT04959448).

Materials & Methods: AROMA (NCT04959448) enrolled adults with CRSwNP initiating dupilumab in real-world clinical practice, with plans for 36 months (M) of follow-up.

Results: 691 patients were enrolled (mean age 51.3 years [SD 13.3], 55.7% male, 69.5% White, 69.2% with asthma, 74.1% with prior sinonasal surgery; 40.7% had received antibiotics for CRSwNP and 65.8% had received corticosteroids for CRSwNP in the last 2 years). Nasal congestion score (range 0–3) decreased from mean 1.8 (SD 0.86) at baseline (BL; n=609) to 0.9 (0.75) at M3 (n=521), 0.7 (0.74) at M12 (n=326), and 0.5 (0.66) at M24 (n=76). Loss of smell score (range 0–3) improved over time: mean (SD) 2.2 (1.06), 1.2 (1.04), 1.0 (1.02), and 0.9 (0.96) at BL (n=609), M3 (n=521), M12 (n=326), and M24 (n=76), respectively. 22-item Sino-Nasal Outcome Test score (range 0–110) also improved over time: 45.9 (21.37), 21.3 (15.67), 17.0 (14.31), 18.4 (14.55) at BL (n=552), M3 (n=443), M12 (n=224), and M24 (n=29), respectively. The proportions of patients reporting that they were “very satisfied” with their treatment (patient global assessment of treatment satisfaction) increased from 4.8% at BL (n=545) to 62.2% and 60.0% at M12 (n=267) and M24 (n=35), respectively. Safety was consistent with the known dupilumab profile from clinical trials.

Conclusions: Dupilumab improved symptoms through 24 months of follow-up in AROMA, supporting its long-term effectiveness in CRSwNP in real-world clinical practice.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3818

Effects of dupilumab on olfactory dysfunction in eosinophilic rhinosinusitis

Shoji Naito[1], Hidenori Yokoi[1], Kohei Inomata[1], Hisae Izuhara[1]
[1]*Kyorin University Suginami Hospital*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction Eosinophilic sinusitis is a refractory disease that can recur even after endoscopic sinus surgery. It is a condition that is particularly associated with olfactory dysfunction. In recent years, it has become possible to use biological agents to treat this condition. In this study, we investigated olfactory function fluctuations in patients treated with dupilumab at our department.

Subjects and Methods: We retrospectively examined patient results measured using the T&T olfactometer (standard olfactory function test in Japan), CT images scored using the Lund-Mackay system, and biomarkers (non-specific IgE levels, blood eosinophil ratios, and exhaled NO levels) in 19 patients (11 males and 8 females, average age 56.6 years) who had been treated with dupilumab for at least 12 months.

Results: Following administration of dupilumab, there was a significant improvement in olfactory function. In particular, detection showed early improvements, and there were significant improvements in detection scores compared to recognition. Improvements in recognition functions were significant at 12 months compared to 3 and 6 months. There was also a significant improvement in CT image scores, but it was not possible to identify biomarkers as indicators of efficacy.

Discussion and Summary: In Japan, the standard olfactory function test (T&T Olfactometer) assumes that detection (sensing smells) and recognition (identifying smells) are threshold values for olfactory strength. The results of this study suggest that recognition in patients with olfactory dysfunction caused by eosinophilic rhinosinusitis (Type 2 inflammation) takes time to improve.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3824

Baseline factors predicting treatment response to Dupilumab and Mepolizumab in Chronic Rhinosinusitis with Nasal Polyps

Mireia Golet Fors[1], Paula Cruz Toro[1], Albert Llansana Rios[1], Carlota Gonzalez Lluch[2], Ignacio Clemente[1], Laura Pardo Muñoz[1], Xavier Gonzalez-Compta[1]

[1]Otorhinolaryngology Department, Rhinology Unit, *[2]Otorhinolaryngology Department*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: This study evaluated baseline factors associated with improvements in quality of life (QoL), olfactory function (OF) and nasal polyp score (NPS) in patients treated with Dupilumab and Mepolizumab.

Methods: Cross-sectional analysis of an ongoing Spanish multicenter prospective cohort, including Dupilumab- and Mepolizumab-naïve consecutive CRSwNP patients. Baseline data, SNOT-22, 48-Sniffin'Sticks-Smell-Test (SSST), Total-Symptom Score (TSS) and NPS were collected. Improvement was defined as reduction of ≥8.9pts in SNOT-22 or ≥1.5pts in TSS for QoL; increase ≥5.5pts in SSST for OF; and reduction ≥1pt in NPS, at 6 months. Logistic regression models were applied.

Results: Fifty-three patients (median age: 53, 62% male) were included. 94% patients had asthma and 34%, AERD. Median of prior surgeries was 2. Thirty-one (58%) received Dupilumab, 22 (42%) Mepolizumab. Median SNOT-22, TSS, SSST and NPS were 55, 8, 11 and 5 in Dupilumab-group, and 65, 8, 8 and 6 in Mepolizumab-group. Among Dupilumab-treated patients, 84% improved QoL, 58% OF and 77% NPS. Higher baseline NPS (OR 1.95) was associated with QoL improvement. No clear baseline predictors for OF and NPS were identified, although trends suggested less improvement in patients with AERD and prior surgeries. Among Mepolizumab-treated patients, 91% improved QoL, 41% OF and 64% NPS. No baseline factors were associated with improvement in QoL nor OF, although a trend in high TSS was observed for QoL. Factors associated with reduction in NPS were TSS (OR 1.96) and male sex (OR 7.69).

Conclusions: Dupilumab and Mepolizumab improved QoL, OF and NPS in CRSwNP. Baseline NPS and TSS emerged as potential predictors of treatment-response.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3837

Evaluation of mepolizumab for the treatment of chronic rhinosinusitis with severe nasal polyposis, real life experience in a spanish multicentric cohort

Paula Cruz Toro[1], Mireia Golet Fors[2], Albert Llansana Rios[3], Xavier Gonzalez Compta[2], Laura Pardo Muñoz[1], Ignacio Clemente[1]

[1]*Hospital Universitari Germans Trias i Pujol*, [2]*Hospital Universitari Bellvitge*, [3]*Hospital Mútua de Terrassa*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: The primary endpoint was to evaluate changes in the Sino-Nasal Outcome Test score (SNOT-22) and Nasal Polyp Score (NPS) in patients in treatment with mepolizumab in a real life setting.

Methods: A multicenter observational study was conducted in patients with CRSwNP with or without severe asthma treated with mepolizumab for at least 12 months. Demographic variables, NPS, SNOT-22, eosinophil count, olfactometry with 48 Sniffin' Sticks and overall symptoms and smell function with visual analogue scale (VAS) were analysed. Patients were evaluated at baseline and follow-up at six months and one year of treatment.

Results: A total of 25 patients were included, 14 women and 11 men. Eighteen patients had associated asthma and 7 had aspirin-exacerbated respiratory disease (AERD). A statistically significant decrease was observed in the SNOT-22 score with a mean improvement of 31 points and a decrease of 2 points in the Nasal polyp Score. Global VAS improved 4 points and eosinophil count dropped from a mean of 577,2 cell/µL to 43.6 cell/µL. Regarding smell, no significant changes were observed, with only a slight improvement of the TDI from 11 to 12 points and no changes in the smell VAS. It is shown that the most relevant changes are obtained in patients with high T2 profile, specifically asthmatic and AERD patients present the greatest clinical and endoscopic changes. No adverse effects were recorded.

Conclusion: The use of mepolizumab as adjuvant therapy in patients with severe CRSwNP is safely associated with a significant improvement in clinical and endoscopic parameters.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3843

Mepolizumab increases habitual physical activity and cardiorespiratory fitness in patents with CRSwNP irrespective of concomitant endoscopic sinus surgery: A Randomized Control Trial

Jens Tidemandsen[1], Morten Hostrup[2], Anne Sophie Homøe[1], Lukas Moesgaard[2], Kasper Aanæs[1], Howraman Meteran[3], Vibeke Backer[4]

[1]Rigshospitalet, copenhagen , [2]University of Copenhagen , [3]Copenhagen University Hospital-Hvidovre, [4]Department of Otorhinolaryngology, Head & Neck Surgery and Audiology, Copenhagen University Hospital, Denmark

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Cardiorespiratory fitness is among the best predictors of life expectancy and all-cause mortality. There is an association between patients' chronic rhinosinusitis (CRS) and nasal polyps (CRSwNP) disease severity and their daily physical activity level – likely due to a high disease burden. In this study, we investigated the effect of Mepolizumab, with or without sinus surgery, on habitual physical activity and cardiorespiratory fitness. We conducted a randomized trial on 58 adults with severe CRSwNP. Our inclusion criteria were symptoms of CRS, nasal polyposis (NPS≥4), SNOT22 score>, signs of type-2 inflammation and ≥1 prior functional endoscopic sinus surgery (FESS). We randomized patients (1:1) into sinus surgery and mepolizumab (FESS) or mepolizumab only (nonFESS). Patients were treated with 100 mg mepolizumab every 4 weeks for 6 months. We assessed patients before and after six months for cardiorespiratory fitness and habitual physical activity. We did not encourage physical activity. At entry, 29 patients were allocated to the FESS group and 28 to the nonFESS group, 74% males, with a mean age of 52(14) years. Cardiorespiratory fitness increased after 6 months of treatment, with a change in fitness level: VO2max/kg: 1·95 ml/min/kg(p=0·01) and 1·50 ml/min/kg(p=0·01), corresponding to an enhancement of 6,25% and 5,02%, respectively. Work capacity increased 32 seconds(p<0·001) and 26 seconds(p=0·006), respectively and daily steps 1117 steps(p<0·001) and 1087 steps(p=0·001), respectively. No significant differences were observed between the groups. Adults with CRSwNP treated with mepolizumab increase their physical activity and cardiorespiratory fitness. Adding FESS in combination with mepolizumab showed no benefit regarding fitness.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3845

Real-World Effectiveness of Dupilumab Through 18 Months in Patients with CRSwNP and AERD: Results from the Global AROMA Registry

Enrico Heffler[1], Andrew A. White[2], Kathleen M. Buchheit[3], Tanya M. Laidlaw[3], Marjolein E. Cornet[4], Changming Xia[5], Helen Kim[5], Mark Corbett[6], Juby A. Jacob-Nara[6], Amr Radwan[7]

[1]Personalized Medicine, Asthma and Allergy, Humanitas Research Hospital, Milan, Italy, [2]Division of Allergy, Asthma and Immunology, Scripps Clinic, San Diego, CA, USA, [3]Division of Allergy and Clinical Immunology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [4]Department of Otorhinolaryngology, Alrijne Hospital, Leiderdorp, The Netherlands, [5]Regeneron Pharmaceuticals Inc., Tarrytown, NY, USA, [6]Sanofi, Bridgewater, NJ, USA, [7]Regeneron Pharmaceuticals Inc., Uxbridge, UK

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Rationale: Chronic rhinosinusitis with nasal polyps (CRSwNP) has a high symptom and health-related quality-of-life burden that increases in patients with aspirin-exacerbated respiratory disease (AERD). Dupilumab is efficacious in type 2 inflammatory conditions, but real-world evidence on CRSwNP in AERD is limited.

Methods: AROMA (NCT04959448) is a phase 4 prospective registry study following adults with CRSwNP initiating dupilumab in real-world practice in the USA, Canada, Germany, Italy, Japan, and the Netherlands.

Results: Of 691 CRSwNP patients who initiated dupilumab, 160 (23.2%) had AERD; median age at AERD diagnosis was 39 years (IQR 28–50). Overall, 32 (20.0%) patients with AERD had undergone confirmatory aspirin-challenge, 23 (14.4%) had undergone aspirin-desensitization, and 31 (19.4%) reported experiencing a reaction to alcohol. Asthma-specific outcomes progressively improved: at baseline, 6, 12, and 18 months, mean (SD) ACQ-6 scores (scale 0–6) were 1.3 (1.07), 0.4 (0.56), 0.5 (0.75), and 0.4 (0.60), respectively; mini-AQLQ scores (scale 1–7) were 5.3 (1.19), 6.3 (0.70), 6.2 (0.99), and 6.3 (0.79). Mean (SD) FeNO (ppb) was 35.5 (22.68), 15.8 (5.85), and 15.3 (6.13) at baseline, 6 and 12 months, respectively. CRSwNP outcomes also improved progressively: at baseline, 3, 12, and 18 months, mean (SD) nasal congestion scores (range 0–3) were 1.9 (0.85), 0.8 (0.74), 0.7 (0.77), and 0.6 (0.66), respectively; loss of smell scores (range 0–3) were 2.5 (0.83), 1.3 (1.02), 1.0 (1.02), and 1.0 (1.06); SNOT-22 scores (range 0–110) were 47.6 (19.53), 20.7 (15.26), 17.7 (12.63), and 15.7 (13.68).

Conclusions: Dupilumab has long-term real-world effectiveness in AERD on both CRSwNP and asthma outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3851

Onset of action of tezepelumab in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps in the phase 3 WAYPOINT study

Oliver Pfaar[1], Joseph K Han[2], Martin Desrosiers[3], Claire Hopkins[4], Stella E Lee[5], Joaquim Mullol[6], Andrew Foster[7], Ting Li[8], Claudia Chen[9], Gun Almqvist[10], Mary Kay Margolis[11], Julie McLaren[12], Shankar Jagadeesh[13], Vaishali S Mankad[8], Lila Bahadori[13], Sandhia S Ponnarambil[14]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Marburg, Germany, [2]Department of Otolaryngology, Head and Neck Surgery. Eastern Virginia Medical School, Norfolk, VA, USA, [3]Division of Otolaryngology, Head and Neck Surgery, Centre Hospitalier de l'Université de Montréal, University of Montreal, Montreal, QC, Canada, [4]Department of Otolaryngology-Head and Neck Surgery, Guys and St Thomas' Hospital, London, UK, [5]Division of Otolaryngology, Head and Neck Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [6]Rhinology Unit & Smell Clinic, Department of Otorhinolaryngology, Hospital Clinic Barcelona, IDIBAPS, CIBERES, University of Barcelona, Barcelona, Catalonia, Spain, [7]Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [8]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Durham, NC, USA, [9]Biometrics, Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [10]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden, [11]Patient-centered Science, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [12]Global Clinical Development – Medical, Amgen, Thousand Oaks, CA, USA, [13]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [14]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Tezepelumab significantly reduced nasal polyp size and improved nasal congestion severity and other sino-nasal symptoms versus placebo in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP) after 52 weeks in the WAYPOINT study (NCT04851964). This prespecified secondary analysis evaluated the onset of action and duration of the treatment response in WAYPOINT.

Methods: Eligible adults were randomized (1:1) to tezepelumab 210 mg or placebo subcutaneously every 4 weeks (Q4W) for 52 weeks. Endoscopic total nasal polyp score (NPS) was assessed post-baseline at weeks 4, 12, 24, 36 and 52. Biweekly mean nasal congestion score (NCS), loss of smell score and total symptom score (TSS) were calculated using daily entries from the patient-reported Nasal Polyposis Symptom Diary (NPSD); scores assessed post-baseline at weeks 2 and 4, then Q2W. Sino-Nasal Outcome Test (SNOT)-22 total score was assessed post-baseline Q4W. Smell was evaluated post-baseline using the University of Pennsylvania Smell Identification Test (UPSIT) at weeks 4, 12, 24, 36 and 52.

Results: Patients received tezepelumab (n=203) or placebo (n=205). Improvements from baseline in NPS, NCS, NPSD scores, SNOT-22 total score and UPSIT score were observed with tezepelumab versus placebo from the first post-baseline assessment after initiation of tezepelumab (at week 2 or week 4) and were sustained until the end-of-study treatment (week 52) (Table).

Conclusions: Rapid improvements versus placebo in nasal polyp size, nasal congestion severity, loss of smell and other sino-nasal symptoms were observed within the first 2–4 weeks of tezepelumab treatment (after one dose) and continuously improved throughout treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3852

Efficacy of tezepelumab on loss of smell in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps in the phase 3 WAYPOINT study

Joaquim Mullol[1], Joseph K Han[2], Martin Desrosiers[3], Claire Hopkins[4], Stella E Lee[5], Oliver Pfaar[6], Andrew Foster[7], Ting Li[8], Claudia Chen[9], Gun Almqvist[10], Mary Kay Margolis[11], Julie McLaren[12], Shankar Jagadeesh[13], Vaishali S Mankad[8], Lila Bahadori[13], Sandhia S Ponnarambil[14]

[1]Rhinology Unit & Smell Clinic, Department of Otorhinolaryngology, Hospital Clinic Barcelona, IDIBAPS, CIBERES, University of Barcelona, Barcelona, Catalonia, Spain, [2]Department of Otolaryngology, Head and Neck Surgery, Eastern Virginia Medical School, Norfolk, VA, USA, [3]Division of Otolaryngology, Head and Neck Surgery, Centre Hospitalier de l'Université de Montréal, University of Montreal, Montreal, QC, Canada, [4]Department of Otolaryngology-Head and Neck Surgery, Guys and St Thomas' Hospital, London, UK, [5]Division of Otolaryngology, Head and Neck Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA, [6]Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Marburg, Germany, [7]Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [8]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Durham, NC, USA, [9]Biometrics, Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [10]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden, [11]Patient-centered Science, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [12]Global Clinical Development – Medical, Amgen, Thousand Oaks, CA, USA, [13]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA, [14]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: In the phase 3 WAYPOINT study (NCT04851964), tezepelumab significantly reduced nasal polyp size and improved nasal congestion severity and other sino-nasal symptoms versus placebo in adults with severe chronic rhinosinusitis with nasal polyps (CRSwNP) after 52 weeks. Loss of smell is a common symptom of CRSwNP that negatively impacts health-related quality of life and can be difficult to treat. This analysis assessed loss of smell in patients from WAYPOINT.

Methods: Eligible adults with severe, uncontrolled CRSwNP were randomized (1:1) to tezepelumab 210 mg or placebo subcutaneously every 4 weeks for 52 weeks. Endpoints related to sense of smell included change from baseline to week 52 in biweekly mean loss of smell score evaluated using the patient-reported Nasal Polyposis Symptom Diary (NPSD; key secondary), and sense of smell score assessed using the University of Pennsylvania Smell Identification Test (UPSIT; secondary). Anosmia was defined as an UPSIT score of less than or equal to 18.

Results: Overall, 408 patients received tezepelumab (n=203) or placebo (n=205). At week 52, significant improvements were observed with tezepelumab versus placebo in biweekly mean loss of smell (NPSD) ($p<0.001$) and in UPSIT score ($p<0.01$) (Table). From baseline to week 52, the proportion of patients with anosmia was reduced from 84.3% to 31.6% in tezepelumab recipients versus 89.2% to 74.3% in placebo recipients (Table).

Conclusions: Compared with placebo, tezepelumab significantly improved the loss of smell score (NPSD) and the sense of smell score (UPSIT), and reduced the proportion of patients with anosmia in adults with severe, uncontrolled CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3863

Suspected EGPA in a patient on Dupilumab treatment: confirmed diagnosis of sarcoidosis - case report

Ágnes Kiricsi[1], Eszter Erdélyi[2], Ágnes Szalenko-Tőkés[3], Anna Lakatos[4], László Tiszlavicz[5], Daniella Hulló[6], László Rovó[7]
[1]ENT Consultant Ph.D. , [2]ENT Consultant, MD PhD, [3]ENT Consultant MD, [4]Pulmonologist Consultant MD, [5]Pathologist Professor, Ph.D. Med. Habil , [6]Rheumatologist Consultant , [7]ENT Consultant, PH.D. Med habil

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Chronic rhinosinusitis with nasal polyps (CRSwNP) is an inflammatory disease of the nasal and paranasal sinuses, and it is associated with significantly decreased health related quality of life. Dupilumab, a fully human monoclonal antibody that binds IL-4Rα and inhibits signaling of both IL-4 and IL-13, has shown efficacy across multiple diseases with underlying type 2 signatures. In our center in Szeged, Hungary more than a hundred patients are on dupilumab treatment. As the patient population increases, so does our experience, though occasionally we encounter symptoms that necessitate further investigation.We would like to present an interesting case of a 65-year-old female patient with CRSwNP and bronchial asthma who fulfilled the criteria for biological treatment. We started dupilumab therapy in December of 2023 and after two injections the patient developed skin symptoms, painful nodules on both sides above the elbow, and arthralgia. We performed laboratory tests, which showed elevated blood eosinophil count and slightly elevated CRP, ANCA was negative. Rheumatologist consultant examined her and performed an ultrasound, where no arthritis or fluid was visualized, instead, panniculitis was suspected. The administration of dupilumab was suspended until the exclusion of EGPA. A biopsy was taken from the nodules, the pathologist's opinion was cutan sarcoidosis instead of panniculitis. Bilateral hilar lymphadenopathy on the chest CT indicated sarcoidosis as well. We started methotrexate, systemic steroid, and mepolizumab treatment. Bronchoscopy, BAL and FNA excluded the possibility of malignant disease and the diagnosis of EGPA. The patient is on Mepolizumab and methotrexate treatment continuously. The nodules almost disappeared, lung function is normal, and the nasal symptoms are fluctuant and partially controlled. We would like to point out how important a multidisciplinary approach is in the exclusion or diagnosis of EGPA or other eosinophil-induced organ dama



3923

Treatment of Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) with Mepolizumab: Our Real-Life Data Compared to Global Clinical Trials

Alper Elez[1], László Szakács[3], Ágnes Szalenko-Tőkés[4], Eszter Erdélyi[3], Mária Matúz[5], Ágnes Kiricsi[3], László Rovó[6]
[1]ENT Resident, [2]Department of Otorhinolaryngology, University of Szeged, [3]ENT Consultant Ph.D., [4]ENT Consultant, [5]Pharmacologist habil., [6]ENT consultant Ph.D. Med. Habil. Head of Department

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Background: Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) is a prevalent chronic inflammatory disease that leads to nasal obstruction, loss of smell, breathing difficulty, and facial pain. Mepolizumab, an anti-IL-5 monoclonal antibody, has demonstrated promising potential in managing CRSwNP. This presentation aims to provide an overview of local experiences with mepolizumab in managing CRSwNP, examining both clinical outcomes and patient-reported experiences compared to real-life data.

Material: Real-life data from adult CRSwNP patients treated with mepolizumab at the University of Szeged were collected. Nasal endoscopy was performed and after that SNOT-22, nasal obstruction VAS, and NOSE parameters were registered. At baseline the mean values were: NPS=5,17±0,937, SNOT22=64,58±15,957, VAS=9±1,1078, NOSE=18,08±2,234.

Results: Global studies have shown that mepolizumab reduces polyp size, improves nasal airflow, and enhances overall quality of life. In addition, many reports highlight symptom improvement and fewer exacerbations following treatment. In our real-life data, we observed improvements in Health-Related Quality of Life Questionnaires (HRQLQs) and nasal polyp scores. However, two patients required rescue surgery, five received systemic steroids, and one patient switched to another biologic therapy due to inadequate response and worsening symptoms.

Conclusion: Mepolizumab is a promising treatment for severe CRSwNP, with evidence suggesting its effectiveness in symptom control and positive patient experiences. While clinical outcomes are generally positive, there is variability in patient responses. Therefore, further research is needed to optimize treatment protocols, address response variability, and evaluate long-term efficacy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3960

Hong Kong Experience of Biologics for Chronic Rhinosinusitis with Nasal Polyps

Andrew Chun Lok Wong[1], Kit Man Sin[1]
[1]*Tuen Mun Hospital, New Territories West Cluster, Hospital Authority, Hong Kong*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Biologics for chronic rhinosinusitis with nasal polyps was newly introduced to Hong Kong as an indication since January 2024. As the tertiary referral centre, we report our Hong Kong experience since January 2024. Given chronic rhinosinusitis with nasal polyps often co-exists with asthma and non-steroidal anti-inflammatory drug-exacerbated respiratory disease (N-ERD), we set up an Airway Combine Clinic for multidisciplinary management with pulmonologists.

Material & Methods: Patients attended the Airway Combine Clinic for biologics with indication of chronic rhinosinusitis with nasal polyps from January 2024 to January 2025 were recruited and analyzed. Biologics were prescribed according to EPOS/EUFOREA 2023 criteria. Patient characteristics including age, sex, co-morbidities, number of sinus surgeries, blood eosinophils, total IgE, smell test (TIBSIT), SNOT-22 scores, nasal polyp scores were collected and prospectively follow up at 3, 6 and 12 months.

Results: 12 patients attended the Airway Combine Clinic for biologics with indication of chronic rhinosinusitis with nasal polyps from January 2024 to January 2025. 7 patients received dupilumab and 5 patients received mepolizumab. The average age of patient is 54, male 40%, female 60%. 90% has co-morbid asthma, 60% has N-ERD. Total IgE before biologics is 360.11, Blood eosinophils 0.71x10^9, Number of FESS: One (55%), Two (45%), TIBSIT: 20.13/48, SNOT-22: 60.56, Nasal polyp score: 6.2. 4 patients completed 12 months follow up with excellent response according to EPOS/EUFOREA response criteria.

Conclusion: We reported the first real world Hong Kong series of biologics with indication of chronic rhinosinusitis with nasal polyps for dupilumab and mepolizumab.



3977

Two cases of chronic rhinosinusitis associated with EGPA exhibiting different responses to mepolizumab

Seiichiro Kamimura[1], Keisuke Ishitani[2], Ryota Morozumi[2], Tatsuya Fujii[3], Yoshiaki Kitamura[1]
[1]Department of Otorhinolaryngology —Head and Neck surgery, [2]Department of Otorhinolaryngology – Head and Neck Surgery, [3]Department of Otolaryngology-Head and Neck surgery

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Eosinophilic granulomatosis with polyangiitis (EGPA) is a rare systemic vasculitis characterized by eosinophilic inflammation and often associated with chronic rhinosinusitis (CRS) with nasal polyps. Mepolizumab, an anti-IL-5 antibody, is effective for EGPA and eosinophilic CRS (ECRS). However, its efficacy for EGPA-associated CRS remains unclear. We report two cases of EGPA with MPO-ANCA positivity and differing responses to mepolizumab for CRS. Case 1: A 48-year-old female with CRS and asthma developed EGPA with MPO-ANCA positivity. Despite mepolizumab treatment, her nasal symptoms persisted, requiring endoscopic sinus surgery (ESS). Although histology showed reduced eosinophilic infiltration, post-surgical recurrence of nasal polyps and congestion occurred, suggesting that the recurrence of nasal polyps was induced by IL-5-independent mechanism of the disease. Case 2: A 55-year-old female with CRS developed EGPA during dupilumab therapy. The blood test, both MPO-ANCA and PR3-ANCA were positive. Mepolizumab and low dose corticosteroids effectively managed EGPA and CRS without recurrence of nasal polyps and congestion over two years. The contrasting outcomes between these cases highlight potential heterogeneity in EGPA-associated CRS pathophysiology. Sinonasal manifestations with EGPA impact patients' quality of life significantly. While mepolizumab offers a promising therapeutic option for EGPA, its efficacy appears variable, particularly in CRS management. Surgery remains a consideration for refractory cases but carries a high recurrence risk. These two cases underscore the need for tailored treatment strategies and careful monitoring of CRS activity. Further research is necessary to elucidate the factors influencing efficacy with mepolizumab and to optimize care for CRS with EGPA.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4018

Hungarian Rhinosinusitis Registry Augmenting Healthcare (HURRAH) data of Quality of Life in CRSwNP patients treated with Dupilumab

Tünde Orosz[1], Balázs Liktor[1], Csenge Zsíros[2], Mária Matuz[3], Eszter Erdélyi[4], Ágnes Szalenkó-Tőkés[4], Bálint Liktor[1], László Lujber[5], Zsolt Bella[6], Lili Lakatos[7], Vivien Vass[8], Péter Hegyi[8], Zsuzsanna Horváth[7], Kristóf Ludányi[9], Gábor Forgács[9], Imre Dóka[9], Ágnes Kiricsi[10], Tibor Szalóki[9], Anna Bódi[11], László Tóth[11], Zoltán Fent[9], Helga Kraxner[9], Andor Hirschberg[1]
[1]St. John's Hospital, Department of Otorhinolaryngology and Maxillofacial Surgery, Budapest, Hungary, *[2]University of Szeged, Family Medicine Department*, *[3]University of Szeged, Institute of Clinical Pharmacy, Faculty of Pharmacy, Hungary*, *[4]Albert Szent-Györgyi Health Center, University of Szeged, Department of Otorhinolaryngology, Head & Neck Surgery, Szeged, Hungary*, *[5]University of Pecs, Department of Otorhinolaryngology, Head and Neck Surgery, Pecs, Hungary*, *[6]Bács-Kiskun County Hospital, Department of Otorhinolaryngology and Maxillofacial Surgery, Kecskemét,, Hungary*, *[7]Dept. of Otolaryngology, South Buda Center Hospital St. Imre University Teaching Hospital Budapest, Hungary*, *[8]Institute for Translational Medicine University Pécs Hungary*, *[9]Semmelweis University Budapest Department of Otorhinolaryngology and Head and Neck Surgery*, *[10]University of Szeged, Department of Otorhinolaryngology*, *[11]Dept ENT and H&N Surg. Univ Debrecen. Hungary*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) significantly impairs patients' quality of life (QoL) due to persistent nasal obstruction, loss of smell, and facial pressure. In Hungary antibody therapy for CRSwNP has been established since 2020 with dupilumab. The Hungarian Rhinosinusitis Registry Augmenting Healthcare (HURRAH) aims to collect real-world data on CRSwNP treatments, including dupilumab, to assess their impact on patient outcomes.

Materials & Methods: This study analyzed data from the HURRAH register, focusing on CRSwNP patients treated with dupilumab since 2020. Patients were evaluated using the Sino-Nasal Outcome Test (SNOT-22) , the Visual Analog Scale (VAS) for nasal obstruction, the Modified Lund-Kennedy (MLK) endoscopic scoring system, and the Nasal Obstruction Symptom Evaluation (NOSE) scale. Assessments were conducted at baseline, 6 months, 1 year, and 2 years of treatment.

Results: A total of 106 patients from the HURRAH register were included in the study. At baseline, patients reported significant impairment in disease-specific QoL. Following 6 months of dupilumab treatment, there was a statistically significant improvement in the SNOT-22 Test scores, indicating enhanced disease-specific QoL. The MLK scoring system demonstrated a notable decrease in nasal polyp burden, and the VAS score and NOSE scale scores indicated significant alleviation of nasal obstruction symptoms. These improvements were sustained and further enhanced at the 1-year and 2-year assessments.

Conclusions: Real-world data from the HURRAH registry demonstrats that dupilumab significantly enhances both disease-specific and general health-related QoL in Hungarian CRSwNP patients. These results support the continued use of dupilumab as an effective treatment option for improving patient outcomes in this population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4072

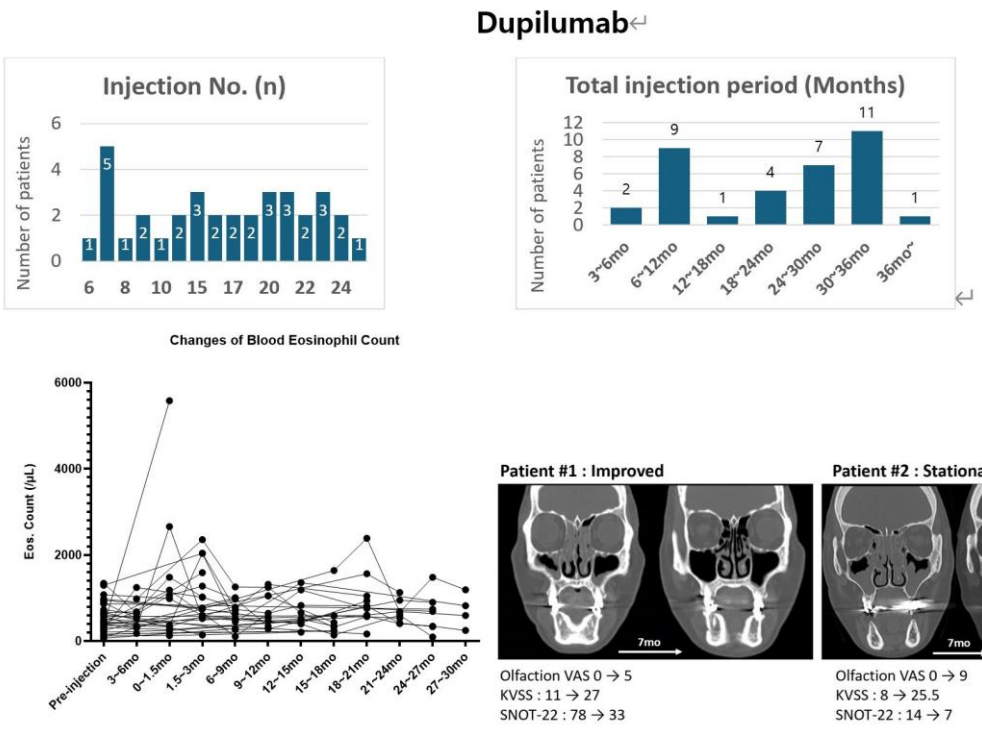
Dupilumab versus Omalizumab for CRSwNP in Korean Patients

Siyeon Jin[1], Dong-Young Kim[2], Hyun Seong Kim[1], Hanju Lee[1], Jayoung Oh[3]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University Hospital, Seoul, Republic of Korea, *[2]Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University College of Medicine, Seoul, Republic of Korea*, *[3]Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University Bundang Hospital, Republic of Korea*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Many biologics targeting different pathways have been developed for chronic rhinosinusitis, exhibiting varying efficacy and adverse effect profiles. As most prior studies are confined to the US or Europe, data regarding drug responses in Asian populations is scarce. This study retrospectively analyzed dupilumab and omalizumab treatment outcomes at SNUH to compare efficacy, safety, and indications. A retrospective observational study was conducted on patients receiving injection over 3months from January 2021 to 2025. Patients' VAS scores of olfaction, nasal obstruction and sino-nasal outcome test(SNOT-22) scores were analyzed for subjective outcomes. Serum lab(eosinophil count, percentage, total IgE), Lund-Mackay(LM) score of CT scans, nasal polyp scores(NPS) and the Korean version of Sniffin' stick(KVSS) test were used for objective outcomes. Rescue therapies including usage of oral corticosteroids or surgical treatment, injection schedules and adverse effects were also reviewed. A total of 35 and 32 patients receiving dupilumab and omalizumab were included. Dupilumab demonstrated superior efficacy, with a 94.29% response rate compared to omalizumab(59.37%). LM scores and NPS revealed greater improvement in dupilumab-treated patients(84.2% and 77.1%) compared to omalizumab(67.7% and 40.1%, respectively). Subjective olfaction improvement was also significantly higher in the dupilumab group($p<0.001$). Rescue surgery was more frequently required in the omalizumab group(31.25% requiring surgery vs. 0% in dupilumab). However, dupilumab showed higher incidence of side effects(rash, itching, and ocular swelling) and blood eosinophilia, some requiring concomitant steroid treatment. Overall, dupilumab showed superior results in both subjective and objective parameters, especially regarding olfaction. However, as transient serum eosinophilia was frequently observed after dupilumab injection, omalizumab should be preferred for patients with high baseline blood eosinophil count.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4113

Evaluation of the Effectiveness of Tezepelumab on Nasal Symptoms in Patients with Severe Asthma.

Rafael Hijano[1], Helio Bona-Andrade[2], Mireia Quer-Castells[3], Pilar Ausin[2], Angela García-Sanz[4]

[1]Hospital del Mar Barcelona. Pompeu Fabra University Barcelona., [2]Hospital del Mar Barcelona. Asthma Unity. , [3]Hospital del Mar Barcelona, [4]Asthma Unity, Hospital del Mar Barcelona

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Intoduction: Tezepelumab is a biological treatment that blocks the activity of thymic stromal lymphopoietin (TSPL) involved in the pathogenesis of asthma and chronic rhinosinusitis. Patients with severe asthma also have associated sinonasal symptoms -some of them with nasal polyps (CRSwNP)- which contribute to a poorer quality of life. This study shows how the treatment with tezepelumab not only improves parameters related to the lower airway, but also those related to the upper airway.

Methods: Observational study in a tertiary hospital: 18 patients (age 56 ± 14.4) received tezepelumab 210 mg for uncontrolled asthma. FEV1: forced expiratory volume in the first second; ACT: Asthma Control Test; SNOT-22: Sinus Symptoms Questionnaire; VAS (General visual analogue scale, nasal obstruction and smell) and a nasal endoscopy were carried out immediately before starting treatment and at six months.

Results: 10 patients (55%) had a low T2 phenotype, based on eosinophilia, IgE and FeNO. 4 patients had nasal polyps. FEV1 improved by an average of 10.11 (50.11 vs 60.22) as did ACT (average improvement of 5.78). Baseline SNOT averaged 52, with an improvement of 18 points at six months (34). Sinonasal VAS improved overall by 2.1 points.

Conclusions: In our experience, in patients with severe, uncontrolled asthma, tezepelumab not only improves asthma control and lung function, but also quality of life related to nasal symptoms. A thorough evaluation of nasal symptoms and a personalized approach for those candidates to receive tezepelumab is recommended.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4119

The Impact of mepolizumab on patients with CRSwNP

Konstantina Tzima[1], Vaia Ntrigiou[1], Alexandros Ladias[1], Efklidis Proimos[1], Panagiota Asimakopoulou[1], Maria Vrentzou[1], Chariton Papadakis[1]

[1]*Chania General Hospital, Chania, Greece*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: The purpose of this study is to investigate the impact of Mepolizumab on the symptoms of patients with Chronic Rhinosinusitis with Nasal Polyps (CRSwNP).

Materials and Methods: This study initially included 50 patients with CRSwNP (grade III-IV), aged 26-67 years, presenting olfactory disorder as the main symptom. These patients were evaluated at the ENT outpatient clinic from June to December 2024. The participants were randomly assigned into two groups: the experimental group received Mepolizumab and Intranasal Corticosteroids (INCS), while the control group received only INCS. Every three months evaluations were conducted and included the recording of SNOT-22, NPS, VAS, and Sniffin'sticks scores.

Results: Of the 50 patients, 45 eventually completed the study. The results were analyzed using descriptive statistics. Three months after the initial evaluation, the experimental group demonstrated a statistically significant improvement in SNOT-22, NPS, and VAS scores, and a non-statistically significant improvement in Sniffin'sticks scores. After six months of treatment, a statistically significant difference was observed between the two groups, with the experimental group showing superiority in all studied parameters.

Conclusions: Patients with CRSwNP benefited more from the combination of Mepolizumab and INCS,compared to INCS alone, results that are maintained in the long term.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4194

Mepolizumab efficacy in patients with chronic rhinosinusitis with nasal polyps with or without bronchial asthma (preliminary data of the CALIOPI study)

Spyridon Gougousis[1], Kalliopi Domvri[2], Giorgia Chainoglou[1], Anastasia Sarafidou[3], Katerina Tsiliggeridou[1], Paraskevi Karamitsou[1], Anastasia Liapi[4], Ioanna Tsiouprou[2], Petros Bakakos[5], Stefanos Triaridis[3], Ioannis Konstantinidis[3], Konstantinos Porpodis[2]

[1]Ear, Nose, Throat Department, George Papanikolaou Hospital, Greece, *[2]Pulmonary Department, Aristotle University of Thessaloniki, G. Papanikolaou Hospital, Thessaloniki, Greece*, *[3]Ear, Nose, Throat Department, Aristotle University of Thessaloniki, Ahepa Hospital, Greece*, *[4]Ear, Nose, Throat Department, Sotiria Chest Hospital, Athens, Greece* , *[5]1st Respiratory Department, Sotiria Chest Hospital, National and Kapodistrian University of Athens Medical School, Athens, Greece*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Background: According to literature, Mepolizumab is effective on patients with chronic rhinosinusitis with nasal polyps (CRSwNP). Aim: We investigated the efficacy of Mepolizumab treatment in Greek patients with CRSwNP with or without asthma by assessing patient characteristics associated with treatment response.

Material and Methods: CALIOPI is a multicenter study including 2 Pulmonary Clinics and 3 Ear, Nose Throat Departments in Greece. Patients with CRSwNP with or without asthma were eligible to be administered Mepolizumab (100 mg mepolizumab subcutaneously) every 4 weeks. Fifty-seven patients were recruited in CALIOPI study. Clinical parameters such as nasal polyp score, sense of smell (sniffin test), SNOT-22 and biomarkers of inflammation (blood eosinophils, IgE) were evaluated before and after treatment initiation. This trial is registered with ClinicalTrials.gov, number NCT05708300.

Results: The majority of the CRSwNP patients were male (69%) of mean age 57.1 ± 13.6 years. Twenty-seven out of 57 patients (47%) were asthmatic. The mean number of surgeries for the whole population was found to be 1.8 ±1.6. Preliminary results from 26 patients are presented that have concluded 6 months of treatment. Treatment with mepolizumab resulted in a significant improvement from baseline to 6 months of treatment in total endoscopic nasal polyp score, sniffin test, blood eosinophil levels and SNOT-22 score ($p<0.05$). No on-treatment serious adverse events were reported.

Conclusions: In our study, 6 months of mepolizumab treatment leads to the improvement of nasal polyp score, sense of smell and quality of life in Greek patients with CRSwNP with or without asthma. Funding: GSK 14879-21963.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4438

Dupilumab for treating chronic rhinosinusitis with nasal polyposis in England: A cost-effectiveness analysis.

Clement Halin[1], Richard Hudson[1], Aakash Gandhi[2], Jules Tavi[3], Laurent Dreyfus[3], Neel Bhatt[4], Mark Corbett[5]

[1]Health Economics and Value Assessment (HEVA), Sanofi, Reading, UK, [2]HEVA, Sanofi, Cambridge, Massachusetts, US, [3]HEVA, Sanofi, Gentilly, France, [4]Medical Affairs, Sanofi, Reading, UK, [5]Medical Affairs, Sanofi, Cambridge, Massachusetts, US.

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyposis (CRSwNP) is a type 2 inflammatory disease triggering symptomatic chronic inflammation within the sinuses and nasal cavity whereby nasal polyps cause partial or total obstruction associated with significant quality of life (QoL) decrement. CRSwNP is often accompanied with co-comorbid asthma. This study evaluates the cost-effectiveness of dupilumab for the treatment of adults remaining uncontrolled after surgery, a sub-population within the European Medicines Agency license, these patients experience long-term loss of QoL and limited treatment options.

Methods: A cost-effectiveness analysis from the English National Health Service (NHS) perspective was conducted to evaluate dupilumab plus established clinical management (ECM) vs. ECM alone. ECM comprises maintenance with daily intranasal corticosteroids and rescue treatment such as short-term systemic corticosteroids, antibiotics and sinonasal surgery. A decision tree, reflecting the trial period, addressed initial response to treatment and was followed by a Markov model evaluating long-term treatment response and revision surgery requirement.

Results: The incremental cost-effectiveness ratio (ICER) was £24,491 per quality-adjusted life-year (QALY) gained. The ICER was most sensitive to the choice of health utility derivation methodology which was examined in sensitivity analyses. The 22-item Sino-Nasal Outcome Test (SNOT-22) is the most appropriate disease specific QoL score assessment method, and therefore used to derive utilities for this study (base case).

Conclusion: The ICER is below the commonly accepted UK willingness to pay (WTP) threshold and sensitivity analyses shows the base case ICER to be robust. This study shows that dupilumab is a clinically and cost-effective use of NHS resources in England.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4497

Real-life retrospective 12-month effectiveness with Dupilumab for chronic rhinosinusitis with nasal polyps

Jhonder Salazar[1], Santiago Parreño[2]

[1]Autonomous University of Barcelona, *[2]Hospital Vall d´Hebron*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

BACKGROUND: Dupilumab, an IL-4/13 receptor inhibitor, is approved for the treatment of uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP).

METHODOLOGY: We evaluated the effectiveness and safety of dupilumab for CRSwNP based on retrospective 12-month follow-up data of 21 patients. We analysed nasal endoscopy scores, SNOT-22, symptom severity, odor identification, total serum IgE and total blood eosinophil count (BEC). We performed statistical analysis using non-parametric ANOVA-type models.

RESULTS: Significant improvements in endoscopy scores, SNOT-22, and others aspects were observed as early as month 1 and were sustained through month 12. Initial elevations in median BEC levels returned to near baseline by month 12, although 42.1% of patients maintained a BEC ≥0.7 compared to 22.5% at baseline. Total serum IgE levels decreased progressively and correlated with nasal polyp scores at month 12. An "adequate response" was achieved in 76.8% of the cohort.

CONCLUSIONS: Our findings indicate that dupilumab is effective for the treatment of CRSwNP, with sustained improvements in both clinical and patient-reported outcomes over 12 months. The potential for short- and long-term elevations in BEC in some patients warrants careful monitoring. These results support the use of dupilumab as a viable long-term treatment option for CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4511

Effects on nasal microbiome in patients with NSAID-exacerbated respiratory disease (N-ERD) under dupilumab therapy

Tina Bartosik[1], Petra Pjevac[2], Joana Seneca Silva[2], Christina Morgenstern[1], Tamara Arnoldner[3], Katharina Gangl[1], Christoph Sinz[3], Nicholas James Campion[1], Aldine Tu[3], Victoria Stanek[1], Christine Bangert[3], Sven Schneider[1], Julia Eckl-Dorna[1]

[1]Department of Otorhinolaryngology, General Hospital and Medical University of Vienna, Vienna, Austria, *[2]Department of Microbiology and Ecosystem Science, Centre for Microbiology and Environmental Systems Science, University of Vienna, Vienna, Austria*, *[3]Department of Dermatology, General Hospital and Medical University of Vienna, Vienna, Austria*

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Background: Non-steroidal anti-inflammatory drug-exacerbated respiratory disease affects up to 10% of patients with nasal polyps, significantly impacting their quality of life. In this study, we examined the effects of dupilumab treatment, a monoclonal antibody targeting the IL-4 receptor α chain, thus causing a decrease on nasal type 2 mediator levels, on the composition and diversity of the nasal microbiome.

Methods: The nasal microbiome of 28 patients was analyzed using 16S rRNA gene amplicon sequencing at baseline and at 4, 8, 12, and 24 weeks following the initiation of dupilumab therapy.

Results: After applying stringent decontamination measures and excluding patients samples with less than 500 reads at one or more time points, complete datasets from 8 out of 28 patients were available for downstream microbiome analysis. All 8 patients exhibited a significant reduction in total polyp score (TPS, $p = 0.0078$) and an improvement in SNOT-22 scores ($p = 0.0781$) following dupilumab therapy. Over the 24-week treatment period, no major changes in microbiome diversity or composition were observed, and only 2 out of 8 patients showed a decrease in staphylococcal abundance.

Conclusions: Dupilumab treatment did not appear to affect microbiome diversity or composition. But more than 70% of samples failed to meet quality control standards, underscoring the need for improved nasal microbiome sampling techniques and standardized quality control guidelines for the analysis of low-biomass microbiome data.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3787

Efficacy of stapokibart in chronic rhinosinusitis with nasal polyps patients with and without prior systemic corticosteroid use

Jingyu Jiang[1], Shen Shen[1], Bing Yan[2], Ming Wang[1], Di Wu[1], Yingshi Piao[1], Jun Tang[3], Xiangli Yang[4], Zhiwei Cao[5], Jinmei Xue[6], Wen Liu[7], Shixi Liu[8], Li Shi[9], Guangke Wang[10], Xicheng Song[11], Yongtian Lu[12], Jianjun Chen[13], Luyun Jiang[14], Jing Ye[15], Shaoqing Yu[16], Yucheng Yang[17], Hongyan Fang[18], Jiping Li[19], Haibo Shi[20], Jiangang Fan[21], Hongyue Yan[22], Haifei Wang[22], Bo Chen[22], Chengshuo Wang[1], Luo Zhang[1]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China , [2]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [3]The First People's Hospital, Foshan, Guangdong, China, [4]Tianjin Union Medical Center, Tianjin, China, [5]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China, [6]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [7]Zibo Central Hospital, Zibo, Shandong, China, [8]West China Hospital Sichuan University, Chengdu, Sichuan, China , [9]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China , [10]Henan Provincial People's Hospital, Zhengzhou, Henan, China , [11]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China , [12]Shenzhen Second People's Hospital, Shenzhen, China , [13]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [14]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [15]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China , [16]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China , [17]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China , [18]Chongqing General Hospital, Chongqing, China , [19]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [20]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China , [21]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China , [22]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: To investigate the efficacy of stapokibart, a novel anti-IL-4Rα antibody, in patients with chronic rhinosinusitis with nasal polyps (CRSwNP) with and without prior systemic corticosteroid (SCS) use.

Methods: In the CROWNS-2 (NCT05436275) phase 3 trial, adults with severe uncontrolled CRSwNP were randomly assigned 1:1 to subcutaneous stapokibart 300 mg or placebo every 2 weeks for 24 weeks, in addition to mometasone furoate nasal spray. Post-hoc endpoints assessed in subgroups with and without prior SCS use included changes from baseline in nasal polyp score (NPS), nasal congestion score (NCS), and loss-of-smell score; the proportions of patients with NPS improvement ≥1, NPS improvement ≥2, and NCS improvement ≥1.

Results: Totally 93 of 179 patients had received SCS during the past 2 years (n=50/90 for stapokibart and n=43/89 for placebo group). Baseline characteristics were similar between subgroups irrespective of prior SCS use. In subgroup with prior SCS, at W24, stapokibart showed significant superiority over placebo in the changes from baseline in NPS (LS mean difference [95%CI]: -2.2 [-2.7 to -1.7]), NCS (-0.6 [-0.9 to -0.3]), and loss-of smell score (-0.9 [-1.2 to -0.6]), as well as the proportions of patients with NPS improvement ≥1 (86% vs. 39.5%; p<0.0001), NPS improvement ≥2 (76% vs. 14%; p<0.0001), and NCS improvement ≥1 (64% vs. 46.5%; p=0.054). Similar efficacy was also observed in subgroup without prior SCS. At W24, stapokibart significantly improved NPS (-2.2 [-2.7 to -1.8]), NCS (-0.9 [-1.1 to -0.6]) and loss-of smell score (-1.1 [-1.4 to -0.8]); the proportions of stapokibart-treated patients with NPS improvement ≥1 (95% vs. 37%), NPS improvement ≥2 (87.5% vs. 15.2%), and NCS improvement ≥1 (77.5% vs. 28.3%) were significantly higher than placebo group (all p<0.0001).

Conclusions: Both subgroups with and without prior SCS use benefited from stapokibart evidenced by reduced polyp size and improved symptoms.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3791

Stapokibart rapidly improves symptoms in patients with severe chronic rhinosinusitis with nasal polyps: a post-hoc analysis of the phase 3 CROWNS-2 trial

Yi Zhou[1], Shen Shen[2], Bing Yan[1], Ming Wang[1], Di Wu[1], Yingshi Piao[3], Jun Tang[4], Xiangli Yang[5], Zhiwei Cao[6], Jinmei Xue[7], Wen Liu[8], Shixi Liu[9], Li Shi[10], Guangke Wang[11], Xicheng Song[12], Yongtian Lu[13], Jianjun Chen[14], Luyun Jiang[15], Jing Ye[16], Shaoqing Yu[17], Yucheng Yang[18], Hongyan Fang[19], Jiping Li[20], Haibo Shi[21], Jiangang Fan[22], Hongyue Yan[23], Haifei Wang[23], Bo Chen[23], Chengshuo Wang[1], Luo Zhang[1]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China , [2]Beijing TongRen Hospital, Capital Medical University, [3]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [4]The First People's Hospital, Foshan, Guangdong, China , [5]Tianjin Union Medical Center, Tianjin, China , [6]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China, [7]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [8]Zibo Central Hospital, Zibo, Shandong, China, [9]West China Hospital Sichuan University, Chengdu, Sichuan, China , [10]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China , [11]Henan Provincial People's Hospital, Zhengzhou, Henan, China , [12]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China , [13]Shenzhen Second People's Hospital, Shenzhen, China , [14]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [15]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [16]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China , [17]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China, [18]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China , [19]Chongqing General Hospital, Chongqing, China , [20]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [21]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China , [22]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China , [23]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) often leads to uncontrolled nasal symptoms and impaired quality of life. Stapokibart, a novel humanized monoclonal IL-4Rα antibody, has been approved for the treatment of CRSwNP in China. In the phase 3 CROWNS-2 trial (NCT05436275), nasal congestion score (NCS) and total symptom score (TSS) were significantly improved with stapokibart compared to placebo at the first post-treatment evaluation (week 4). This post-hoc analysis aimed to assess the early onset of stapokibart among patients with severe CRSwNP based on daily individual rhinosinusitis symptom scores.

Methods: Eligible participants in CROWNS-2 were randomly assigned to subcutaneous stapokibart 300 mg or placebo (1:1) every 2 weeks (Q2W) for 24 weeks, in addition to mometasone furoate nasal spray. Outcomes analyzed in this study were the changes from baseline in daily NCS, TSS, and loss-of-smell score, and the proportion of patients achieving NCS improvement ≥0.5 (meaningful change threshold) and ≥1 within two weeks of treatment initiation.

Results: In CROWNS-2, 90 patients received stapokibart and 89 received placebo. At D4 post- treatment initiation, change from baseline in NCS was significantly greater in the stapokibart group than the placebo group (p=0.0302). Consistently, a significantly higher proportion of patients in the stapokibart group achieved NCS improvement ≥0.5 (25.6% vs. 11.2%, p=0.0148) and ≥1 (15.6% vs. 4.5%, p=0.0140) than the placebo group at D4. Of note, TSS was significantly improved in the stapokibart group versus the placebo group as early as D1 post treatment initiation (p=0.0465). Loss-of-smell score was significantly improved in the stapokibart group versus the placebo group since D5 (p=0.0272).

Conclusions: Stapokibart led to rapid improvements in individual rhinosinusitis symptoms in patients with severe CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







3793

Stapokibart improves outcomes in patients with CRSwNP regardless of comorbid allergic rhinitis

Di Wu[1], Shen Shen[1], Bing Yan[1], Ming Wang[1], Yingshi Piao[1], Jun Tang[2], Xiangli Yang[3], Zhiwei Cao[4], Jinmei Xue[5], Wen Liu[6], Shixi Liu[7], Li Shi[8], Guangke Wang[9], Xicheng Song[10], Yongtian Lu[11], Jianjun Chen[12], Luyun Jiang[13], Jing Ye[14], Shaoqing Yu[15], Yucheng Yang[16], Hongyan Fang[17], Jiping Li[18], Haibo Shi[19], Jiangang Fan[20], Hongyue Yan[21], Haifei Wang[21], Bo Chen[21], Chengshuo Wang[1], Luo Zhang[1]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [2]The First People's Hospital, Foshan, Guangdong, China, [3]Tianjin Union Medical Center, Tianjin, China, [4]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China, [5]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [6]Zibo Central Hospital, Zibo, Shandong, China, [7]West China Hospital Sichuan University, Chengdu, Sichuan, China, [8]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China, [9]Henan Provincial People's Hospital, Zhengzhou, Henan, China, [10]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China, [11]Shenzhen Second People's Hospital, Shenzhen, China, [12]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [13]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [14]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China, [15]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China, [16]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China, [17]Chongqing General Hospital, Chongqing, China, [18]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [19]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China, [20]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, [21]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) often coexists with comorbid allergic rhinitis (AR). Stapokibart, a novel anti-IL-4Rα monoclonal antibody, demonstrated favorable safety and efficacy in CRSwNP in a phase 3 trial (NCT05436275). This post-hoc study investigated efficacy of stapokibart in patients with and without AR.

Methods: Eligible patients were randomized to stapokibart 300 mg or placebo (1:1) Q2W for 24 weeks, plus mometasone furoate nasal spray. Changes from baseline in nasal polyp score (NPS), nasal congestion score (NCS), and loss-of-smell score and response rates for NPS improvement ≥1, 2, and NCS improvement ≥1 were assessed in subgroups with and without AR.

Results: 35/90 patients in the stapokibart and 28/89 in the placebo group had a history of AR. In subgroup with AR, compared to placebo, stapokibart significantly improved NPS (LS mean difference [95% CI]: -2.6 [-3.2, -2.1]), NCS (-0.9 [-1.2, -0.5]), loss-of-smell score (-1.2 [-1.6, -0.8]), and response rates for NPS improvement ≥1 (97.1% vs. 42.9%), ≥2 (88.6% vs. 10.7%) and NCS improvement ≥1 (77.1% vs. 28.6%, all P<0.0001) at week 24. In subgroup without AR, stapokibart also yielded greater improvements in NPS (-2.1 [-2.6, -1.7]), NCS (-0.6 [-0.8, -0.3]), and loss-of-smell score (-0.9 [-1.1, -0.6], all P<0.0001) as well as higher response rates for NPS improvement ≥1 (85.5% vs. 36.1%, P<0.0001), ≥2 (76.4% vs. 16.4%, P<0.0001) and NCS improvement ≥1 (65.5% vs. 41.0%, P=0.003) at week 24.

Conclusion: Stapokibart reduced polyp size and improved symptoms in patients with severe CRSwNP irrespective of comorbid AR.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3795

Stapokibart efficacy in patients with chronic rhinosinusitis with nasal polyps with and without comorbid asthma

Shen Shen[1], Bing Yan[1], Ming Wang[1], Di Wu[1], Yingshi Piao[1], Jun Tang[2], Xiangli Yang[3], Zhiwei Cao[4], Jinmei Xue[5], Wen Liu[6], Shixi Liu[7], Li Shi[8], Guangke Wang[9], Xicheng Song[10], Yongtian Lu[11], Jianjun Chen[12], Luyun Jiang[13], Jing Ye[14], Shaoqing Yu[15], Yucheng Yang[16], Hongyan Fang[17], Jiping Li[18], Haibo Shi[19], Jiangang Fan[20], Hongyue Yan[21], Haifei Wang[21], Bo Chen[21], Chengshuo Wang[1], Luo Zhang[1]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [2]The First People's Hospital, Foshan, Guangdong, China, [3]Tianjin Union Medical Center, Tianjin, China, [4]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China, [5]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [6]Zibo Central Hospital, Zibo, Shandong, China, [7]West China Hospital Sichuan University, Chengdu, Sichuan, China, [8]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China, [9]Henan Provincial People's Hospital, Zhengzhou, Henan, China, [10]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China, [11]Shenzhen Second People's Hospital, Shenzhen, China, [12]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [13]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [14]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China, [15]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China, [16]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China, [17]Chongqing General Hospital, Chongqing, China, [18]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [19]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China, [20]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, [21]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Stapokibart is a novel anti-IL-4Rα monoclonal antibody recently approved for chronic rhinosinusitis with nasal polyps (CRSwNP) in China. This post-hoc study assessed its efficacy in patients with and without comorbid asthma using data from a phase 3 trial (NCT05436275).

Methods: Patients were randomized 1:1 to stapokibart 300 mg or placebo Q2W for 24 weeks alongside MFNS. FEV1 was assessed in the subgroup with asthma. Post-hoc endpoints included changes from baseline in nasal polyp score (NPS), nasal congestion score (NCS), and loss-of-smell score; proportions of patients achieving improvements in NPS of ≥1 and NCS of ≥1 in both subgroups.

Results: 45/90 patients in the stapokibart and 44/89 in the placebo group had comorbid asthma. In the subgroup with asthma, stapokibart vs. placebo significantly improved NPS (LS mean difference: -2.4 [-2.9, -1.9]), NCS (-0.8 [-1.1, -0.6]), and loss-of-smell score (-1.2 [-1.5, -1.0]); higher proportions of patients on stapokibart vs. placebo achieved improvements in NPS of ≥1 (95.6% vs. 43.3%) and NCS of ≥1 (84.4% vs. 38.6%) at W24 (all P<0.0001); stapokibart also improved FEV1. In the subgroup without asthma, stapokibart vs. placebo consistently induced greater improvements in NPS (-2.1 [-2.6, -1.6], P<0.0001), NCS (-0.5 [-0.8, -0.2], P=0.0013), and loss-of-smell score (-0.8 [-1.1, -0.4], P<0.0001); higher proportions of patients achieving improvements in NPS of ≥1 (84.4% vs. 33.3%, P<0.0001) and NCS of ≥1 (55.6% vs. 35.6%, P=0.05) at W24.

Conclusion: Stapokibart reduced polyp size and improved symptoms regardless of comorbid asthma status and improved lung function in those with asthma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





3796

Stapokibart demonstrates favorable efficacy regardless of sinus surgery history in chronic rhinosinusitis and nasal polyps: a post hoc analysis of phase 3 results

Yuzhoujia Deng[1], Shen Shen[1], Bing Yan[1], Ming Wang[1], Di Wu[1], Yingshi Piao[1], Jun Tang[2], Xiangli Yang[3], Zhiwei Cao[4], Jinmei Xue[5], Wen Liu[6], Shixi Liu[7], Li Shi[8], Guangke Wang[9], Xicheng Song[10], Yongtian Lu[11], Jianjun Chen[12], Luyun Jiang[13], Jing Ye[14], Shaoqing Yu[15], Yucheng Yang[16], Hongyan Fang[17], Jiping Li[18], Haibo Shi[19], Jiangang Fan[20], Hongyue Yan[21], Haifei Wang[21], Bo Chen[21], Chengshuo Wang[1], Luo Zhang[21]

[1]Beijing TongRen Hospital, Capital Medical University, Beijing, China, [2]The First People's Hospital, Foshan, Guangdong, China, [3]Tianjin Union Medical Center, Tianjin, China, [4]Shengjing Hospital of China Medical University, Shenyang, Liaoning, China, [5]The Second Hospital of Shanxi Medical University, Taiyuan, Shanxi, China, [6]Zibo Central Hospital, Zibo, Shandong, China, [7]West China Hospital Sichuan University, Chengdu, Sichuan, China, [8]Shandong Provincial ENT Hospital, Shandong University, Jinan, Shandong, China, [9]Henan Provincial People's Hospital, Zhengzhou, Henan, China, [10]Yantai Yuhuangding Hospital, Qingdao University, Yantai, Shandong, China, [11]Shenzhen Second People's Hospital, Shenzhen, China, [12]Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, [13]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu, Sichuan, China, [14]The First Affiliated Hospital of Nanchang University, Nanchang, Jiangxi, China, [15]Tongji Hospital, School of Medicine, Tongji University, Shanghai, China, [16]The First Affiliated Hospital of Chongqing Medical University, Chongqing, China, [17]Chongqing General Hospital, Chongqing, China, [18]Renji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [19]Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China, [20]Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Chengdu, Sichuan, China, [21]Keymed Biosciences (Chengdu) Co., Ltd, Chengdu, Sichuan, China

Poster Session | CRS – Biologics | 22 June – 25 June, 2025, All day

Introduction: Patients with chronic rhinosinusitis with nasal polyps (CRSwNP) refractory to medication often require sinus surgery. Stapokibart is a novel anti-IL-4Rα monoclonal antibody recently approved in China for CRSwNP. This study aimed to evaluate the efficacy of stapokibart in patients stratified by sinus surgery history, using data from the phase 3 CROWNS-2 trial (NCT05436275).

Methods: Eligible patients were randomized 1:1 to receive subcutaneous stapokibart 300 mg or placebo every 2 weeks for 24 weeks, plus MFNS. In this post hoc subgroup analysis, patients were stratified by number of previous surgeries (0, 1, ≥2) and time since last surgery (<3 or ≥3 years). Efficacy outcomes at week 24 included nasal polyp score (NPS), nasal congestion score (NCS), and 22-item Sino-Nasal Outcome Test (SNOT-22) score.

Results: A total of 179 patients received ≥1 dose of stapokibart (n = 90) or placebo (n = 89), and 114 (63.7%) had undergone sinus surgery. Stapokibart vs placebo demonstrated significant improvements in patients with previous surgery, with LS mean differences (95% CI) in NPS, NCS, and SNOT-2 score of -2.4 (-2.8, -2.0), -0.8 (-1.1, -0.6), and -15.2 (-20.7, -9.7), respectively. Significant benefits were also observed in surgery-naïve patients, as well as in those with 1 or ≥2 surgeries. Patients with <3 years or ≥3 years since last surgery both experienced improved outcomes with stapokibart treatment vs placebo.

Conclusions: Stapokibart significantly reduced polyp size and improved symptoms and patients' quality of life regardless of sinus surgery history.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS - Medical Management (Excluding biologics)

3643

Activation of the PGE2–EP2 pathway as a potential drug target for treating eosinophilic chronic rhinosinusitis

Horikiri Kyohei[1], Taketomi Yoshitaka[2], Kondo Kenji[1], Yamasoba Tatsuya[1], Murakami Makoto[2]

[1]Department of Otolaryngology and Head and Neck Surgery, Graduate School of Medicine, The University of Tokyo, [2]Laboratory of Microenvironmental and Metabolic Health Sciences, Center for Disease Biology and Integrative Medicine, Graduate School of Medicine, The University of Tokyo

Poster Session | CRS - Medical Management (Excluding biologics)| 22 June – 25 June, 2025, All day

Introduction: Current treatments for eosinophilic chronic rhinosinusitis (ECRS) involve corticosteroids with various adverse effects and expensive therapies, such as dupilumab, highlighting the need for improved treatments. ECRS is often complicated by aspirin-induced asthma; therefore we developed a new mouse model of ECRS by using microsomal PGE synthase-1 (Ptges)-deficient mice that do not synthesize prostaglandin E2 (PGE2), which mimics aspirin-induced asthma-like symptoms. In addition, we investigated whether PGE2 supplementation or the activation of PGE2 receptors (EP1-4) could improve ECRS pathology.

Methods and Results: The expression of PTGES was significantly lower in the nasal polyps of patients with ECRS than in those without ECRS. Histological, transcriptional, and lipidomic analyses of Ptges-deficient mice revealed that defective PGE2 biosynthesis facilitated eosinophil recruitment into the nasal mucosa, elevated the expression of type-2 cytokines and chemokines, and increased pro-allergic and decreased anti-allergic lipid mediators following challenge with Aspergillus protease and ovalbumin. A nasal drop containing an analog of PGE2 or agonists of the PGE2 receptor, EP2 or EP4, including omidenepag isopropyl, which has been clinically used for the treatment of glaucoma, markedly reduced intranasal eosinophil infiltration in Ptges-deficient mice.

Conclusion: We established a new mouse model using Ptges-deficient mice that is relevant to human ECRS. EP2 and EP4 agonists ameliorated the ECRS-like pathology caused by Ptges deficiency. Furthermore, our findings suggest the potential efficacy of drug repositioning of omidenepag isopropyl for the treatment of patients with ECRS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4040

Clinical relationship between chronic rhinosinusitis with nasal polyps, asthma and NSAIDS allergy in 2 years of the COVID-19 pandemic

Alex Iulian Milea[1], Caius Codrut Sarafoleanu[1]

[1]Carol Davila University of Medicine and Pharmacy , [2]Carol Davila University of Medicine and Pharmacy

Poster Session | CRS - Medical Management (Excluding biologics)| 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps and asthma are highly associated under the concept of "United Airway Disease", which represents the combination of both diseases and one of the most difficult phenotypes to treat. The aim of the study was to investigate the prevalence of asthma and NSAIDS allergy in patients with Chronic rhinosinusitis. We sought to elucidate how the COVID-19 pandemic influenced the management of patients with chronic rhinosinusitis.

Materials and methods: Patients who underwent endoscopic sinus surgery for chronic rhinosinusitis in “Sfanta Maria” Clinical Hospital Bucharest in 2 years of the COVID-19 pandemic were identified from Easy Medical Software. This retrospective study involved 343 consecutive adult patients divided in two groups: a group of 222 patients with Chronic Rhinosinusitis without Nasal Polyps (CRSsNP) and a group of 121 patients with chronic rhinosinusitis with nasal polyps (CRSwNP). We evaluated the prevalence of asthma and NSAID allergies in patients included in these two groups, disease recurrence rate, and the presence of blood eosinophilia in these patients.

Results: A total of 343 patients were included, 35% of these had CRSwNP, and 20 % of these patients had asthma confirmed by PFTS and only 2.5% of patients with CRSwNP had NSAID allergies without asthma. Recurrences of CRSwNP were identified in 39 patients of which 12(31%) had associated asthma, 25(64%) did not have associated asthma.

Conclusions: Asthma and NSAID allergy are more common comorbidities in patients with CRSwNP in comparison with patients with CRSsNP. COVID-19 pandemic restricts medical service accessibility for CRS patients.



CRS – Diagnosis and Investigations

3697

IgG4-related chronic rhinosinusitis as a differential diagnosis of CRSwNP

Youjirou Shida[1]

[1]*Department of Otolaryngology Head and Neck Surgery, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

IgG4-related disease (IgG4-RD) is a systemic condition characterized by the formation of mass-like or hypertrophic lesions with elevated serum IgG4 levels, infiltration of IgG4-positive plasma cells, and fibrosis. Refractory chronic rhinosinusitis (CRS) can occasionally be associated with IgG4-RD. We report here the clinical characteristics of four cases of IgG4-related CRS (IgG4-CRS). Case 1: A 31-year-old male with a prior diagnosis of IgG4-RD presented with nasal obstruction and olfactory dysfunction. Bilateral olfactory cleft edema was noted. Despite systemic corticosteroid therapy, symptoms persisted, necessitating endoscopic sinus surgery (ESS). Histopathology revealed significant eosinophilic infiltration and IgG4-positive cells, confirming coexisting eosinophilic CRS and IgG4-CRS. Both symptoms improved postoperatively. Case 2: A 66-year-old male underwent ESS for CRS. Subsequent dacryoadenitis led to a diagnosis of IgG4-RD and corticosteroid therapy was initiated. Persistent nasal obstruction prompted referral to our hospital. Mucosal inflammation and thickening of the lateral nasal wall and nasal floor were observed, and biopsy revealed IgG4-CRS. Nasal symptoms worsened with steroid reduction. Case 3: A 70-year-old male with IgG4-RD presented with nasal polyps and mucosal inflammation and thickening of inferior turbinate. Nasal symptoms improved with topical steroids but recurred after discontinuation. Case 4: A 74-year-old female presented with nasal obstruction, olfactory dysfunction, and cervical lymphadenopathy. Biopsy of nasal mucosa and lymph nodes revealed IgG4-RD. Symptoms could be managed with nasal steroid sprays following systemic corticosteroid. In refractory CRS with mucosal inflammation or thickening in the inferior turbinate or nasal floor, we should suspect IgG4-CRS. Multidisciplinary collaboration is essential for diagnosis and treatment involving systemic corticosteroid.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3817

Clinical review of 5 cases of sphenoid sinus primary malignant tumor experienced in our department

Hidenori Yokoi[1], Naito Shoji[1], Kohei Inomata[1], Hisae Izuhara[1], Shoji Naito[1]

[1]*kyorin University Suginami Hospital*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Most malignant tumors that occur in the paranasal sinuses are maxillary sinus primary, and malignant tumors of the sphenoid sinus primary are rare, accounting for 2-3% of all paranasal sinus tumors. In this study, we conducted a clinical review of 5 cases of sphenoid sinus primary malignant tumor experienced in our department after 2019.

Cases and Results: There were 2 cases of squamous cell carcinoma, 1 case each of neuroendocrine carcinoma, teratocarcinoma sarcoma, and plasmacytoma. The ages of the patients ranged from 45 to 74 years, and there were 3 male and 2 female patients. The main complaints of 4 of the 5 patients were ophthalmological symptoms such as diplopia and photophobia. Treatment consisted of chemoradiotherapy for the two squamous cell carcinoma cases, and recurrence was observed in one case. The neuroendocrine carcinoma case was treated with a combination of CyberKnife and chemotherapy, but multiple metastases were observed and the patient passed away 11 months later. The teratocarcinoma case was treated with surgery and postoperative CyberKnife, and the patient is doing well. In one case of plasma cell type, autologous peripheral blood stem cell transplantation was performed in our hospital's hematology department, and the patient achieved complete remission.

Discussion and Summary: It is suggested that, depending on the histological type and the anatomical relationship with the nerves around the tumor, it is important to choose the best treatment for each case of sphenoid sinus primary malignant tumor, such as surgery, radiation therapy, and chemotherapy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3861

The Impact of COVID-19 Infection on the Onset and Progression of Allergic Fungal Rhinosinusitis

Iryna Tsvirinko[1], Diana Zabolotna[1]

[1]*O.S. Kolomiychenko Institute of Otolaryngology of NAMS of Ukraine*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Allergic fungal rhinosinusitis (AFRS) is a primary, Th2-mediated chronic rhinosinusitis diagnosed based on the criteria defined by Bent and Kuhn. AFRS accounts for 5–10% of all cases of chronic rhinosinusitis (CRS). It arises as a localized allergic reaction to the non-invasive growth of fungi in areas with impaired mucus drainage.

Objective: To investigate the impact of COVID-19 infection on the onset and/or progression of allergic fungal rhinosinusitis in patients.

Materials and Methods: During 2023-2024 34 patients with signs of allergic fungal rhinosinusitis were examined and treated at the rhinology department. The average age of patients was 48.7 years. The majority were men—21 individuals (61.8%), while 13 patients (38.2%) were women.

Results: 41.2% (14 patients) did not have sufficient evidence of prior COVID-19 infection.COVID-19 was reported in the medical history of 58.8% (20 patients). Among these:35% (7 patients) confirmed having had COVID-19 in 2020.The largest group—75% (15 patients)—experienced COVID-19 during 2021.10% (2 patients) had confirmed COVID-19 in 2022.10% (2 patients) reported two confirmed instances of COVID-19 infection. In one case, the patient's condition worsened after the viral infection, while the other patient noticed no significant changes in the course of the disease.50% (10 patients) observed a deterioration in their condition after having COVID-19.

Conclusions: Half of the patients linked worsening of their condition to the aftermath of COVID-19 infection. However, the onset of the disease was not attributed to COVID-19 by the patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4086

Minimal invasive nasal sampling techniques to define the inflammatory endotype

Elke Vandewalle[1], Stijn Vanhee[1], Gabriele Holtappels[1], Natalie De Ruyck[1], Lara Derycke[1], Pauline Janssen[1], Manon Blauwblomme[1], Ellen Ketelaere[1], Anne-Sophie Eeckels[1], Thibaut Van Zele[1], Philippe Gevaert[1]

[1]Upper Airways Research Laboratory - Ghent University

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Minimal invasive sampling in order to define the inflammatory endotype would optimize treatment efficacy, even early in the disease of nasal inflammatory pathologies.

Materials & Methods: During surgery, nasal mucosal brushings, nasal secretions, tissue and serum were collected from patients with either allergic rhinitis (AR), chronic rhinosinusitis with (CRSwNP) or without nasal polyps (CRSsNP) or nasal obstruction due to non-inflammatory pathology (control). Inflammatory cells including eosinophils, neutrophils and T helper subsets (Th1, Th2 and Th17 cells were analyzed by flow cytometry of the brushes and single cell suspension of tissue. Inflammatory cytokines/chemokines were analyzed by Olink in nasal secretion, serum and tissue.

Results: Most patients showed a mixed endotype based on the presence of inflammatory cells with neutrophils presenting in all samples in varying quantities in each phenotype. CRSwNP showed the highest eosinophil presence. T helper subsets were difficult to identify, although Th2 cells seemed to be highest in AR and CRSwNP. Each disease phenotype and sample type showed different inflammatory cytokine levels. Neutrophilic markers were higher in nasal secretion and tissue compared to serum in all phenotypes. CRSsNP patients had higher type 3 markers in sinus tissue, CRSwNP patients showed higher levels of type 2 markers IL-4 and IL-13. IL-5 levels were generally low, in one CRSwNP patient IL-5 could be detected in both tissue and serum but not in nasal secretion.

Conclusions: Local nasal sampling with mucosal brushings and secretions could improve diagnosis and management of nasal inflammatory diseases. However, optimization of these techniques is still necessary in order to impelemt them in routine clinical practice.



4205

Prospective immunohistochemical study on the involvement of inflammatory cells in chronic rhinosinusitis

Karolina Dżaman[1], Katarzyna Czerwaty[2], Katarzyna Piszczatowska[3], Mirosław Szczepański[4], Natalia Jermakow[5], Nils Ludwig[3]

[1]Department of Otolaryngology, The Medical Centre of Postgraduate Education, 01-813 Warsaw, Poland, [2]1. Department of Otolaryngology, The Medical Centre of Postgraduate Education, Warsaw, Poland , [3]2. Department of Biochemistry, Medical University of Warsaw, Warsaw, Poland, [4]1. Department of Otolaryngology, The Medical Centre of Postgraduate Education, Warsaw, Poland; 2. Department of Biochemistry, Medical University of Warsaw, Warsaw, Poland, [5]3. Department of Hyperbaric Medicine, Military Institute of Medicine - National Research Institute, Warsaw, Poland, [6]Department of Otolaryngology, The Medical Centre of Postgraduate Education, Warsaw, Poland, [7]1. Department of Otolaryngology, The Medical Centre of Postgraduate Education, Warsaw, Poland

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Chronic sinusitis (CRS) is a heterogeneous disease affecting patients' quality of life and the healthcare system with a pathogenesis that is still not fully understood. This study aims to assess inflammatory cell infiltration in the microenvironment in CRS. The study included patients with CRS with nasal polyps (CRSwNP) (n=20), CRS without NP (CRSsNP) (n=23), and a control group (CG) (n=8). Tissue sections from the ostiomeatal complex were taken during surgery and the expression levels of CD68, CD11b, and CD16-positive cells (the mean number of stained cells from three fields of view) were determined. Endoscopic and radiological severity were evaluated using the Lund-Kennedy and Lund-Mackay scales. Statistical analysis was performed using the R programming language (v4.2.2) in RStudio (v2023.03.0).CRSwNP patients were significantly older (Me=48.5) than patients in the CG (Me=35; U=12.5; p=0.01) and with CRSsNP (Me=35; U=69; p=0.016). CRSwNP patients had the highest edema on endoscopy and the highest lesion severity on CT. There were statistically significant differences in CD16 expression between CRSwNP and both CRSsNP and CG and in CD11b expression between the CRSsNP and CG (Fig.). There were positive correlations between CD16 and CD11b expression in the CRSwNP group (r=0.497; p=0.026) and between CD-68 and CD11b in the CRSsNP group (r=0.497; p=0.016). Our study provides new information on tissue infiltration by immune cells in CRS. Perhaps the evaluation of CD11b and CD16 expression can be used in the future to predict the response to biologic therapy used in patients with eosinophilic CRSwNP, but this requires further study.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4266

Characterization of chronic rhinosinusitis endotypes in a Colombian population: an approach towards personalized medicine

Augusto Peñaranda[2], Daniel Peñaranda[1], Juan Felipe Lopez[2], Sergio Moreno-Lopez[3], Maria A García Chabur[4], Lucia C Perez Herrera[5]

[1]Department of Otolaryngology, Stanford University, *[2]School of Medicine, Universidad de Los Andes / Department of Otolaryngology, Fundación Santa Fe de Bogotá*, *[3]School of Medicine, Universidad de Los Andes / Researcher, UNIMEQ-ORL*, *[4]Department of Otolaryngology, Fundación Universitaria de Ciencias de la Salud*, *[5]Department Global Public Health, Karolinska Insitutet / Researcher, UNIMEQ-ORL*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Background: Few studies describe the epidemiology of Chronic Rhinosinusitis (CRS) in racial and ethnic minorities, particularly in Latin American populations. This study aimed to describe the clinical characteristics of CRS and quality of life in a population that required endoscopic management at two otolaryngology-referral hospitals from Colombia.

Methods: Observational, descriptive, prospective study that included adults with CRS who consulted to two otorhinolaryngology-referral hospitals in Bogotá between January 2021 and April 2022. Questionnaires about sociodemographic, nasal obstruction (Nasal Obstruction Symptom Evaluation/NOSE and Visual Analogue Scale/VAS), and quality of life (Sino-nasal Outcome Test-22/SNOT-22) were applied. A Spearman correlation analysis was performed.

Results: A total of 55 individuals were included, with the majority being male and within the age range of 18 to 40 years across all three groups. We found higher severity scores on scales such as NOSE, EVA, and Lund Mackay in patients with Chronic Rhinosinusitis with Polyps (CRSwNP). Additionally, a mixed CRS endotype of TH2/TH1 type with elevated atopy biomarkers was identified, especially in patients with CRSwNP. Cluster analysis revealed people with some type of rhinosinusitis (n=36) consisted of people with overweight (n=14, 38.89%) and obesity (n=5, 13.89%), increased mucosal eosinophils (n=22, 61.11%), with presence of atopy (n=32, 88.89%) and higher levels of IL-6 ,IL-9, IL1-B, SNOT-22 and Lund Mackay scores (table 4).

Conclusions: In conclusion, our results suggest a TH2/TH1 mixed endotype in a mestizo population with CRSwNP in the city of Bogotá. In our context, mucosal eosinophils and atopy may serve as possible markers for disease severity in patients with chronic rhinosinusitis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4374

Nasal Diphtheria or Chronic Carriage Caused by Nontoxigenic Corynebacterium diphtheriae by Corynebacterium belfantii—Case Report

Yung-Hsuan Lee[1], Fang-Wei Lin[1], Liang-Chun Shih[1]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University Hospital, Taichung, Taiwan, R.O.C., [2]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University Hospital, Taichung, Taiwan (R.O.C.)

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Background: Diphtheria, a rare respiratory infectious disease in Taiwan, is classically caused by Corynebacterium diphtheriae. Since the improvement of vaccine quality in 1970, only one case was reported in 1981. Diphtheria primarily affects the tonsils, pharynx, and nose (upper respiratory tract), as well as the skin in some cases. The action of exotoxin causes tissue necrosis in the affected areas, forming a grayish-white pseudomembrane.

Case report: We describe a 66-year-old male who presented with ear stuffiness and nasal discharge. The patient had a history of bilateral endoscopic surgery for chronic sinusitis, which revealed encrusted lesions on the bilateral middle turbinates and sinonasal antrums. Nasal endoscopic sampling was performed, and the culture yielded Corynebacterium diphtheriae. The isolate was identified as non-toxigenic Corynebacterium belfantii, which does not meet the definition of an infectious disease. The patient completed a course of erythromycin treatment and remains stable on follow-up.

Conclusion: This case highlights the importance of clinicians' awareness ofnon-toxigenic diphtheria, especially in an era of high diphtheria toxoid vaccination rates. Non-toxigenic strains may be a source of infection or have the potential to become toxigenic.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4387

Woakes Syndrome: A Rare Case of Refractory Nasal Polyposis with Facial Deformity

Mariana Cascão[1], António Castanheira[1], Ricardo Damaso[1]

[1]ULSTMAD, [2]Unidade Local de Saúde Trás-os-Montes e Alto Douro

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Woakes Syndrome is a rare condition characterized by recurrent nasal polyposis, often beginning in childhood, leading to severe nasal and sinus deformities. This includes broadening of the nasal bridge, midfacial widening, and, in some cases, nasal septal destruction. Early diagnosis is crucial to prevent irreversible changes. It is associated with chronic rhinosinusitis with nasal polyps (CRSwNP), typically resistant to corticosteroids. This report aims to highlight the complexities of managing Woakes Syndrome and the importance of a multidisciplinary approach involving endoscopic sinus surgery (ESS), rhinoplasty and biologic therapy for long-term control .

Case Study: A 71-year-old female with a history of asthma and CRSwNP presented with severe nasal obstruction, extensive polyposis, anosmia, and notable widening of the nasal bones. Nasal endoscopy showed complete bilateral obstruction of the nasal cavities by polyps, with computed tomography scan also revealing sinus wall sclerosis. Following minimal improvement with intranasal corticosteroids and moderate response to oral corticosteroids, the patient underwent ESS, resulting in substantial symptomatic relief. A subsequent rhinoplasty was scheduled to address aesthetic concerns.

Results: Postoperative outcomes showed significant improvement in nasal airflow and symptom relief. However, due to the refractory nature of the disease, the patient remains at high risk for polyp recurrence. Multidisciplinary management, including biologic therapy, is anticipated for sustained disease control.

Conclusions: Woakes Syndrome presents considerable diagnostic and therapeutic challenges due to its rarity and resistance to conventional therapies. ESS is pivotal in management, but polyps recurrence may indicate the need for adjunctive treatments such as biologic therapy. Early intervention and a multidisciplinary approach are essential for optimal patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



394

Serum Eosinophil Counts as Predictors for Type 2 Chronic Rhinosinusitis with Nasal Polyp in Taiwan

Bo-Rong Chen[1], Liang-Chun Shih[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University Hospital, Taichung, Taiwan (R.O.C.)*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction (Background & Aim): Chronic rhinosinusitis (CRS) is a common inflammatory disease that affects the nasal and paranasal sinuses. It is characterized by persistent inflammation of the nasal and sinus mucosa, leading to symptoms such as nasal congestion, facial pain, and loss of smell. CRS can be classified into two subtypes: CRS with nasal polyps (CRSwNP) and CRS without nasal polyps (CRSsNP). Studies have shown that some CRSwNP is associated with a type 2 inflammatory response, characterized by the presence of eosinophils and Th2 cytokines. However, the prevalence of type 2 CRSwNP varies geographically, and the relationship between serum eosinophil counts and type 2 CRSwNP in the Taiwanese population is not well understood.

Material & Methods: In this study, we aimed to investigate the relationship between serum eosinophil counts and type 2 CRSwNP in Taiwan. We conducted a retrospective study of 113 patients with CRSwNP who underwent endoscopic sinus surgery at China Medical University Hospital in Taiwan between 2021/02 and 2022/07. We collected data on patient demographics, clinical features, and serum eosinophil counts. We also performed histological analysis of nasal polyp tissue to determine the presence of eosinophils.

Results: Our results showed that 70.8% of patients with CRSwNP had type 2 inflammation, as evidenced by the presence of eosinophils and Th2 cytokines in nasal polyp tissue. Using receiver operating characteristic (ROC) curve analysis, we determined that a serum eosinophil count of 156 cells/μL had a sensitivity of 64.5% and a specificity of 74.2% for predicting type 2 CRSwNP, with Youden index 35.8%.

Conclusions: Serum eosinophil counts can potentially predict type 2 CRSwNP, with a suggested cutoff value of 156 cells/μL, serving as a non-invasive biomarker for type 2 inflammation in Taiwan.



4395

The role of TG2 in the formation of nasal polyps in patients with chronic sinusitis and nasal polyps

Yu-Ru Lai[1], Liang-Chun Shih[2]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University, Taichung, Taiwan(R.O.C), [2]Department of Otorhinolaryngology-Head and Neck Surgery, China Medical University hospital, Taichung, Taiwan(R.O.C)

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Chronic sinusitis is classified into Th2-related CRSwNP and Th1-related CRSsNP. Nasal polyp recurrence affects patients' well-being, making effective treatment crucial. While its exact cause remains unclear, studies suggest TGF-β induces EMT in CRSwNP by downregulating E-cadherin, ZO-1, and Occludin while upregulating Vimentin, SMA, and Snail, leading to distinct mucosal properties. Transglutaminase 2 (TG2) plays a role in regulating TGF-β-induced EMT, making it a potential therapeutic target.

Methods: Tissue samples from patients with CRSwNP, CRSsNP, and DNS(deviated nasal septum, control group) were analyzed using immunohistochemistry(IHC) ,quantitative PCR, immunocytochemistry, and western blot. Primary epithelial cells were cultured under air-liquid interphase (ALI) conditions, with TG2 overexpression and knockdown to assess differences in TG2 and epithelial-mesenchymal transition-related mRNA and protein expression.

Results: The results of IHC showed that, compared with CRSsNP, the expressions of TG2 and EMT-related proteins in epithelial cells of CRSwNP tissue were significantly increased. Meanwhile, the results of differentiated primary epithelial cells also showed the same pattern. Furthermore, over expression or knockdown TG2 revealed positive correlated responses of EMT proteins.

Conclusion: TG2 plays a crucial role in nasal polyp formation by enhancing EMT in nasal epithelial cells. This study is the first to suggest its involvement in CRSwNP and CRSsNP pathogenesis. Ongoing research on TG2 signaling may lead to effective treatments for preventing nasal polyps and improving patient quality of life.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4417

A rare case of gossypiboma following sinus surgery

Eko Makoshi[1], Eri Mori[2], Nao Hesaka[1], Takara Nakazawa[1], Yoshinori Saito[1], Yosuke Shimamura[1], Shintaro Chiba[1], Humikazu Ota[1]

[1]Ota General Hospital, *[2]The Jikei University Hospital*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Background: The retention of a foreign body after surgery can trigger an inflammatory reaction, leading to the formation of a foreign body granuloma. A granuloma caused by retained surgical gauze is referred to as “gossypiboma.” While gossypiboma is most commonly reported after abdominal surgeries, its occurrence following nasal sinus surgery is exceedingly rare.

Case Report: We report a case of gossypiboma in a 47-year-old male who had undergone sinus surgery more than 20 years ago at another medical institution. However, details of the previous procedure were unavailable. The patient presented with symptoms of recurrent rhinosinusitis, and previous endoscopic findings was limited due to middle meatus adhesion, preventing direct visualization of the maxillary sinus lesion. The imaging findings initially suggested an organized hematoma in the left maxillary sinus. During surgery, retained surgical gauze was discovered within the maxillary sinus confirming the diagnosis of gossypiboma. The gauze was successfully removed, and the patient recovered without complications.

Discussion: Gossypiboma and organized hematomas share overlapping clinical and radiological features, making preoperative diagnosis challenging. This report reviews the literature and highlights key imaging findings and clinical indications to improve diagnostic accuracy. Proper differentiation is essential to avoid unnecessary delays in treatment and potential complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4487

Central Compartment Atopic Disease in Chronic Rhinosinusitis: A Distinct Clinical Entity

Julissa Vizcarra[1], Ramón Moreno[2], Daniel Martin[3], Concepción Gago[2], Juan Maza[2], Serafín Sánchez[2]

[1]Consorci Sanitari Integral, *[2]Hospital Universitario Virgen Macarena*, *[3]Hospital Universitario de Álava*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Central Compartment Atopic Disease (CCAD) is an emerging phenotype of chronic rhinosinusitis characterized by type 2 inflammatory changes in the central structures of the nasal cavity. However, its diagnosis relies on nonspecific criteria and its characterization remains imprecise.

Materials and Methods: We conducted a historical cohort study including patients diagnosed with CCAD, CRSwNP and CRSsNP evaluated in consultations and/or underwent surgery between 2020 and 2024. CCAD patients met endoscopic criteria for mucosal degeneration/edema/polyps localized in the middle turbinate, posterior septum, and/or superior turbinate, without lateral involvement of the paranasal sinuses according to CT scan. We analyzed demographic, laboratory, clinical, and quality-of-life variables, as well as radiological findings and surgical procedures. A descriptive and bivariate analysis was performed.

Results: A total of 454 patients were included, 83 diagnosed with CCAD. Asthma and AREA had a lower prevalence in the CCAD group, which also had fewer prior surgeries. Allergic sensitization was similarly distributed across subtypes. Peripheral eosinophilia was higher in CCAD than in CRSsNP. The mean Lund-Mackay score was lower in CCAD than in CRSwNP. Regarding surgery in CCAD, most patients underwent functional endoscopic sinus surgery (64.9%). The mean SNOT-22 score improvement post-surgery was 34 points. Statistically significant differences were found between the type of surgery and the postoperative SNOT-22 scores in the CCAD group.

Conclusion: CCAD represents an entity with unique phenotypic characteristics, showing a high prevalence of allergy and a lower prevalence of asthma. Extensive endoscopic sinus surgery provides a significant benefit in terms of quality of life.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4548

Prevalence of type 2 inflammation in patients with chronic rhinosinusitis with nasal polyps in a tertiary hospital in Turkey

Ayse Asli Sahin Yilmaz[1], Melis Demirag Evman[1], Hatice Tugce Kaya[1], Okan Mustafa Yildiz[1], Kayhan Basak[2], Betul Ulya Durmus[2]

[1]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Otolaryngolgy Head and Neck Surgery Istanbul Turkey, *[2]University of Medical Sciences Kartal Dr.Lutfi Kırdar City Hospital Department of Pathology Istanbul Turkey*

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Background & Aim: Chronic rhinosinusitis (CRS) is a widespread disease which affects 5–12% of the population causing a substantial global burden. As well known with the EPOS 2020, CRS is classified based on endotype dominance; type 2 and non-type 2. Evidence of type 2 inflammation is determined by tissue eosinophil count, serum eosinophils or total immunoglobulin E (IgE) levels. The aim was to evaluate the prevalence and features of type 2 inflammation in patients with nasal polyposis who had Endoscopic Sinus Surgery (ESS) at a tertiary hospital Otolaryngology clinic in Turkey.

Material & Methods: This study was conducted among patients who presented with nasal polyps and underwent ESS between 2023-24. Patients with nasal/paranasal sinus diseases other than Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) were excluded. Demographic data and co-morbidities of the patients were retrospectively collected. Type 2-CRS was determined according to EPOS 2020 guidelines. For histopathologic analysis an extended checklist for CRSwNP was used as suggested by Alobid et al.

Results: Of the 85 patients included in the study, 10 were excluded due to diagnosis of respiratory adenomatoid hamartomas associated with nasal polyposis. The prevalence of type 2-CRS was 76.47%. Allergic rhinitis was present in 44.61% and asthma in 23.07% of the patients. 38.46% of the cases were revisions. Histopathologic analysis were done according to extended checklist for CRSwNP.

Conclusions: The type 2 inflammation was the most common one in our population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4557

Differential Diagnosis of Central Compartment Atopic Disease based on extent of sinuses involvement: Systematic Review and Meta-Analysis

Eugenio Errico[1], Fabio Sovardi[2], Fabio Pagella[1], Laura Terradico[1]

[1]Universita degli studi di Pavia, [2]Fondazione IRCCS policlinico San Matteo (Pavia)

Poster Session | CRS – Diagnosis and Investigations | 22 June – 25 June, 2025, All day

Introduction: Central Compartment Atopic Disease (CCAD) is a recently developed terminology used to describe a specific phenotype of Chronic Rhinosinusitis (CRS). The aim of this study is to provide information regarding the characteristics of patients affected by CCAD, and to clarify the extent of sinuses involvement. Ultimately attempting to provide guidance for CCAD differential diagnosis based on extent of sinus involvement assessed by Lund-Mackay (LMK) scores.

Materials and Methods: Authors searched for articles on PubMed, Cochrane, and Embase databases. Review of the articles was carried out following 2020 PRISMA guidelines, all articles were assessed for quality according to NICE guidelines. Afterwards the statistical analysis was performed with STATA 18SE software. Studies were also assessed for heterogeneity and risk of publication bias. Mean LMK score of patients with CCAD and without CCAD were compared.

Results: A total of 7 studies were included, from which data on 940 subjects was extracted, of which 223 were diagnosed with CCAD. The statistical analysis found e mean difference in LMK scores of -3.38 (95% CI: - 3.99; - 2.76), and a moderately high between-studies heterogeneity I2 = 91.35%.

Conclusions: Patients with CCAD are less likely to develop high LMK scores compared to other phenotypes of CRS, potentially a LMK score> could be used to exclude CCAD diagnosis. However differential diagnosis between CCAD and CRSwNP remains difficult, the lack of criteria to perform a clear diagnosis of CCAD accounts for the high heterogeneity between the studies. It is unclear whether CCAD is a completely distinct phenotype or an early stage of CRSwNP, this advocates the need for consensus studies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Medical Management

3700

Smoking increases mortality risk of chronic inflammatory airway diseases: a real-world hospital cohort study

Jari Haukka[1], **Sanna Toppila-Salmi**[2], Aada Murtomäki[2], Eetu Korhonen[3], Paulus Torkki[1], Mikko Nuutinen[1]

[1]University of Helsinki, *[2]University of Helsinki and Eastern Finland*, *[3]University of Eastern Finland*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Background: Previous studies have linked asthma to increased mortality, but data on inflammatory upper airway diseases and smoking-related mortality remain limited. We aimed to assess mortality rates in asthma, allergic rhinitis (AR), chronic rhinosinusitis with (CRSwNP) or without nasal polyps (CRSsNP), and NSAID-exacerbated respiratory disease (N-ERD), hypothesizing that smoking elevates mortality risk in these conditions.

Methods: This retrospective cohort study included 74,868 patients visiting a tertiary hospital in Helsinki, Finland, between 2004–2011. Data of diagnoses and smoking status were obtained from electronic health records. Mortality and causes of death were obtained from Statistics Finland, with follow-up extending to death or censoring on 31.12.2021. Propensity score matching was used to match smokers with controls.

Results: Smoking significantly increased all-cause mortality risk ($p < 0.001$) among all subjects and subgroups with asthma, AR, CRSwNP, CRSsNP, and/or N-ERD. When both smokers and non-smokers were considered, asthma, AR, CRSwNP, CRSsNP, and/or N-ERD alone were not associated with increased mortality compared to controls in Cox´s regression models matched for age and gender.

Conclusion: Smoking is strongly linked to increased mortality in patients with inflammatory upper and lower airway diseases. These findings highlight the importance of smoking cessation interventions in this population.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3816

Real-life outcomes of Mepolizumab treatment in patients with chronic rhinosinusitis with nasal polyps. Single center results after 12 months follow-up.

Cristina Vaduva[1], Juan Ignacio Riestra Ayora[3], Ana Solís Fesser[4], Eduardo Martín Sanz[5]

[1]ENT specialist at the Rhinology Department of University Hospital of Getafe, Madrid, Spain; Collaborating teacher at Universidad Europea of Madrid, [2]Rhinology Department of University Hospital of Getafe, Madrid, Spain; Collaboratin teacher at Universidad Europea of Madrid, [3]ENT specialist at Rhinology Department of University Hospital of Getafe, Madrid, Spain; Professor at Universidad Europea of Madrid, [4]ENT resident at University Hospital of Getafe, Madrid, Spain, [5]Head of the ENT Department of University Hospital of Getafe, Professor at Universidad Europea of Madrid

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a chronic inflammatory disease that negatively impacts patients' quality of life. Mepolizumab, a monoclonal antibody targeting IL-5, has demonstrated efficacy in controlling eosinophilic inflammation. This study evaluates its effectiveness in a real-life, single center setting. Objectives: To assess the clinical evolution of CRSwNP patients treated with Mepolizumab for 12 months by analyzing changes in Meltzer grade, SNOT-22, olfaction VAS, BOT-8 (detection, identification, memory), sleep VAS, and the need for oral corticosteroids and surgery.

Methods: 30 Patients with CRSwNP treated with Mepolizumab for at least one year were included. Clinical and analytical data were retrospectively collected, evaluating changes in key parameters before and after treatment using descriptive statistical analysis.

Results: After 12 months of treatment with Mepolizumab, the following changes were observed: Meltzer grade of polpyps presented with areduction from an average of 6 to 2 points. SNOT-22 decreased from 73 to 30 points. Olfaction VAS Improvement from 8 to 3 points (10 being anosmia and 0 being perfect smell). BOT-8 (detection, identification, memory) had a progressive increase (detection: +5, identification: +6, memory: +6 points). Sleep VAS (10 being worst and 0 the best) increased from 9 to 4 points. The need for oral corticosteroids decreased usage from 100% to 0% in most cases. The indication for Surgery was present Only in 16% of patients after 1 year of treatment.

Conclusions: Mepolizumab demonstrates significant efficacy in real-life settings, improving symptoms, inflammatory biomarkers, and quality of life in CRSwNP patients. These results support its use as an effective therapeutic option in refractory cases.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3872

Real-life outcomes of Dupilumab treatment in patients with chronic rhinosinusitis with nasal polyps. Results from single center after 12-month follow-up.

Cristina Vaduva[1], Juan Ignacio Riestra Ayora[3], Ana Solís Fesser[4], Eduardo Martín Sanz[5]

[1]at University Hospital of Getafe, Madrid, Spain; Collaborating Teacher at Universidad Euroopea of Madrid, Spain, [2]Rhinology Department at University Hospital of Getafe, Madrid, Spain; Collaborating Teacher at Universidad Euroopea of Madrid, Spain, [3]Rhinology Department at University Hospital of Getafe, Madrid, Spain; Professor at Universidad Euroopea of Madrid, Spain, [4]ENT Department at University Hospital of Getafe, Madrid, Spain., [5]Head of ENT Department at University Hospital of Getafe, Madrid, Spain; Professor at Universidad Euroopea of Madrid, Spain

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a severe inflammatory disease that significantly affects quality of life. Dupilumab, a monoclonal antibody targeting the IL-4/IL-13 pathway, has demonstrated efficacy in clinical trials. This study evaluates its effectiveness and safety in real-world clinical practice.

Objectives: To evaluate the clinical outcomes of CRSwNP patients treated with Dupilumab for 12 months using the following parameters: Meltzer polyps grade, SNOT-22, olfaction VAS, BOT-8 (detection, identification, memory), sleep VAS, need for oral corticosteroids, and need for surgery. Methods: 12 patients with CRSwNP treated with Dupilumab for at least one year were included. Clinical and laboratory data, including symptomatic and objective parameters, were collected before treatment initiation and at 12 months. Data were analyzed using descriptive and comparative measures.

Results: After 12 months of treatment, the following changes were observed: Meltzer polyps grade decreased from an initial mean of 6 to 1. SNOT-22 questionnaire presents an average reduction from 65 to 20 points. Olfaction VAS had a significant improvement from 8 to 2 points (10 being anosmia and 0 perfect smell). vBOT-8 olfactory test had a consistent increase in detection (1 to 7), identification (1 to 8), and memory (1 to 9). Sleep VAS Improved from 9 to 4 points (10 being the worst sleep quality and 0 perfect sleep). Oral corticosteroids usage reduced from 100% to 0% in most cases and the indication for surgery: Only 16% of patients had indication for surgical intervention after 12 months of treatment.

Conclusions: Real-life treatment with Dupilumab led to significant improvements in symptoms and quality of life in patients with CRSwNP. These findings confirm its efficacy and support its role as a treatment of choice for this refractory condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4049

Severe chronic rhinosinusitis and/or severe asthma: report of three years' experience of a multidisciplinary unit

Diogo Cunha-Cabral[1], Rita Vasconcelos Pereira[2], Pedro Gomes[1], Ana Luisa Fernandes[2], Joana Simões[3], Miguel Viana[1], Rosa Fernandes[4], Cristina Lopes[4], Delfim Duarte[1], José Penêda[1]

[1]Otorhinolaringology department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal, *[2]Pneumology department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal*, *[3]Internal Medicine department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal*, *[4]Allergy/Imunology department, Hospital Pedro Hispano, Matosinhos, Porto, Portugal*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis (CRS) is a complex disease that has a significant impact in the quality of life. Its management can be challenging, especially in high relapsing cases, secondary forms and if comorbidities as asthma are present. Previous studies showed that the evaluation of patients with severe CRS in multidisciplinary units might improve clinical outcomes. Nevertheless, there is scarce data addressing the workflow of patients with CRS in these units.

Material and methods: We aim to describe the three years' experience of a multidisciplinary unit for patients with severe chronic rhinosinusitis and/or severe asthma.

Results: The multidisciplinary unit includes Otorhinolaryngology, Allergy/Immunology, Pneumology and Internal Medicine specialists as also nurses dedicated to each of these areas. Since its creation in 2022, 93 patients with severe or difficult to treat chronic rhinosinusitis and/or asthma were evaluated. Most patients (64,5%) were female and the mean age at the first consultation was 52,84 years (+/- 13,80 years). Almost 50% of the patients were referred by Pneumology, followed by Allergy/Immunology (28,0%) and Otorhinolaryngology (21,5%). CRS was the second cause of referral after asthma. 53 patients (57,0%) had CRS and 81,1% of these had previous endoscopic sinus surgery. After evaluation, 66,0% (35/53) of the patients with CRS initiated biological therapy, 13,0% were recommended for surgery and the remaining had their medical therapy optimized. Dupilumab was the selected biological in 60,0% of the cases followed by Mepolizumab in 31,4% of the patients with CRS. Benralizumab was started in 2 patients and Omalizumab in only 1 patient.

Conclusion: Multidisciplinary units are a hallmark of excellence in the care of patients with severe CRS; its implementation should be pursued in hospitals where therapeutic with biologic treatments are an option.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4091

The effects of different nasal saline irrigation solutions on the innate nasal proteome in patients with chronic rhinosinusitis with nasal polyps

A.Simon Carney[1], Surraya Abdul Baseer[1], Guy Botera[1], Paul Henshaw[1], Nick Pietris[1], Nusha Chegeni[1], Alex Colella[1], Timothy Chataway[1], Kamelya Aliakbari[1]

[1]College of Medicine and Public Health, Flinders University

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction:Type-2 diffuse chronic rhinosinusitis (CRS) with nasal polyps, significantly impacts patient quality of life and presents substantial therapeutic challenges. Large volume nasal saline irrigation (NSI) with added topical steroid is a low-cost, evidence-based therapy with potential disease-modifying effects. This study compares the impact of low sodium (LowNa) and isotonic NSI (IsoSal), both with added mometasone, on the nasal innate immune proteome.

Materials and Methods: A randomised clinical trial was conducted with patients diagnosed with Type-2 diffuse CRS. Participants received either IsoNa or LowNa both combined with mometasone, over 14 days. Nasal secretion samples were collected pre- and post-treatment, and proteins were extracted and quantified. Peptides were analysed using liquid chromatography-mass spectrometry, followed by data-independent acquisition for proteomic profiling. Statistical significance was determined with unpaired t-tests ($q < 0.05$).

Results: Post analysis, 3850 unique proteins were detected with individual samples containing between 2304 (minimum) and 3541 (maximum) proteins. The IsoNa group recorded 29 innate proteins that changed in concentration following NSI with 5 of these increasing and 24 decreasing. LowNa group recorded 11 that changed concentration following NSI with 9 of these increasing and 2 decreasing. Notably, lysozyme concentrations significantly increase after LowNa, but not IsoNa, NSI.

Conclusion: This study demonstrated a significant change in key innate proteins post-treatment. Overall, the LowNa irrigation group demonstrated a greater increase in the number of innate proteins, including lysozyme, compared to the Isotonic saline group in type 2 diffuse CRS patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4142

Dupilumab improves the sense of smell and quality of life of patients with CRSwNP in different regions of Brazil

Wilma Anselmo-Lima[1], Vanessa Dinarte[2], Clara Lima[1], Otávio Mielli[1], Maria Eduarda Zanetti[1], Luiza Arruda[1], Marcio Nakanishi[3], Eduardo Kosuji[4], Eulália Sakano[5], Miguel Tepedino[6], Edwin Tamashiro[1], Fabiana Valera[1]

[1]Faculdade de Medicina de Ribeirão Preto – USP, *[2]Faculdade de Medicina de Marília-FAMEMA*, *[3]Faculdade Medicina da Universidade de Brasília*, *[4]Escola Paulista de Medicina - UNIFESP*, *[5]Faculdade de Ciências Médicas-UNICAMP*, *[6]Faculdade de Ciências Médicas-UERJ*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyp (CRSwNP), has anosmia as one of the most disabling symptoms, with a significant impact on patients' functionality and quality of life. For recalcitrant cases of the disease, the biological dupilumab appears as an option. Aim: To present the clinical experience and results with dupilumab in improving smell and quality of life in patients with difficult-to-control CRSwNP in different regions of Brazil.

Material & methods: Patients were selected from different reference centers in Brazil and were evaluated smell test (CCCRC) and quality of life questionnaire (SNOT-22), at the beginning of (T0) and one year (T1) later. The paired t-test and the Wilcoxon signed rank test assessed the statistical significance of changes in T0 and T1 times.(Figure).

Results: The sample consisted of 53 patients, 96.2% had asthma and 62.3% AERD. A significant drop in the SNOT-22 score was noticed, from an average of 61.9 to 16.7 at the end of the 12 months of follow-up, with statistical difference between the pre- and 1-year moments ($p < 1$). The CCCRC showed an impressive improvement in the average score, throughout the segment, from anosmia, 0 points, to mild hyposmia, 5.5 points ($p < 0.0001$). When comparing DREA and asthma only, the responses were similar. In general, most patients achieved an adequate response (good/excellent) within a period of 1 year.

Conclusions: This real-life study have shown that dupilumab improves nasal polyp score, smell test and SNOT-22 in a sustained manner.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4225

Evaluation of Early Real-World Efficacy and Safety of Mepolizumab in Chronic Rhinosinusitis with Nasal Polyposis Through a Multidisciplinary Approach

Alicia Maria Pérez Orribo[1], Paloma Poza Guedes[2], Ruperto González Pérez[2], Maria Gabriela Muñoz Cordero[3], Daniel López Campos[3], Luis Antonio García González[3]

[1]. ENT Department, Hospital Universitario de Canarias, La Laguna, Spain, *[2]Allergy Department & Severe Asthma Unit, Hospital Universitario de Canarias, La Laguna, Spain*, *[3]ENT Department, Hospital Universitario de Canarias, La Laguna, Spain*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Background: Type-2 inflammatory airway diseases including chronic rhinosinusitis with nasal polyps (CRSwNP) and asthma frequently coexist in the same patient sharing a common pathophysiology. We investigated the efficacy and safety of 16 weeks of mepolizumab in a selected cohort with the CRSwNP endotype within a real-life context.

Materials and methods: Non-consecutive patients with type-2 inflammation severe CRSwNP in accordance with the current EPOS/EUFOREA Guidelines were selected from the Allergy&ENT outpatient clinics. Patient demographics, medical history, relevant co-morbid conditions, exacerbation history, medication use, and health care resource demand were recorded. Mepolizumab was administered subcutaneously at a dose of 100 mg every four weeks for 16 weeks in all included subjects. CRSwNP assessments included a SNOT-22 questionnaire, a loss of smell visual analogue scale (VAS) and an endoscopic nasal polyp score (NPS) by trained ENT staff. Basal spirometry and Asthma Control Test (ACT), atopic status were documented. Outcome data from all participants were gathered and compared at two time points: before (T0) and 16-weeks post-commencement (T4) of monthly mepolizumab.

Results: A total of 32 eligible patients with CRSwNP -16 with severe T2 uncontrolled asthma and 9 with NERD- were included. Significant ($p<0.05$) improvements in T0 compared to T4 were observed in SNOT-22 (mean ± SD) 6.74±24.95 to 32.79±24.62, and NPS (5.81±1.36 to 3.35±2.57). Blood eosinophil levels were reduced from 680.6±290.5 cells/µL at T0 to 49.56±48.89 cells/µL at week-16 with no significant ($p>0.05$) changes in total IgE, specific IgE to Dermatophagoides spp. or FENO. In addition, significant improvements were confirmed from T0 to T4 in ACT 14.52±4.61 to 21.18±4.05, and lung function FEV1 (mL) 2531±761.6 to 3917±913.4 in the subgroup of asthmatics. No adverse events associated with mepolizumab were recorded.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4241

Exploring the severity of CRS and hand dominance

Nikita Bhoombla[1], Francesco Di Pierro[1], Marlene Speth[1], Issa Beegun[2], Hesham Saleh[1]

[1]Imperial College Healthcare Trust, *[2]Department of Rhinology Imperial Health*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Objectives: This study investigates the potential relationship between CRS severity and patients hand dominance, to determine whether hand dominance influences the severity of disease with respect to anatomical distribution of inflammation.

Methods: A Retrospective study was conducted in all patients with CRS who has had CT sinuses requiring medical treatment at a busy London tertiary centre. This dataset was further investigated for the interplay between hand dominance, nasal obstruction, sinonasal disease or deviated septum and whether they were on treatment for active disease.

Results: Having reviewed over 100 scans a correlation between Left hand dominance and worsening of disease in the ipsilateral osteomeatal region was identified.

Conclusions: There is correlation between hand dominance and worsening of nasal disease in the more dominant side from our results. We believe this to be the case due to incorrect application of treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4380

Weight gain in patients with uncontrolled chronic rhinosinusitis with nasal polyps undergoing biological therapy with dupilumab - a retrospective analysis

Miguel Padrão[1], Diogo Dias[1], Margarida Bulha[1], Sofia Cales[1], Sandra Augusto[1], Luísa Azevedo[1]
[1]Unidade Local de Saúde da Região de Aveiro

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusitis with nasal polyps (CRSwNP) is an inflammatory condition with high prevalence and morbidity. Dupilumab, an anti-interleukin-4 and 13 monoclonal antibody, has proven an effective therapeutic option. The variation in body weight of patients undergoing treatment remains little explored.

Objectives: assess the weight gain of patients with CRSwNP undergoing treatment with dupilumab, correlating it with improvements in nasosinusal symptoms.

Methods: 39 patients, under serial assessments at the introduction of medication, 1, 6, 9 and 12 months. Weight was measured using a Seca 877 scale. Smell was assessed using the Barcelona Smell Test 24 (BAST-24) and the Loss of Smell Score (LoS). Nasosinusal symptomatology was assessed using Sinonasal Outcome Test (SNOT)-22 and the global Visual Analogue Scale (VAS). Nasal congestion was assessed using Nasal Congestion Score (NCS) and polyp burden using Endoscopic Nasal Polyp Score (NPS).

Results: There was weight gain from 3 months on, reaching 2.144 kg ($p<0.001$) at 12 months. There was no difference between patients with normosmia and hyposmia (U-Test=230.5, $p= 0.15$). We found no correlation between weight gain and ΔSNOT-22 ($r=-0.008$, $p=0.96$), SNOT-22 score ($r=-0.017$, $p=0.92$), NPS ($r=-0.04$, $p=0.81$), VAS ($r=-0.050$, $p=0.76$) or NCS ($r=0.045$, $p=0.79$) at 12 months of follow-up.

Conclusion: Treatment with dupilumab may be associated with weight gain independent of improvements in olfactory function and nasosinusal symptoms. The high homogeneity of the improvement of our outcomes and the small size of our sample calls for further studies to deepen our understanding of the mechanisms underlying this weight gain and assess its long-term implications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4396

Screening olfaction under dupilumab in chronic rhinosinusitis with nasal polyps

Tina Mauthe[1], Christian Meerwein[1], Fabio Ryser[2], Catrin Brühlmann[1], Ayla Yalamanoglu[3], Urs Steiner[2], Michael Soyka[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Zurich, University of Zurich, Zurich, Switzerland, *[2]Department of Rheumatology and Immunology, University Hospital Bern, University of Bern, Bern, Switzerland*, *[3]Department of Immunology, University Hospital Zurich, University of Zurich, Zurich, Switzerland*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) often impairs olfaction. This study evaluated the effects of dupilumab on olfactory function and its associations with clinical parameters.

Methods: CRSwNP patients receiving biweekly subcutaneous Dupixent® (300 mg) were assessed at baseline, one, three, and six months. Outcomes included the 12-item Sniffin' Sticks Test (SST-12), fractional exhaled nitric oxide (FeNO), Nasal Polyp Score (NPS), and weekly Sino-Nasal Outcome Test (SNOT-22).

Results: Among 26 patients, dupilumab significantly reduced FeNO, NPS, and SNOT-22 after one month, while olfactory improvement (SST-12) became evident at three months. After six months, normosmia increased to 81%, and anosmia dropped to 9.5%. Olfactory function (SST-12) correlated negatively with polyp severity (NPS) but not with FeNO, SNOT-22, or age.

Conclusions: Dupilumab effectively restores olfaction in CRSwNP, with over 80% achieving normosmia after six months, highlighting its potential for managing this condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4442

Optimizing Postoperative Outcomes: Normal Saline Nasal Wash Following Functional Endoscopic Sinus Surgery in Indonesia

Aditya Wira Buana[1]

[1]*ORL-HNS Department Faculty of medicine, Hang Tuah University –Dr. Ramelan Naval Hospital,Surabaya, Indonesia.*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Nasal irrigation with normal saline after Functional Endoscopic Sinus Surgery (FESS) is one of the most decent therapies currently available in Indonesia, resulting in enhanced treatment outcomes and a transformative impact on patient care. Limitations in facilities and funding from state-owned insurance pose challenges in providing comprehensive therapy for CRS patients. This study aims to analyze the effectiveness of nasal irrigation with saline solution in CRS patients after performing FESS.

Material and methods: This study was a retrospective cohort design, with an Independent T-test for analyzing medical records from 2021 to 2024.

Results: 244 patients who underwent Functional Endoscopic Sinus Surgery (FESS) were identified. Statistical analysis shows a significant difference in the symptoms of nasal obstruction (P=0.006) and fascial pain (P=0.001). Nasal endoscopy examination revealed significant results in the nasal discharge (P=0.000), mucosal color changes (P=0.011), and piles of debris (P=0.001).

Conclusions: This study proves that nasal irrigation with normal saline solution is adequate in patients with chronic rhinosinusitis after functional endoscopic sinus surgery.



4443

Cinnabsin suppress in vitro IL-8 production from A549 cells stimulated with lipoprotein

Hideyuki Kawauchi[1], Prokopakis Emmanuel[2], Hisashi Iizasa[1]

[1]Department of Microbiology, Shimane University , [2]Department of ORL, Medical University Plovdiv , [3]Department of ORL, University of Crete

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: Cinnabsin ,which has been used for the treatment of patients with acute or chronic rhinosinusitis, exerts an array of anti-inflammatory activities. To prove pharmacological effects of Cinnabsin on various factors contributing to vicious circle in sinonasal cavity, such as epithelial cell chemokine production, hydrogen peroxide production from neutrophils, we have started to perform in vitro experimental studies. We firstly examined whether Cinnabsin might influence the release of IL-8 from human epithelial cells activated with agonists of TLR2, which mainly expresses on airway epithelial cells.

Materials and Methods: We use the human lung epithelial cell line A549 for our in vitro studies. IL-8 releases from these cell lines stimulated with lipoprotein are determined by ELISA. Confluent epithelial cell monolayer are pre-incubated with Cinnabsin for 3 hours and afterwards activated with lipoprotein as a TLR2 agonist for 24 hours. Cell culture: Cells of the human A549, pulmonary epithelial cell line (ATCC CCL 185, Rockville, MD, USA) show features of type II alveolar epithelial cells and produce surfactants. The cells are grown in RPMI1640 medium containing 10% (v/v) fetal calf serum (FCS), 100 µg/ml streptomycin, 100 IU/ml penicillin and 20 mmol/l sodium hydrogen carbonate. Cell culture conditions A549 cells are cultured at 370 C in a water saturated atmosphere containing 5% CO2. The buffers and cell media were prepared using pyrogen-free water. Confluent A549 cell monolayers (105 cells) are cultured in 1 mL RPMI-1640 (10% FCS [v/v]) with antibiotics in 24-well plastic tissue culture plates (Costar, Cambridge, MA, USA). Confluent monolayers are pre-incubated with various concentrations of Cinnabsin for 3 hours. After pretreatment, the cells are washing with PBS twice. After 24 hours of culture, the cell supernatants were collected and stored at -80 oC for IL-8 determination. ELISA assay for IL-8: The amount of IL-8 released into the cell supernatants is determined by a specific ELISA with a detection limit of 30 pg/ml as previously described.

Result: In our preliminary experiment, in vitro IL-8 production from A549 cells stimulate with lipoprotein could be downregulated with adding of Cinnabsin (100 ug/ml, 10 ug/ml) in a dose dependent manner. The precise data will be presented and discussed at the upcoming ERS meeting.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4454

Effect of Budesonide Nasal irrigation in patients Chronic Rhinosinusitis with Nasal Polyps without prior Sinus Surgery

Marcel Menon Miyake[1], Juliana Pascutti Sant'Ana[1], Caio Gomes Floriano[1], Marlos Cortez[1], Leonardo Volpi[1], Renato Trinta[1], Isabela Pontes[1], Ricardo Romano[1]

[1]Santa Casa de São Paulo School of Medical Sciences

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Background: The indication for nasal irrigation with corticosteroids after sinus surgery in patients with Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) is well established, as surgery facilitates distribution throughout the sinonasal cavity. However, it remains unknown whether this approach could also provide therapeutic benefit prior to surgery. This study aims to compare the effect of budesonide versus saline nasal irrigation in surgically naive CRSwNP patients.

Methods: A randomized, double-blind, placebo-controlled parallel-group study was conducted in patients with CRSwNP with no previous sinus surgery. Patients were randomized to receive either 1 mg budesonide or saline nasal irrigation twice daily for four weeks. The primary outcome was the change in the 22-item Sinonasal Outcome Test (SNOT-22). Secondary outcomes included the Visual Analogue Scale (VAS), Nasal Polyp Score (NPS), and the Connecticut (CCCRC) olfactory test.

Results: A total of 52 patients were randomized (mean age 50.1 ± 12.9 years; 51.9% female). The intention-to-treat (ITT) analysis showed that the budesonide nasal irrigation group demonstrated a significantly greater improvement in SNOT-22 (LS mean difference: 34.8 [5.92 SD]; p=0.04) and VAS (LS mean difference: 3.73 [0.68 SD]; p=0.02). No significant differences were observed between groups in NPS or CCCRC.

Conclusion: Budesonide nasal irrigation may be an important tool for controlling sinonasal symptoms in patients with CRSwNP who are not candidates for sinus surgery or while awaiting surgical treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4478

Nasal rinsing with probiotics – microbiome evaluation in patients with inflammatory diseases of the nasal mucosa

Eliza Brozek-Madry[1], Zofia Burska[1], Laura Ziuzia-Januszewska[1]

[1]*Department of Otorhinolaryngology, National Medical Institute of the Ministry of Interior and Administration, Warsaw, Poland*

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Introduction: The evidence regarding the efficacy of probiotic in chronic rhinosinusitis (CRS) is very limited. For this reason, the EPOS2020 steering group advised against the use of probiotics in the treatment of patients with CRS. Therefore, further research on probiotics, evaluating their impact on microbial communities, is particularly important. This study aimed to assess the influence of probiotic nasal rinses on nasal microbiota profiles in patients with primary CRS, granulomatosis with polyangiitis (GPA), and nasal septal perforation, using 16S rRNA sequencing.

Material and method: The study involved 36 patients diagnosed with nasal mocosa diseases, including 16 patients with primary CRS, 11 patients with granulomatosis with polyangiitis (GPA), and 9 patients with nasal septal perforation. Patients were randomly assigned to either a a study group, which underwent nasal rinsing with probiotics containing Lactobacillus plantarum and Bifidobacterium animalis, or a control group, which rinsed the nose with saline. Metagenomic analysis of bacterial and archaeal populations was carried out based on the hypervariable V3-V4 region of the 16S rRNA gene.

Results: At the level of genus, among the most abundant co-colonisers in the microbiome were Staphylococcus, Streptococcus, and Haemophilus. After one month of nasal rinsing with probiotics, a decrease in abundance in the following genera was observed : Finegoldia (p=0,01); Haemophilus (p=0,02); Streptococcus (p=0,027); Staphylococcus (p=0,033); Micrococcus (p=0,0347); Coryne bacterium (p=0,049); Gemella (p=0,055); Rubrobacter (p=0,0551); ; Pseudonocardia(p=0,058). Conversely, there was an increase in the abundance of probiotic species Lactobacillus plantarum and Bifidobacterium animalis. Moreover, an increase in the genera Dolosigranulum and Stenotrophomonas was observed, although it did not reach statistical significance.

Conclusions: While Streptococcus, Haemophilus, Staphylococcus and Moraxella, are considered commensals with relatively low bacterial burden within the sinonasal mucosa, a dysbiosis state with their overrepresentation may contribute to inflammatory processes. We observed a significant reduction in the abundance in these genera following nasal rinsing with probiotics in patients with nasal inflammatory diseases, indicating a potential role for probiotics in restoring microbial homeostasis at the mucosal level.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4539

An Overview of Switching Biological Therapies for Chronic Rhinosinusitis with Nasal Polyposis (CRSwNP)

Talal Alharbi[1], Ahmad Alroqi[3], Nawaf Alsubaie[4]

[1]King abdulaziz medical city, [2]King abdulaziz medical city , [3]King Saud University , [4]King Abdulaziz University Hospital

Poster Session | CRS – Medical Management | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyposis (CRSwNP) is a type 2 inflammatory disease, with eosinophilic inflammation of the nasal mucosa and paranasal sinuses. It can lead to significant impact on quality of life due to symptoms of local and systemic inflammation and has a high recurrence rate despite optimal medical and even surgical treatment in certain cases. Recalcitrant CRSwNP can be treated with biological therapies with specific immunological targets, such as IgE (Omalizumab), IL4α receptors (Dupilumab), or IL-5 (Mepolizumab), which have been approved for this use.

Summary: While there is sufficient evidence to support the use of biological therapies for recurrent and refractory CRSwNP despite the use of nasal corticosteroids as an add-on or adjunctive therapy, there is paucity of evidence regarding switching from one biologic to another. The purpose of this narrative review was to review the currently available literature on biological therapies for CRSwNP and their switching in cases of inadequate disease control, so that recommendations could be formulated for clinical guidance and to aid further prospective studies. Keywords such as 'biologic'; 'anti-IgE'; 'anti-IL5'; 'anti-IL4'; 'sinusitis'; 'chronic rhinosinusitis'; 'nasal polyps'; 'switch'; and 'recurrence' were combined using the 'AND' or 'OR' Boolean operators to search databases including Google Scholar, Medline, and EMBASE; free-text search was also utilized for this purpose. Evidence on biologic switching for recurrent CRSwNP was limited and supported the use of Dupilumab while switching from anti-IgE or anti-IL5 biologics, due to better symptom control and improved quality of life outcomes. Multidisciplinary consensus from immunologists or allergists, otorhinolaryngologists, and pulmonologists (in cases of concurrent asthma) is essential for aiding decision-making regarding switching biologics.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Outcome Assessment

3785

Risk factors of early postoperative relapse of chronic rhinosinusitis with nasal polyps: a randomized controlled trial

Harald Kulju[1], Sanna Toppila-Salmi[2], Johanna Sahlman[3], Paula Virkkula[4]

[1]University of Eastern Finland, [2]Department of Otorhinolaryngology, University of Eastern Finland Joensuu, Kuopio, Finland, [3]Kuopio University Hospital, Kuopio, Finland, [4]Helsinki University Hospital

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Introduction: Uncontrolled chronic rhinosinusitis with nasal polyps (CRSwNP) often requires endoscopic sinus surgery (ESS). The predictors of postoperative polyp recurrence remain unclear. This study aims to identify preoperative clinical markers that predict early relapse, looking to enable targeted surgical resource allocation, personalized treatment, and optimized follow-up planning.

Methods: Data was derived from the AirGOs Operative multicenter study conducted at the University Hospitals of Helsinki and Kuopio. Ninety-five severe CRSwNP patients were randomized into complete or limited ESS groups. Preoperative and postoperative data (at 3, 6, and 9 months) were collected. Early relapse was defined as a total endoscopic nasal polyp score (NPS) ≥5 at any follow-up point within 9 months. Risk factors for relapse were analyzed using adjusted logistic regression, Mann-Whitney U, and Fisher's exact tests. Receiver operating characteristic (ROC) curve analysis determined variable cut-off values.

Results: Early postoperative relapse occurred in 29% of patients. Univariate logistic regression identified high preoperative Nasoendoscopic Polyp Score (NPS), high Lund-MacKay score or sinus computed tomography scans (LMK), NSAID-exacerbated respiratory disease (NERD), and limited ESS as factors associated with relapse. Multivariable analysis identified high preoperative NPS, high LMK, and limited ESS as independent risk factors for postoperative polyp recurrence.

Conclusions: High NPS, high LMK, and the extent of surgery are predictors of early polyp recurrence after ESS. These findings are crucial for preoperative planning, patient education on recurrence risks, and optimizing follow-up and advanced treatment strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3826

Olfactory outcomes after Endoscopic Modified Lothrop procedure

Alison Lim[1], Sagar Mittal[1], Elliot Quay[1], Hammaad Khan[1], Saleh Okhovat[1]
[1]GGC

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Background: The Endoscopic Modified Lothrop Procedure (EMLP) allows for maximal medication delivery to the frontal sinus in chronic rhinosinusitis (CRS), as well as improving access for the surgical management of skull base pathologies. This study aims to report olfactory outcomes following EMLP and the impact of middle turbinate resection on olfaction in this cohort.

Methods: A retrospective study was performed in a single UK tertiary centre. All patients who underwent EMLP between 01/11/21 – 01/10/23 were identified. Data collection included demographic information, surgical details. Patient reported olfactory score was scored from 0 to 10, with a score of 0 representing complete anosmia and a score of 10 representing no olfactory disruption.

Results: 51 patients (36 male, 15 female) with a mean age of 52 years underwent EMLP. CRS (66.6%), followed by mucocele (27.5%) were the most common indications. Mean pre-operative smell score was 1.9 out of 10, and increased post-operatively to 3.3 (p=0.08). 34 (66.7%) patients had middle turbinate resection, and there was no significant difference in post-operative smell scores in patients with and without middle turbinate resection (p=0.46). SNOT-22 score significantly improved following intervention (p<0.001).

Discussion: In this cohort EMLP had no significant impact on patient reported smell outcomes. The resection of the middle turbinate had no impact on post-operative smell outcomes. Olfaction can be maintained following comprehensive endoscopic surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3860

Our Experience in the Surgical Treatment of Frontal Sinusitis in the Reality of a Warring Country

Iryna Tsvirinko[1], Diana Zabolotna[1], Oleksandra Tytarchuk[3]

[1]Kolomiychenko Institute of Otolaryngology of NAMS of Ukraine, [2]O.S.Kolomiychenko Institute of Otolaryngology of NAMS of Ukraine, [3]State institution "O.S. Kolomiychenko Institute of Otolaryngology of National Academy of Medical Sciences of Ukraine", Zoolohichna street, 3, Kyiv, Ukraine, 03057

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

The frontal sinus is often cited as the most challenging area to approach in endoscopic sinus surgery (ESS) because the region is situated behind and above the frontal beak, requiring an angulated endoscopic approach. The relatively small confines of this region are prone to postoperative cicatrization.

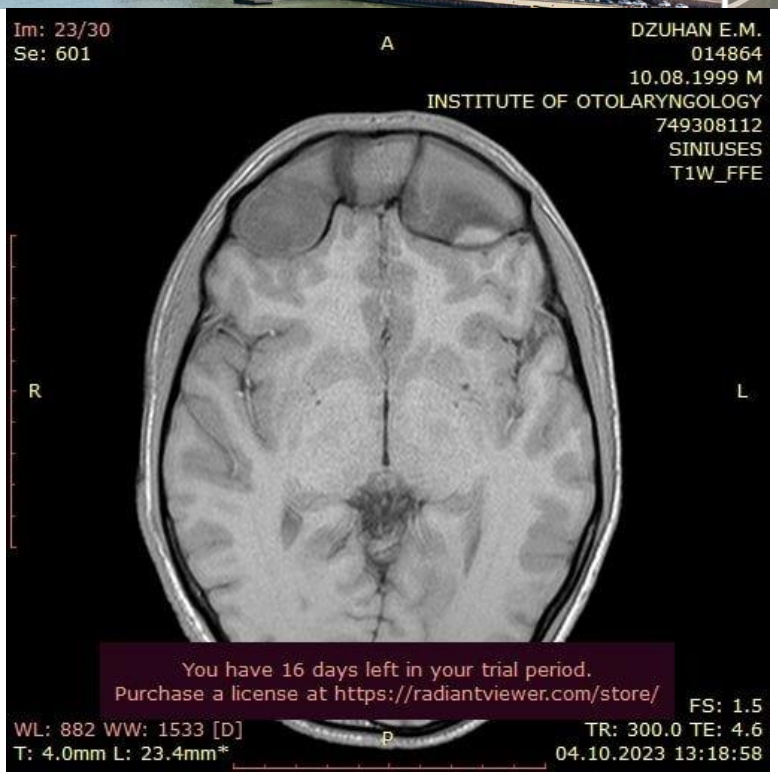
Purpose: To determine the key problems and methods of treating patients with chronic frontal rhinosinusitis, depending on etiology, main pathology, previous surgeries, and the possibility of follow-up.

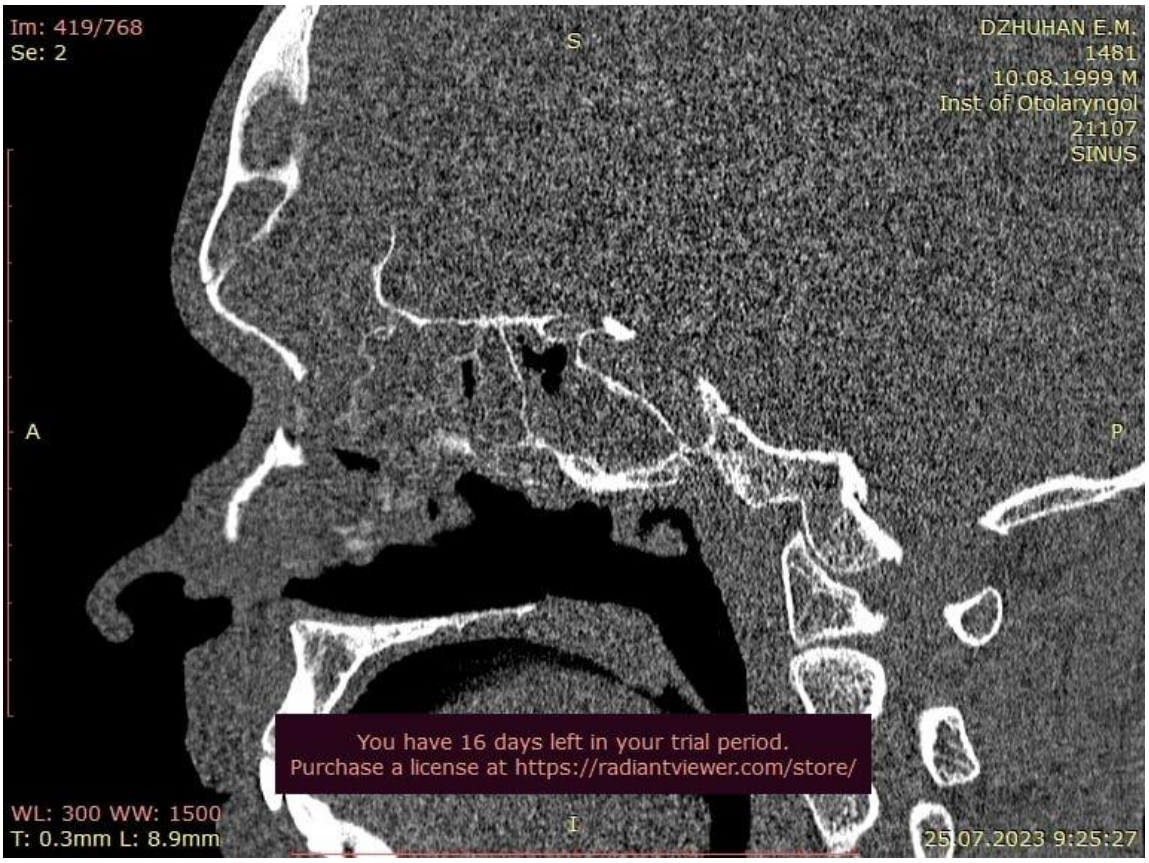
Material & Methods: During 2024–2025, in the rhinology department, we operated on 101 patients with frontal sinusitis. The average age of the patients was 44.3 years. Men accounted for 63.4% (64), and women for 36.6% (37).To classify the cases, we used the International Frontal Sinus Anatomy Classification (IFAC):1st group – 57.4% (58 patients): ANC, SAC, SBC, and anterior-posterior (AP) diameter> mm.2nd group – 24.8% (25 patients): SAFC, SBFC, SOEC, and/or AP diameter 6–10 mm.3rd group – 17.8% (18 patients): FSC, SAFC, SBFC with AP diameter <5 mm, including patients with intraorbital and intracranial spread.

Results: We noticed recurrence rates in the following groups: 1st group – 3.4% (2 patients)2nd group – 16% (4 patients)3rd group – 22.2% (4 patients)

Conclusions: The most challenging cases were provoked by previous trauma or frontal sinus trephination in the past .Due to the wartime conditions, the postoperative follow-up period is significantly complicated. A mometasone delivery system is effective in managing frontal sinusitis recurrence, but it is currently unavailable in our country.




Im: 23/30
Se: 601
A
DZUHAN E.M.
014864
10.08.1999 M
INSTITUTE OF OTOLARYNGOLOGY
749308112
SINIUSES
T1W_FFE
R
L
You have 16 days left in your trial period.
Purchase a license at https://radiantviewer.com/store/
FS: 1.5
WL: 882 WW: 1533 [D]
T: 4.0mm L: 23.4mm*
P
TR: 300.0 TE: 4.6
04.10.2023 13:18:58


Im: 419/768
Se: 2
S
DZUHAN E.M.
1481
10.08.1999 M
Inst of Otolaryngol
21107
SINUS
A
P
You have 16 days left in your trial period.
Purchase a license at https://radiantviewer.com/store/
WL: 300 WW: 1500
T: 0.3mm L: 8.9mm
I
25.07.2023 9:25:27




Im: 392/768
Se: 2
S
DZHUHAN E.M.
3466
10.08.1999 M
Inst of Otolaryngol
22479
SINUS
A
P
You have 16 days left in your trial period.
Purchase a license at https://radiantviewer.com/store/
WL: 300 WW: 1500
T: 0.2mm L: -4.4mm
I
16.10.2023 12:07:21

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3885

Estimating meaningful change thresholds for the Nasal Polyposis Symptom Diary: Analysis of the WAYPOINT trial

Mary Kay Margolis[1], Vaishali Mankad[2], Cristina Ivanescu[3], Mark Kosinski[3], Fay Tasouli[3], Gerasimos Dumi[3], Claire Hopkins[4]

[1]Patient Centered Science, AstraZeneca, [2]Late-stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, [3]IQVIA, [4]Department of Otolaryngology-Head and Neck Surgery, Guys and St Thomas' Hospital

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Introduction: The Nasal Polyposis Symptom Diary (NPSD) is a patient-reported outcome measure to assess symptoms/impacts in patients with chronic rhinosinusitis with nasal polyps (CRSwNP). Within-patient meaningful change thresholds (MCTs) were previously estimated; these analyses established MCTs in the WAYPOINT trial population.

Methods: WAYPOINT (NCT04851964) was a phase 3, randomized, placebo-controlled trial to evaluate efficacy and safety of tezepelumab in patients with severe CRSwNP. Patients completed the NPSD every morning and Patient Global Impression of Severity (PGI-S) and Patient Global Impression of Change (PGI-C) at each visit. Pooled WAYPOINT data (N=406) were used to estimate MCTs for improvement at Week 52 in Nasal Congestion Score (NCS; co-primary endpoint), Difficulty with Sense of Smell (DSS), and Total Symptom Score (TSS) (secondary endpoints), using anchor-based methods supplemented by distribution-based methods. PGI-S was the primary anchor, with PGI-C providing support/context. The anchor category group with the lowest median (or mean) score change exceeding the “no change” group 95% confidence interval and exceeding distribution-based estimates was used.

Results: Both anchors were highly correlated with NCS, DSS, and TSS (PGI-S: 0.671–0.725; PGI-C: 0.634–0.668). PGI-S 1-point improvement met criteria to be the anchor change category for NCS and TSS, while 2-point improvement met criteria for DSS. PGI-S-based analyses yielded MCT values of −1.1, −0.6, and −5.4 for NCS, DSS, and TSS, respectively (Table).

Conclusion: Within-patient MCTs for improvement were established for NPSD NCS, DSS, and TSS. These could aid interpretation of scores in patients with severe CRSwNP, to better understand meaningful change and treatment response.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3894

Characteristics and risk factors for postoperative recurrence in chronic rhinosinusitis with nasal polyps: a multidisciplinary expert consensus

María Sandra Domínguez Sosa[1], Ruperto González Pérez[3], Christian Calvo Henríquez[4], Carlos Colás[5], Beatriz Fernández Parra[6], Isam Alobid[7]

[1]Rhinology Unit, ENT Department, Hospital Universitario de Gran Canaria Dr. Negrín, Las Palmas de Gran Canaria, Spain., [2]Rhinology Unit, ENT Department, Hospital Universitario de Gran Canaria Doctor Negrín, [3]Allergology Department and Severe Asthma Unit, Hospital Universitario de Canarias, Santa Cruz de Tenerife, Spain., [4] ENT Department, Complejo Hospitalario Universitario de Santiago de Compostela, Santiago de Compostela, Spain., [5]Allergology Department, Hospital Clínico Universitario Lozano Blesa, Aragón Health Research Institute, University of Zaragoza, Zaragoza, Spain., [6]Allergology Department, Hospital El Bierzo, Ponferrada, Spain, [7]Rhinology and Skull Base Unit, ENT Department, Hospital Clínic, Universitat de Barcelona, FRCB-IDIBAPS, CIBERES, Barcelona, Spain.

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Chronic rhinosinusitis with nasal polyps (CRSwNP) is a chronic inflammatory condition of the nasal mucosa and paranasal sinuses, characterized by the presence of nasal polyps. After surgery, a significant number of patients experience disease recurrence (ranging from 16% to 95.9% in patients followed for more than 5 years), without a standardized definition. The RELAPSE project aims to establish a consensus on the characteristics of postoperative recurrence and to determine and prioritize the most relevant risk factors. The Delphi methodology was used to reach a consensus among healthcare professionals. This process involved literature review, selection of prognostic criteria by a multidisciplinary scientific committee, and iterative rounds of anonymous surveys of experts. In October and December 2024, two rounds of surveys were conducted. Sixty-nine specialists (47 otorhinolaryngologists and 22 allergologists) completed the Delphi questionnaire. Consensus was reached regarding characteristics of postoperative recurrence, which included worsening of symptoms and presence of polyps confirmed by endoscopy at least 6 months after first follow-up visit (4 weeks after surgery). Several key prognostic factors for recurrence of CRSwNP were identified, being the top-five: 1. Presence of eosinophils in nasal polyps. 2. Concomitant asthma. 3. NSAID-exacerbated respiratory disease. 4. High eosinophils count in blood and nasal secretions. 5. Extension of sinus surgery. The RELAPSE project successfully reached a consensus on the characteristics of postoperative recurrence and significant risk factors. Their recognition will facilitate close monitoring, timely interventions for high-risk patients and optimization of medical and surgical treatment, ultimately improving patients' quality of life.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3906

Eosinophilic mucinous rhinosinusitis: a clinicopathological profile and predictors of recurrence

Regi Kurien[1], Lalee Varghese[1], Lisa Mary Cherian[1]

[1]*Department of Otolaryngology, Christian Medical College, Vellore, Tamil Nadu, India*

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Background: Eosinophilic mucinous rhinosinusitis (EMRS), a distinct phenotype of chronic rhinosinusitis with nasal polyps (CRSwNP) is often misdiagnosed with allergic fungal rhinosinusitis. Being under-reported there is a paucity of data regarding their clinical profile. The study aims to describe the clinico- pathological profile, analyze recurrence rates and predict factors predisposing to recurrence.

Material and Methods: This was a retrospective review of patients treated for EMRS from 2013-2023 wherein data regarding demography, clinical features, hematological and pathological parameters and follow up were collected and analyzed.

Results: Eight-nine patients were treated for EMRS during the above period. 31.4% had high BMI with 25 (28.1%) patients having asthma. Majority (96.6%) presented with bilateral disease with a mean Lund Kennedy endoscopic score of 5.96. The mean IgE and serum eosinophils levels were 597.55(SD =918.10) and 8.09 (SD=6.39) respectively. Histopathology showed moderate infiltrates in 59 (82%) with predominance of lymphocytes (91%), eosinophils (52.8%), and plasma cells (42.69%). On follow up, 47 (63.5%) showed no endoscopic signs of recurrence. Factors predicting recurrence included high BMI (p=0.040) and high serum eosinophilia (p=0.013). Although presence of moderate infiltrates was statistically significant in patients with no recurrence (p=0.039), severe infiltrates though showing a rising trend was not significant. Presence of comorbidities like asthma, raised IgE and eosinophilic infiltrates were not significant factors predicting recurrence.

Conclusion: EMRS forms a distinct subset of CRSwNP. Patients with high BMI, raised serum eosinophils and moderate infiltrates on histopathology need aggressive treatment with close follow up to prevent recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4015

Evaluation of SNOT-22 Subdomains in CRSwNP Patients Treated with Biological Therapy: Preliminary Insights from a Nationwide Cohort (HURRAH)

Lili Lakatos[1], László Lujber[3], Mária Matúz[4], Eszter Erdélyi[5], Tünde Orosz[6], Bálint Liktor[6], Balázs Liktor[6], Anna Bódi[7], László Tóth[8], Kristóf Ludányi[9], Zsolt Bella[10], Imre Dóka[9], Helga Kraxner[9], Csenge Zsiros[11], Ágnes Szalenkó-Tőkés[5], Tibor Szalóki[9], Zoltán Fent[9], Ágnes Kiricsi[5], Andor Hirschberg[6], Zsuzsanna Horváth[1]

[1]Dept. of Otolaryngology, South Buda Center Hospital St. Imre University Teaching Hospital Budapest, Hungary, [2]Dél-budai Centrumkórház Szent Imre Kórház, [3]ENT, H&N Surg. Univ. Pécs. Hungary, [4]University of Szeged, Institute of Clinical Pharmacy, Faculty of Pharmacy, Hungary, [5]University of Szeged, Department of Otorhinolaryngology, [6]St. John's Hospital, Department of Otorhinolaryngology and Maxillofacial Surgery, Budapest, Hungary, [7]Dept ENT and H&N Surg. Univ Debrecen. Hungary, [8]Dept of ENT and H&N Surg. Univ Debrecen. Hungary, [9]Semmelweis University Budapest Department of Otorhinolaryngology and Head and Neck Surgery, [10]Bács-Kiskun County Teaching Hospital, Department of Oral and Maxillofacial Surgery and Otorhinolaryngology, [11]University of Szeged, Family Medicine Department

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Background and Aim: Chronic rhinosinusitis with nasal polyps (CRSwNP) significantly impacts patients' quality of life. Among the tools available for symptom evaluation, the Sino-Nasal Outcome Test (SNOT-22) is one of the most widely used, providing a validated and quantitative measure of symptom severity across 22 items. Recently, the four-subdomain structure of the SNOT-22 has also been validated, offering new opportunities for more detailed analyses. Our study aims to investigate which SNOT-22 subdomains (nasal symptoms, otologic/facial pain, sleep, and emotional symptoms) show the most significant changes because of biological therapy in patients with CRSwNP.

Material and Methods: We analysed SNOT-22 data from CRSwNP patients enrolled in the Hungarian Rhinosinusitis Registry Augmenting Healthcare (HURRAH). Questionnaires were collected at three different time points: baseline, 6 months, and 12 months after treatment initiation.

Results: Data collection is ongoing, and the most recent results will be presented at the conference.

Preliminary Conclusion: Dividing the SNOT-22 into subdomains allows for a more nuanced analysis of treatment outcomes than assessing overall improvement or deterioration. This approach could shed light on which symptom clusters are most effectively targeted by biological therapy, providing valuable insights into optimising CRS management strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary





4097

Major discrepancy between self-reported and objective adherence in CRS patients

Christiane Haase[1], Kasper Aanaes[1], Vibeke Backer[1], Kjell Erik Julius Håkanson[2], Charlotte Ulrik[2], Bente Appel Esbensen[3]

[1]Department of Otorhinolaryngology, Head & Neck Surgery and Audiology, Copenhagen University Hospital, Denmark, *[2]Department of Respiratory Medicine, Hvidovre Hospital*, *[3]Copecare (Copenhagen Center for Arthritis Research), Center for Rheumatology and Spine Diseases, Copenhagen University Hospital, Denmark*

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP), with comorbid asthma is treated with local corticosteroids. Poor adherence is well-documented in asthma and is linked to adverse outcomes. Limited research has been published on adherence in patients with concomitant CRS and asthma.

Research-question: Is there a difference in subjective vs. objective adherence in patients with CRSwNP and comorbid asthma?

Methods: A cross-sectional survey was conducted among outpatients referred to the Department of Otorhinolaryngology, Rigshospitalet, in 2023. Patients reported their adherence to nasal (nCS) and inhaled (ICS) corticosteroids by self-reported adherence score (SA) and MARS-5 (subjective). Objective adherence was calculated by medication possession ratio (MPR) for medication 12 months prior to clinic assessment. Redeemed doses were divided by prescribed doses. Satisfactory adherences are ≥80% for SA; MPR and MARS-5 score ≥ 20 out of 25.

Results: The study included 136 CRSwNP outpatients, 77% with comorbid asthma. Subjective adherence varied by method between 92–100% (SA, MARS-5. Median objective adherence was 58%, with 31% achieving acceptable levels. No correlation was found between subjective and objective adherence with age, sex, or education. Objective adherence to nCS was significantly higher in patients with comorbid asthma than in CRS alone 33% (p=0.02).

Conclusion: Most patients with CRSwNP with comorbid asthma report satisfactory adherence. Objectively assessed adherence was significantly lower, with only 31% demonstrating satisfactory adherence based on pharmacy redemptions. Patients with CRSwNP and comorbid asthma had significantly higher adherence compared with patients with CRS alone.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4458

Evaluation of the correlation between image findings and treatment efficacy in odontogenic maxillary sinusitis

Suzuki Yasuhiro[1]
[1]Department of otorhinolaryngology

Poster Session | CRS – Outcome Assessment | 22 June – 25 June, 2025, All day

Introduction: Odontogenic maxillary sinusitis is a disease frequently encountered in ENT.It is sometimes difficult to choose whether dental treatment such as tooth extraction first or endoscopic nasal surgery. In this study, we investigated whether image findings influenced the treatment outcome.

Material and methods: Causes of odontogenic maxillary sinusitis include the spread of inflammation from periodontal disease or alveolar pyorrhea, the spread of inflammation from root cysts, the spread of inflammation from bone defects following tooth extraction, and the spread of inflammation after implant insertion. In this study, we did not evaluate each of these causes, but all causes were assessed together. CT findings were classified using the Lund-Mackay score.

Results: In case of Lund-Mackay score of 2, all cases improved after surgery, and there was no recurrence without advanced treatment. There was no difference between local and general anesthesia. In case of Lund-Mackay score of 1 (shadows around 50%), almost all cases improved after surgery, a few cases needed advanced treatment such as nasal irrigation. In case of Lund-Mackay score of 1 (shadows less than 20%), no improvement was observed in any of the cases.

Consideration: In cases of odontogenic maxillary sinusitis, it may be necessary to consider prioritizing endoscopic sinus surgery first depending on the results of the CT findings.



CRS – Pathophysiology

3638

Serum and tissue periostin expression in Chronic Rhinosinusitis with Nasal Polyps

Alkmini Gatsounia[1], Spyridon Lygeros, Gerasimos Danielides[1], George Kyriakopoulos[3], Constantinos Stathopoulos[3], Nikolaos Mastronikolis[2], Vasileios Danielides[2]

[1]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece, [2]1. Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece 2. School of Medicine, University of Patras, Patras, Greece, [3]Department of Biochemistry, School of Medicine, University of Patras, Patras Greece

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introduction: There is increasing evidence of the contribution of periostin in the pathogenesis of chronic rhinosinusitis with nasal polyps. This study aims to investigate the expression of periostin in nasal polyp tissue along with serum periostin and its potential function as a biomarker.

Material & Methods: The study included 36 CRSwNP patients and 12 controls. Nasal polyp tissue from CRSwNP patients and inferior turbinate mucosa samples from controls were intraoperatively collected. POSTN gene mRNA expression from nasal polyp tissue was assessed with PCR and periostin levels on tissue samples were measured with ELISA and Western Blot. ELISA was performed to evaluate serum periostin on blood samples collected from patients undergoing functional endoscopic sinus surgery for CRSwNP (n = 36) and results were compared with assays performed on control subjects (n = 12).

Results: Tissue periostin gene expression in terms of mRNA levels was significantly elevated in patients with CRSwNP than in healthy control subjects (p-value <0.05). Tissue periostin values in CRSwNP patients were also significantly higher in CRSwNP compared to controls. A positive correlation between periostin levels and the presence of asthma and smoking was observed in the patient group. Serum periostin did not present a statistically significant difference between the two groups.

Conclusions: Our data suggest that periostin expression is upregulated in nasal polyps and might determine a crucial role in the occurrence and evolution of the disease. Periostin appears to be a promising therapeutic target candidate in CRSwNP.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3639

Periostin expression in unilateral benign lesions of the nose and the paranasal sinuses

Alkmini Gatsounia[1], Spyridon Lygeros[1], Gerasimos Danielides[1], George Kyriakopoulos[4], Constantinos Stathopoulos[4], Nikolaos Mastronikolis[2], Vasileios Danielides[2]

[1]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece, *[2]1. Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece 2. School of Medicine, University of Patras, Patras, Greece*, *[3]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece* , *[4]Department of Biochemistry, School of Medicine, University of Patras, Patras Greece*

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introduction: The role of periostin in the pathogenesis of inflammatory diseases of the nose and paranasal sinuses is a current subject of study. This study aims to determine the expression of periostin in mucoceles, inverted papillomas, choanopolyps and retention cysts.

Material & Methods: Sixty-six participants were recruited in this study, 18 patients with inverted papillomas, 10 with mucoceles, 10 with choanopolyps, 16 with retention cysts and 12 controls. POSTN gene mRNA expression from tissue samples collected intraoperatively during Functional Endoscopic Sinus Surgery was assessed with PCR and periostin levels on the samples were measured with ELISA and Western Blot. ELISA was performed to evaluate serum periostin on blood samples collected preoperatively from patients undergoing FESS for the above-mentioned pathologies (n = 54) and results were compared with assays performed on control subjects (n = 12).

Results: There were no significant alternations between tissue and serum samples of inverted papilloma compared to control group. In choanopolyps tissues POSTN protein expression was elevated, with no significant alternation in POSTN gene expression nor in serum POSTN levels compared to control. In mucoceles POSTN levels were elevated both on tissue and in serum compared to control. In retention cysts POSTN mRNA levels and protein were elevated in tissue samples, with no significant alternations in serum levels compared to controls.

Conclusion: Periostin can be suggested to play a role in the pathophysiology of benign non-neoplastic lesions of the nose and paranasal sinuses such as mucoceles, retention cysts and choanopolyps.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3772

Role of nasal polyp-derived innate lymphoid cells in staphylococcal enterotoxin-induced cellular responses

Kanai Kengo[1], Oka Aiko[3], Yamada Marie[3], Okano Mitsuhiro[3]

[1]Department of Otorhinolaryngology, International University of Health and Welfare School of Medicine / Department of Otorhinolaryngology, Head and Neck Surgery, Japanese Red Cross Society Himeji Hospital, [2]Department of Otorhinolaryngology, International University of Health and Welfare School of Medicine / Department of Otorhinolaryngology, Head and Neck Surgery, Japanese Red Cross Society Himeji Hospital, [3]Department of Otorhinolaryngology, International University of Health and Welfare School of Medicine

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Background: Innate lymphoid cells (ILCs) is involved in the pathogenesis of chronic rhinosinusitis with nasal polyps (CRSwNP). Staphylococcus enterotoxin B (SEB) from staphylococcus aureus is one of the most characterized microbial components to promote chronic inflammation such as local eosinophilia in CRSwNP. In the present study, we sought to characterize the involvement of ILC in SEB-induced cellular responses in CRSwNP.

Methods: Dispersed NP cells (DNPCs) and NP-derived ILCs were prepared from NPs. DNPCs and/or NP-derived ILCs were stimulated with SEB, then levels of type 1 (IFN-g), type 2 (IL-5 and IL-13), type 3 (IL-17A and IL-22) and regulatory (IL-10) cytokines in the supernatants were determined. In addition, pathophysiological significance of the effect of ILCs on SEB-induced cytokine production by DNPCs was analyzed.

Results: NP-derived ILCs solely did not respond to SEB to produce substantial amounts of cytokines analyzed. Addition of ILCs significantly reduced IL-17A production by DNPCs in response to SEB. On the other hand, Degree of NP eosinophilia was significantly and positively correlated with changes in IL-13 production by the addition of NP-derived ILCs.

Conclusions: These results suggest that ILCs in NPs plays a role in the pathogenesis of CRSwNP triggered by the exposure to SEB. In particular, the ILCs may enhance eosinophilic inflammation through increased IL-13 production following exposure to SEB.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3812

Influence of transient receptor potential channels on the neurogenic inflammation of chronic rhinosinusitis (CRS)

Pascal Ickrath[1], Rina Hoffmann[1], Maria Steinke[1], Totta Ehret-Kasemo[1], Stephan Hackenberg[1], Agmal Scherzad[1]
[1]ENT University Clinic Würzburg, Germany

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Transient receptor potential (TRP) channels are transmembrane cation channels. They appear to play an important role in neurogenic inflammation and maintenance of chronic inflammation. Several subfamilies have been described, but the exact function of these channels is still partially unclear. In preliminary studies, we were able to detect the channels at the RNA and protein level in the nasal mucosa of patients with CRS and in healthy tissue. The aim of the present study was to better understand the role of TRP channels as a possible cause of neurogenic inflammation in CRS. Intraoperatively harvested nasal mucosa from patients with CRS with nasal polyps (CRSwNP), without nasal polyps (CRSsNP) and healthy controls were analyzed. RNA expression of TRPM4, TRPV1 and TRPA1 was detected by quantitative PCR. Immunohistochemical staining (IHC) and Western blot (WB) were used to analyze the channels at the protein level. TRPV1, TRPA1 and TRPM4 could be detected in all samples by PCR. At the RNA level, higher concentrations, especially of TRPM4, were found in inflammatory tissue compared to healthy tissue, but without significance. In IHC, we were able to localize the channels in the apical epithelium. Here we found a higher density in the inflammatory tissue in both CRS subgroups. In addition, we were able to visualize the channels in inflammatory mesenchymal cells in patients with CRS. This indicates a possible role of neurogenic inflammation through the channels. A dimer formation of the extracellular parts of the proteins as well as their temperature dependence was detected by Western blot. TRP channels can be detected in all examined groups. TRPM4 appears to occur more frequently in CRSwNP. The channels are found more frequently in the apical epithelium, but also more frequently in inflammatory cells in inflammatory tissue. Further studies are planned to gain a deeper understanding of the channels and their role in neurogenic inflammation.



4024

Endoscopically guided sinus cultures in recalcitrant sinusitis

Shawki Elmoursi[1], **Sirin Elmoursi[1]**
[1]Al-Mansoura University

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introduction: Despite maximal medical and surgical therapies, subsets of patients continue to have persistent inflammation of paranasal sinuses, treatment of this group of patients, often referred to as recalcitrant chronic sinusitis, is quite challenging and is a subject of considerable debate in the medical literature.

Patients and Methods: Sinus cultures were obtained in 48 patients with recalcitrant sinusitis after ESS. Between January 2012 and January 2014, Antibiotics were stopped 7 days before cultures.

Results: Pseudomonas aeruginosa was isolated in 5(10.4%) patients, Staphylococcus aureus was isolated in 12(25%) patients and Aspergillus was isolated in 3(6.2%) patients. 28 (58.3%) patients showed no bacterial or fungal growth on culture.

Conclusion: Intracellular bacteria should be taken into consideration when designing novel treatment strategies to lessen the chance of reinfection. § More research is needed to know contributing factors in chronicity and resistance. More research is needed to know contributing factors in chronicity and resistance.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4067

Geographical Impact on Histopathological Changes of CRSwNP in East-Asian Population

Lev Chvatinski[1], Ameen Biadsee[2], Yossi Rosman[3], Vladimir kravtsov[3], Ilan Blau[3], Firas Kassem[3]

[1]Technion Israel Institute of Technology, Technion City, Haifa, Israel , [2]Tel-Aviv University, [3]Sackler school of medicine, Tel Aviv university, Tel Aviv, Israel

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyposis (CRSwNP) varies regionally. Eosinophilic (Type-2) inflammation predominant in Western populations and non-eosinophilic (Type-1, Type-3) inflammation in East Asia. The impact of geographic relocation on histopathological remodeling remains unclear.

Aim: To compare endotypes and histological characteristics in East-Asian immigrants living in Israel, and local Israeli patients with CRSwNP.

Materials and Methods: A retrospective study including East-Asian immigrants with recalcitrant CRSwNP post-endoscopic sinus surgery. Patients were compared to matched Israeli patients. Histological parameters—Eosinophil counts, Basement membrane thickness (BMT), Goblet cell hyperplasia, and Subepithelial edema (SE)—were graded on a 0–3 scale. Clinical data included comorbidities, Meltzer polyp score, blood eosinophils, and SNOT-22 scores. Results During the years 2015-2024, 20 East-Asian immigrants with CRSwNP were evaluated in our Clinic. Mean eosinophil counts were 51 per high power field (HPF). Eosinophilic polyps accounted for 80% of the cohort. High BMT and goblet cell hyperplasia (score 3) were found in 29.4% and 17.6% in the study group. High SE score was found in 35 % of the patients. All parameters were comparable to the local control group and significantly higher than expected in East Asian patients according to the literature.

Conclusion: First-generation East-Asian immigrants in Israel exhibit distinct histopathological features, with a higher prevalence of type 2 inflammation markers. Environmental factors may contribute to these differences. Larger studies are needed to clarify the clinical implications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4076

TBHQ Mitigates Pyroptosis Induced by Particulate Matter in Human Nasal Epithelial Cells

Dong Chang Lee[1], Hosung Choi[1], Ji-Sun Kim[1], Hyunsu Choi[2]

[1]Department of Otorhinolaryngology Head and Neck Surgery, College of Medicine, The Catholic University of Koreaa, [2]Clinical Research Institute, Daejeon St. Mary's Hospital, Daejeon, Republic of Korea.

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introdcution: Pyroptosis is a form of programmed cell death characterized by the rupture of the cell membrane and the subsequent release of proinflammatory cytokines. The Nod-like receptor family pyrin domain-containing 3 (NLRP3) inflammasome is critically involved in the pyroptotic response associated with various pathological conditions. Tert-butylhydroquinone (tBHQ), a synthetic antioxidant commonly utilized in numerous food products and industrial applications, has been proposed as a potential therapeutic agent. This study aims to investigate the role of particulate matter (PM) in inducing pyroptosis in human nasal epithelial cells and to explore the therapeutic efficacy of tBHQ in mitigating PM-induced sinonasal diseases.

Material & Methods: The induction of NLRP3 inflammasome-dependent pyroptosis in RPMI 2650 cells exposed to PM particles smaller than 4 μm was assessed through western blotting and enzyme-linked immunosorbent assay (ELISA) to quantify the levels of pyroptotic markers, including IL-1β and IL-18. Furthermore, the cells were treated with tBHQ to evaluate its potential inhibitory effects on PM-induced pyroptosis.

Results: Exposure to PM resulted in the activation of pyroptosis in human nasal epithelial cells, which was NLRP3 inflammasome-dependent. Treatment with tBHQ effectively suppressed the release of pyroptotic markers, suggesting a significant reduction in pyroptosis. The protective effects of tBHQ were reversed upon knockdown of nuclear factor erythroid 2-related factor 2 (Nrf2), implicating the Nrf2 pathway in its antioxidant-mediated action.

Conclusions: tBHQ demonstrates potential as a therapeutic agent for managing sinonasal diseases triggered by PM exposure. The observed suppression of NLRP3 inflammasome activation through the Nrf2 pathway highlights its utility in alleviating inflammation and cellular damage caused by particulate matter.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4219

Olfactory Cleft Brushing in Chronic Rhinosinusitis: A Characterization Study

Agnès Dekeyser[1], Thomas Hummel[2], Clara Neumeister[3], Philippe Rombaux[4], Charles Pilette[5], Brian Lin[6], Caroline Huart[4], Valérie Hox[4]

[1]UCLouvain, [2]Smell and Taste Clinic, Department of Otorhinolaryngology, University Hospital Carl Gustav Carus, TU Dresden, 01307 Dresden, Germany., [3]Laboratory of Pneumology, ENT (Airways) and Dermatology (Skin) (LUNS), Institute of Experimental and Clinical Research (IREC), UCLouvain, 1200 Brussels, Belgium., [4]Department of Otorhinolaryngology, Head and Neck Surgery, Cliniques Universitaires Saint-Luc, 1200 Brussels, Belgium., [5]Department of Pulmonology, Cliniques Universitaires Saint-Luc, 1200 Brussels, Belgium., [6]Department of Developmental, Molecular and Chemical Biology, Tufts University Graduate School of Biomedical Sciences, Boston, MA 02111, USA.

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introduction: Despite its prevalence, the mechanisms underlying olfactory dysfunction (OD) in chronic rhinosinusitis (CRS) remain poorly understood. Progress in this field has been limited by the lack of a safe and effective olfactory cleft sampling method, as well as the absence of an in vitro model to study underlying mechanisms.

Objectives: The aim of the study was to characterize olfactory brushing, an innovative, non-invasive technique for obtaining, analyzing and potentially culturing human olfactory epithelial cells.

Methods: Olfactory cleft brushing was performed on six CRS with nasal polyps (CRSwNP) patients and six healthy controls (HC). The collected samples were characterized by analyzing the expression of olfactory cell-specific markers using RT-qPCR and Western blot (OMP, GAP43, LGR5, CTSV; and ERMN by RT-qPCR only). Additionally, single-cell RNA sequencing (scRNAseq) was conducted on samples from one HC and one CRSwNP patient to further evaluate the presence of olfactory cells.

Results: All olfactory cell-specific markers were detected by RT-qPCR and Western blot, although GAP43, a marker of immature neurons, was only detected in two HC samples by RT-qPCR. Data were confirmed by scRNAseq analysis of both CRSwNP and HC samples. Cell numbers were low due to substantial respiratory cell contamination, which could be mitigated in future studies using negative selection through fluorescence-activated cell sorting (FACS).

Conclusion: Olfactory cleft brushing provides a non-invasive method for collecting olfactory cells, making it a potentially valuable technique for their study and culture, providing that further optimizations are made.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4222

The Role of MicroRNAs as Potential Biomarkers and Therapeutic Targets in CRSwNP

Alkmini Gatsounia[1], Spyridon Lygeros[3], Georgios Schinas[4], Gerasimos Danielides[3], Katerina Grafanaki[5], Nikolaos Mastronikolis[3], Constantinos Stathopoulos[6], Vasileios Danielides[3]

[1]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece 2. School of Medicine, University of Patras, Patras, Greece, [2]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece , [3]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece, [4]School of Medicine, University of Patras, Patras, Greece, [5]Department of Dermatology-Venereology, School of Medicine, University of Patras, Patras, Greece, [6]Department of Biochemistry, School of Medicine, University of Patras, Patras Greece

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Introduction: Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) is a prevalent inflammatory upper airway disease, significantly contributing to global disease burden. MicroRNAs (miRNAs), small non-coding RNA molecules that regulate gene expression at transcriptional and post-transcriptional levels, have emerged as key players in CRSwNP pathophysiology. Dysregulated miRNA expression is implicated in numerous diseases, including cancer, asthma, and inflammatory disorders, emphasizing their clinical relevance.

Materials and Methods: A systematic search of the PubMed database was conducted to explore the role of miRNAs in CRSwNP. Studies were selected following the PRISMA 2020 guidelines. Exclusions included studies focused solely on other epigenetic mechanisms, those not involving CRSwNP patients, or those not distinguishing between CRSwNP and other sinusitis forms. Non-peer-reviewed, opinion-based, review, and retracted articles were also excluded.

Results: In CRSwNP, miRNAs modulate key inflammatory pathways, including T2 immune responses and epithelial-mesenchymal transition (EMT), contributing to chronic inflammation and tissue remodeling. Profiling studies have identified specific miRNAs as potential biomarkers for disease severity and prognosis. Additionally, reversing miRNA actions—either through exosomes or by blocking inflammatory pathways—has been shown to reduce inflammation in CRSwNP.

Conclusion: MiRNAs play key roles in the pathogenesis of CRSwNP and can act as potential biomarkers and theraputic targets offering a pathway for personalized in a very common disease.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4312

Features of the Functioning of Local Immunity in Patients with Chronic Rhinosinusitis with Biofilms

Yurii Maliarenko[1], Diana Zabolotna[1]

[1]*Department of rhinology, allerogology with the group of radiology*

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Background: chronic rhinosinusitis (CRS) is a multifactorial inflammatory disease of the sinonasal mucosa often complicated by bacterial biofilms. This study evaluates local immunity by measuring salivary α-interferon (α-IFN) levels in CRS patients with biofilms.

Materials and Methods: thirty subjects were enrolled and divided into two groups. Group 1 included 15 patients with CRS (with or without nasal polyps) and confirmed bacterial biofilms. Group 2 (control) comprised 15 healthy individuals without CRS. Saliva samples were collected from all participants, and α-IFN levels were quantified using a high-sensitivity immunoassay. Open-source data indicate that the reference range for salivary α-IFN in healthy individuals is typically 1.5–3.5 pg/ml.

Results: patients in the CRS group exhibited a significant reduction in salivary α-IFN levels, with a mean value of approximately 0.5 pg/ml, compared to the control group's mean value of around 2.7 pg/ml, which falls within the normal reference range.

Conclusions: the markedly lower salivary α-IFN levels in CRS patients with biofilms suggest an impaired local immune response that may contribute to disease persistence and severity. These findings support further exploration of immunomodulatory therapies aimed at enhancing local immunity as a novel approach to managing CRS and its biofilm-associated complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4381

Neuroimmune signalling pathways in chronic rhinosinusitis with nasal polyps

Guled Jama[1], Harsha Kariyawasam[2]

[1]Department of Rhinology, Royal National ENT and Eastman Dental Hospitals, University College London Hospitals NHS Foundation Trust, London, UK , [2]Department of Allergy and Clinical Immunology, Royal National ENT and Eastman Dental Hospitals, University College London Hospitals NHS Foundation Trust, London, UK

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) is a complex inflammatory disorder of the upper airways. While traditionally viewed through the lens of type 2 inflammation, emerging evidence suggests a critical role for neuroimmune mechanisms in its pathogenesis. The current review aims to elucidate the intricate interplay between neuronal and immune systems in CRSwNP, highlighting potential novel therapeutic targets.

Methods: A comprehensive analysis of the recent literature in the field was conducted.

Results: The sinonasal mucosa harbours a dense network of immune cells and neuronal structures, forming functional neuroimmune units crucial for airway defence and homeostasis. Neurogenic inflammation, mediated by neuropeptides such as substance P and calcitonin gene-related peptide (CGRP), modulates immune responses in CRSwNP. Notably, a bidirectional communication exists between immune cells and neurons, with inflammatory cytokines directly activating sensory neurons and nerves modulating immune cell function. Transient receptor potential (TRP) channels, particularly TRPV1 and TRPA1, play a pivotal role in neuronal activation and subsequent inflammatory cascades. Furthermore, neurotrophins such as nerve growth factor (NGF) contribute to both neuronal and immune cell activation, potentially perpetuating the inflammatory cycle.

Conclusion: Understanding the neuroimmune signalling pathways involved in the pathogenesis of CRSwNP is crucial for developing targeted therapies that address both the neuronal and immune components of the disease. This approach could lead to more effective, personalised treatments, potentially improving patient outcomes and quality of life. Future research should focus on elucidating specific signalling pathways involved in these interactions to create comprehensive treatment strategies for this challenging condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4404

Severe eosinophilic asthma and chronic rhinosinusitis (CRS) in a patient with ruptured silicone breast implants: A Case Report and Literature Review

Hocknell Emily[1], Sacks Peta-Lee[1], Hopkins Claire[1]
[1]*Guys and St Thomas Foundation Trust*

Poster Session | CRS – Pathophysiology| 22 June – 25 June, 2025, All day

Background: Silicone implant syndrome (SIS) is a controversial entity characterized by systemic inflammatory symptoms potentially linked to silicone breast implants. While a definitive causal relationship remains unproven, reports suggest associations with autoimmune and inflammatory conditions.

Case Presentation: A 56-year-old female with a history of childhood asthma presented in 2022 with severe, uncontrolled asthma and nasal polyposis. Laboratory evaluation revealed an eosinophil count of 800 cells/µL with negative ANCA. She underwent endoscopic sinus surgery in 2023 and was commenced on Tezepelumab. Biopsy demonstrated> eosinophils/HPF but no granulomas. Notably, she had a history of ruptured silicone breast implants, which were later removed in 2024. Given that she remains on Tezepelumab, it is unclear if her symptoms have fully resolved, preventing a definitive diagnosis of SIS.

Discussion: The relationship between silicone exposure and inflammatory diseases remains debated. While some studies suggest an association between breast implants and immune dysregulation, others have found insufficient evidence to support a direct causal link. Eosinophilic asthma and CRS have been linked to various environmental and immunological triggers, but a connection to silicone exposure is not well established.

Conclusion: This case suggests the need for further research into the interplay between eosinophilic upper airway disorders and silicone exposure, which may be an unrecognised potential aetiology in some patients. Further studies are needed to clarify the potential immunological impact of silicone implants and their removal on respiratory disease progression.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



CRS – Surgical Management

3647

Sensory Changes Following Lateral Nasal Wall Surgery: Systematic Review And Analysis of The Literature

Andre Sousa-Machado[1], Rafaela Fernandes[1], Mariana Cascao[1], Antonio Castanheira[1]

[1]ULSTMAD, [2]ULSTMAD; Faculdade Ciencias da Saude - Universidade da Beira Interior

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: The objective of this study was to analyze the sensory changes reported by patients after lateral nasal wall surgery and to assess the prevalence and severity of sensory disturbances, the factors that influence their occurrence, and their impact on patients' quality of life.

Methods: The methodology adopted in this study was PRISMA, as well as the PICO strategy, which assisted in the development of the study's objectives. Based on the inclusion and exclusion criteria, among all the articles retrieved in the searched databases (PubMed and Google Scholar) we selected 15 articles, considered to be pertinent and relevant to the present investigation.

Results: The results demonstrated that there are several sensory disturbances in patients, highlighting the importance of tailoring the best surgical technique to tackle the problem and consequently improve patients' quality of life. Overall, all 15 articles demonstrated important outcomes to patients' health, contributing to their recovery and changing their initial status. No consensus emerges regarding the most suitable surgical technique, as it has been established by previous literature.

Conclusion: In conclusion, the revision showed that sensory changes reported by patients are congruent with the previously identified sensory disturbances. Surgical procedures must be tailored by surgeons precisely to treat the previously identified sensory disturbances, thus contributing to the increase in patients' quality of life.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3708

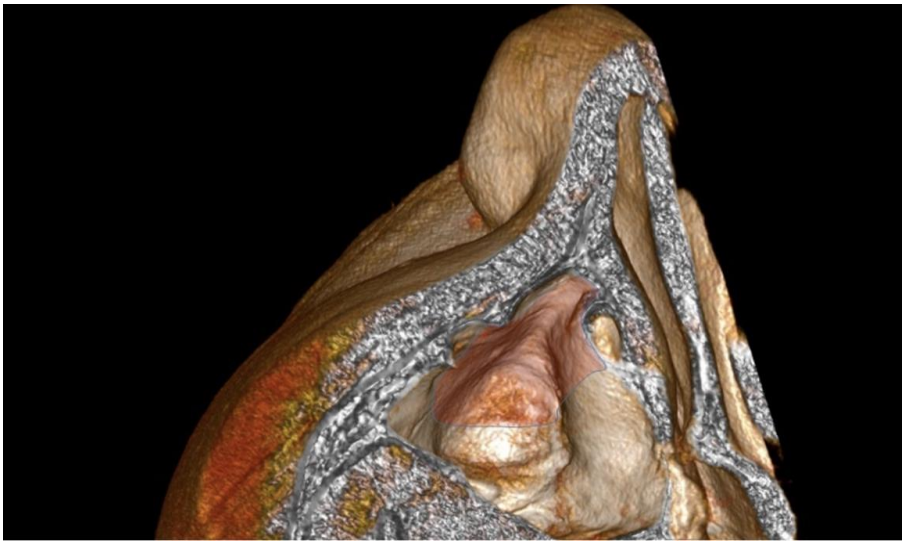
The indirect endoscopic maxilloscopy (IEM)

Otavio Bejzman Piltcher[1], Camila Meotti[3], Giancarlo Cherobin[4], Sofia Michaelsen Premebida

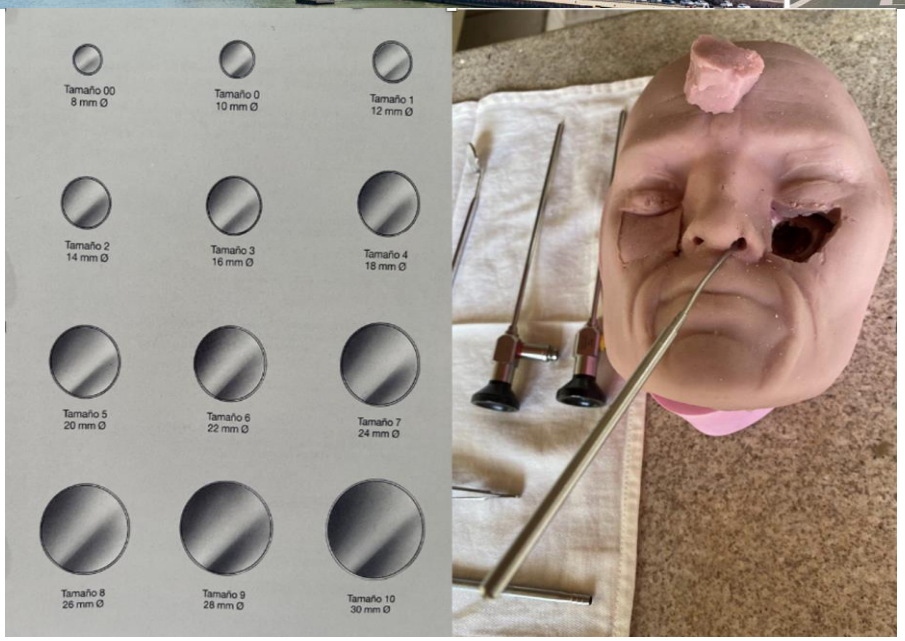
[1]UFRGS/HCPA, [2]Federal University Rio Grande do Sul/ HCPA, [3]HCPA, [4]UFMG

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

I:This article describes a new technique named Indirect Endoscopic Maxilloscopy, (IEM) which combines a standard zero or 30 degrees rigid endoscope with the well-known laryngeal mirror, allowing the surgeon to see the more anterior hidden regions of the maxillar sinus (MS). The IEM is a cheap and feasible procedure to inspect the anteromedial region of the MS. This may avoid invasive canina fossa and modified maxillectomy approaches. MM: Using a surgical model (S.I.M.O.N.T) a large antrostomy was performed and than the anterior wall of the sinus was removed with the facial tissue. Than different laryngeal size mirrors with different angles and special locations in relation to the middle turbinate and the posterior wall of the MS were tested with different endoscopes to check range of view of the anterior parts of the maxillary sinus.(MS) c: The IEM is a cheap and feasible procedure to inspect the anteromedial region of the MS . Its use may avoid the necessity of further invasive surgical approaches. Besides that could be also used at the office looking for disease recurrences. Further research should be done with humans to confirm, this findings, improve it and also check the possible utility for other sinuses like the anterior wall of the frontal and lateral walls of the sphenoid.






Tamaño 00
8 mm Ø
Tamaño 0
10 mm Ø
Tamaño 1
12 mm Ø
Tamaño 2
14 mm Ø
Tamaño 3
16 mm Ø
Tamaño 4
18 mm Ø
Tamaño 5
20 mm Ø
Tamaño 6
22 mm Ø
Tamaño 7
24 mm Ø
Tamaño 8
26 mm Ø
Tamaño 9
28 mm Ø
Tamaño 10
30 mm Ø

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3830

S-100β Level Variations During Functional Endoscopic Sinus Surgery with Moderately Controlled Hypotension: A Randomized Controlled Trial.

Spyridon Lygeros[1], Sotiria Rizopoulou[2], Athanasia Voulgari[3], Garasimos Danielides[1], Gregorios Voyagis[2], Diamanto Aretha[2]

[1]Department of Otolaryngology, University Hospital of Patras, Patras, Greece, *[2]Department of Anesthesiology and Critical Care Medicine, Patras University Hospital, Patras, Greece*, *[3]epartment of Anesthesiology and Critical Care Medicine, Patras University Hospital, Patras, Greece*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: Functional Endoscopic Sinus Surgery (FESS) under controlled hypotension requires optimized anesthesia to improve surgical conditions, reduce operative time, and minimize complications. This study evaluates four anesthesia protocols in terms of S-100β levels (a marker of cerebral injury), surgeon satisfaction, and surgery duration.

Materials & Methods: This randomized controlled trial included 64 ASA I-III patients undergoing FESS, divided into four anesthesia groups: Propofol/Remifentanil, Propofol/Remifentanil/Mg^+/Ketamine, Sevoflurane/Remifentanil, and Sevoflurane/Remifentanil/Mg^+/Ketamine. Plasma S-100β levels were measured at 20 min post-intubation (T20), 40 min into surgery (T40), and post-surgery (Tpost). Secondary outcomes included surgeon satisfaction (Likert scale) and surgery duration. Statistical analyses involved ANOVA, Kruskal-Wallis, and Bonferroni-adjusted comparisons.

Results: Groups were comparable in age (p=0.924), BMI (p=0.601), gender (p=0.605), and ASA (p=0.307). The Sevoflurane/Remifentanil/Mg^+/Ketamine group had the lowest S-100β levels, with significant differences at T20 (p=0.003) and Tpost (p=0.033), but not at T40 (p=0.156). Surgeon satisfaction was highest in this group compared to Propofol/Remifentanil (p=0.026). Surgery duration varied significantly (p=0.005), with Propofol/Remifentanil taking longest vs. Propofol/Remifentanil/Mg^+/Ketamine (p=0.008) and Sevoflurane/Remifentanil/Mg^+/Ketamine (p=0.012). No significant differences were found in bleeding (p=0.116) or recovery scores (Aldrete, p=0.959).

Conclusion: The Sevoflurane/Remifentanil/Mg^+/Ketamine protocol demonstrated lower S-100β levels, greater surgeon satisfaction, and shorter surgery times without affecting bleeding or recovery, making it a favorable choice for FESS under moderate hypotension.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3887

Functional endoscopic surgery in Montenegro 2018-2025, our patients data, age, gender, patohistology result, geographic belongings

Vladimir Ljubic[1], Darja Ljubic[2], Tijana Vukadinovic[1], Bojan Pavlovic[1]
[1]Clinical Center of Montenegro, [2]University Clinical center of Serbia

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction (Background & Aim): intention is to show how we implemented endoscopic sinus surgery in standard surgical program of our Clinic since 2018.

Material & Methods (retrospective study): all FESS operated patients from 2018. year till end of 2024. are included in this study, since we started implementation of functional endoscopic sinus surgery in our Clinic.

Results: Our work shows all operated patients (in study we included patients who were sent to our Clinic with diagnosis that had FESS indicated, and who were also operated with classical method), we compared the number of operated patients by year, their age, gender, operative and pathohistological diagnosis. In 2018. we started with external consultant doing 23 operations in FESS technique and in 2024. we finished with more than 80 operations done independently in our Clinic. During the period of 2018-2025 we operated more than 300 patients (including Covid lockdown period).

Conclusions: Our goal is to point out how we have implemented endoscopic sinus surgery in the standard surgical program of the Clinic, and what our future plans are. We didn't deal with problems in the work, but only with affirmative conclusions. Further education, the involvement of young specialists, as well as the improvement of the conditions in which we work, are the basis for continuing and raising the quality of work.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3889

Multidisciplinary Approach to Ethmoidal Mucocele with Intracranial Extension

Joana Guincho[1], Luís Baptista[1], Carlota Sousa[1], Rui Cabral[1], Luís Castelhano[1], Pedro Escada[1]
[1]*NOVA Medical School*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: A paranasal sinus mucocele is a mucus-filled pseudocyst lined by ciliated epithelium, usually in the frontal or ethmoid sinuses. The most common manifestations in these cases are ocular oedema, proptosis and diplopia. Objectives: Report a posterior left ethmoidal mucocele with intracranial and orbital extension, highlighting clinical features, diagnosis, and surgical management.

Materials and Methods: A 38-year-old male patient, with a history of Fernand Widal triad, had undergone two nasal endoscopic surgeries. After the last surgery, he developed progressively worsening proptosis on the left side. CT of the paranasal sinuses revealed a mucocele originating in the left posterior ethmoid, extending intracranially from the pituitary stalk to the anterior left frontal region. There was near-total destruction of the orbital roof with subsequent extra-conical orbital extension. Preoperative ophthalmological evaluation showed decreased visual acuity, diplopia, dyschromatopsia, and optic nerve atrophy.

Results: The lesion was surgically addressed through a combined approach involving left frontotemporal craniotomy and endoscopic endonasal transethmoidal and transplanum access. The mucocele was removed en bloc after dissecting the orbit, orbital apex, ethmoid roof, and optic chiasm. Reconstruction of the anterior cranial fossa defect was performed using a pedicled pericranial flap and a nasoseptal flap. No postoperative complications occurred, with normalization of visual acuity and resolution of diplopia, although dyschromatopsia persisted.

Conclusions: The complications of a mucocele can be severe, and considering its location, marsupialization may not be the appropriate surgical treatment. In such cases, a combined endonasal and intracranial approach is essential.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3908

Fungal Ball of the sphenoid lateral recess: a case report and literature review

Vorachai Pooldum[1], Wirach Chitsuthipakorn[2], Phattharapol Soponpongpipat[3]

[1]Center of Excellence in Otolaryngology-Head & Neck Surgery. Rajavithi Hospital, Bangkok, Thailand , [2]1. Center of Excellence in Otolaryngology-Head & Neck Surgery. Rajavithi Hospital, Bangkok, Thailand 2. College of Medicine, Rangsit University, Bangkok, Thailand , [3]College of Medicine, Rangsit University, Bangkok, Thailand

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: A sphenoid fungal ball is a non-invasive fungal infection, typically caused by Aspergillus, confined to the sinus without mucosal invasion. Symptoms are often nonspecific, such as headache or facial pain, but atypical cases may present with cranial nerve involvement and bony erosion. Lateral recess involvement is rare but may cause nerve compression due to its proximity to skull base structures, including CN V2. This case reports a sphenoid fungal ball in the lateral recess, leading to CN V2 anesthesia, managed via an endoscopic transpterygoid approach.

Methods: A 59-year-old Thai male presented with progressive left-sided headache for one month and left-sided facial numbness. Clinical examination revealed bilateral inferior turbinate hypertrophy and decreased pinprick sensation in CN V2. Ophthalmologic assessment showed normal extraocular movement and 20/40 visual acuity bilaterally. Contrast-enhanced CT showed complete opacification of the left sphenoid sinus with a hypodense mass, ring enhancement, and bony erosion at the inferomedial pterygoid plate. The patient underwent an endoscopic transpterygoid approach after extended sphenoidotomy.

Results: Intraoperatively, a fungal concretion encased within a bony partition was found with localized bony destruction but intact sinus mucosa. Histopathology with GMS and PAS staining confirmed Aspergillus spp. without mucosal invasion. Facial numbness improved significantly at three months, with no recurrence at one year.

Conclusion: Sphenoid fungal balls can mimic invasive disease due to bony erosion and nerve involvement. CN V2 anesthesia may occur without foramen rotundum erosion. An endoscopic transpterygoid approach is effective for lateral recess involvement, and histopathology is essential for diagnosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4051

Combined tools approach to tackle postsurgery neo-osteogenesis in recalcitrant chronic rhinosinusitis. A case report.

Blanca Mateos-Serrano[1], Carolina Alfonso[1], Coloma Grau[1], Beatriz Arana Fernández[1]
[1]La Paz Universitary Hospital (Madrid, Spain)

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Neo-osteogenesis is a common condition in patients suffering from recalcitrant chronic rhinosinusitis (CRS). Surgery involving this new bone tissue is challenging due to the high risk of recurrence. We present a patient with CRS who underwent two surgeries. During the second procedure, a frontoethmoidal mucocele was opened. One year later, the patient experienced two episodes of fever, frontal pain and inflammation, which were treated with antibiotics. Nasofibroscopy revealed synechiae and slight inflammation in both frontal recesses. A CT scan was performed, showing significant neo-osteogenesis in both frontal sinuses, even though they were partially ventilated. Two small cells were trapped in the interfrontal region, one of which had a pit communicating with the external cortical bone. Since the frontal sinuses were partially ventilated, obliteration was avoided. A combined external and endoscopic endonasal surgery was planned. A Draf III sinusotomy was performed endoscopically, but the interfrontal trapped cells were not accessible. Consequently, an external approach was carried out. An osteoplastic flap was created using a piezoelectric saw. The osteogenic bone was removed with a piezoelectric burr until the trapped cells were opened and communicated with the Draf III cavity. A silastic sheet and corticosteroid-eluting implant were placed into the new recess. One year after the intervention, physical examination and CT scan showed complete healing and ventilation of the Draf III cavity, with no recurrence of neo-osteogenesis. In patients with neo-osteogenesis, combining different tools to reduce post-surgery inflammation, such as piezoelectric instruments and corticosteroid-eluting implants, might be useful to prevent recurrences.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4158

Treatment challenges of chronic invasive fungal sinusitis in immunocompromised patient; a case report.

Evangelos Akoumianakis[1], Maria Doulaptsi[1], Ioulia - Rafailia Fothiadaki[1], Christothea Kokolodimitraki[1], Alexander Karatzanis[1], Emmanuel Prokopakis[1]

[1]Department of Otorhinolaryngology-Head and Neck Surgery, University of Crete School of Medicine, Heraklion, Greece.

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: Chronic invasive fungal sinusitis is an intriguing clinical entity given its obscure symptomatology that might be neglected up until warning signs develop. Computing tomography (CT) as well as magnetic resonance imaging (MRI) aid in the diagnosis and management planning, which involves surgical and medical measures.

Materials and methods: A 76 year-old immunocompromised lady presented to the ENT Clinic with reported 2-month long headache and diplopia. Recent inpatient course of IV antibiotics was reported, with initial resolution of symptoms and subsequent relapse after discharge. At clinical examination, horizontal diplopia was evident. Endoscopy revealed no specific findings. A CT scan showed complete opacification of the sphenoid sinus with erosion of its posterior wall, while MRI designated an inflammatory lesion with possible fungal contamination.

Results: The patient underwent sphenoidectomy. The posterior wall of the sphenoid sinus was found to be eroded. Histopathology revealed fungal invasion to soft tissues with Aspergillus species. Treatment with long-term isavuconasole was initiated. Normal vision was restored. At follow up, a new CT scan was ordered due to persistent nasal symptoms. Multiple sinuses opacification was revealed and a more extended endoscopic procedure (full-House endoscopic sinus surgery) was performed.

Conclusion: Chronic invasive fungal sinusitis poses a notable challenge for the ENT Surgeons. Surgical clearance and long-term anti-fungal medication are the management principles. Consistent follow up is necessary for early identification of relapse.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4193

Beyond the Endonasal Approach: Managing Frontoorbital Mucoceles in Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)

Beatriz Arana-Fernández[1], Coloma Grau-Van Laak[1], Blanca Mateos-Serrano[1], Paula Cora Aldaz-Bernad[1], Álvaro De Arriba-Sánchez[1], Carolina Alfonso-Carrillo[1]

[1] *Rhinology and Skull Base Surgery Unit, Otorhinolaryngology Department, La Paz University Hospital, Madrid. Spain.*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: Front orbital mucoceles are slow-growing, expansile lesions resulting from obstructed sinus drainage, often due to chronic sinusitis. They can produce bone erosion and displacement of orbital structures, causing proptosis, diplopia, and visual disturbances.

Material & Methods: A 25-year-old male with a history of CRSwNP, Aspirin-Exacerbated Respiratory Disease (AERD), and asthma underwent bilateral Functional Endoscopic Sinus Surgery (FESS) two years prior. He presented with acute right ocular proptosis, headache, and retro-orbital pain. A CT scan revealed an extraconal intraorbital lesion adjacent to the superomedial orbit, causing a mass effect on the ophthalmic vein and superior rectus muscle. MRI confirmed a progressively enlarging, well-defined lesion (35 × 33 × 17 mm), hypointense on T1 and hyperintense on T2, consistent with a front orbital mucocele. A combined supraorbital and endonasal approach was planned for effective marsupialization.

Results: A superior external transorbital approach was used for initial drainage, followed by bilateral FESS. Residual uncinate fragments were removed, and a complete ethmoidectomy was performed. To optimize mucocele marsupialization, a right DRAF IIB (Caroline's Window) was conducted. Four months later, the patient experienced nasal polyp recurrence. Given an eosinophil count of 1100, mepolizumab (anti-IL-5) was initiated to prevent further complications.

Conclusion: Front orbital mucoceles in patients with CRSwNP are often associated with sinus drainage obstruction caused by chronic inflammation and previous surgeries. Although the endonasal approach is the preferred treatment method, a combined approach may be necessary in certain cases. Additionally, biological therapy can help control inflammation and reduce the risk of recurrence and new complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4201

Crushing vs. Resection of Concha Bullosa: Long-Term Outcomes in the Treatment of Chronic or Recurrent Rhinosinusitis During FESS Surgery

Mario Järvekülg[1], Paula Virkkula[1], Markus Lilja[1], Ahmed Geneid[1], Aaro Haapaniemi[1], Maija Hytönen[1]
[1]Helsinki University Hospital

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: The bullous middle turbinate (CB), is a common anatomical variant in the human population and considered a potential pathogenic factor in chronic or recurrent rhinosinusitis. Optimal management during FESS surgery remains debated, with crushing and resection as main options. Main concerns are synechia formation after resection and CB regrowth after crushing. Prior studies have short follow-up times and small sample sizes.

Material and Methods: This randomized controlled trial was conducted at the Helsinki University Central Hospital Ear Clinic between 2019 and 2022. Approval for the study was granted by local Ethics Committee. 65 patients, aged between 18 and 65 years, with a Sinonasal Outcome Score (SNOT-22) of at least 30, either unilateral or bilateral CB, and scheduled for FESS surgery due to unsatisfactory response to conservative management were recruited into either crushing or resection group. In case of bilateral CB, the same method was used in both sides. Participants' postoperative SNOT-22 scores and endoscopy findings were recorded during the 1 year follow-up visit.

Results: Both study groups showed a statistically significant improvement in the overall change of SNOT-22 scores postoperatively ($p < 0,005$), with the resection group demonstrating a significantly greater overall improvement compared to the crushing group ($p < 0,005$) as well as in rhinological and emotional subscores. There were no statistically significant differences between synechia formation or scarring. However, there was statistically significant difference in the access to middle meatus in resection group ($p = 0,009$).

Conclusions: Based on the results mentioned previously, CB resection seems more favorable management option during FESS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4360

Odontogenic rhinosinusitis: Indication for FESS based on CT score

Mikulas Knotek[1], Krystof Zuska[1], Jakub Fuksa[1], Petr Schalek[1]

[1]*Department of Otorhinolaryngology, Charles University in Prague, 3rd Faculty of Medicine, University Hospital Kralovske Vinohrady*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: The CT examination of the paranasal sinuses plays a crucial role in the diagnostic process of chronic rhinosinusitis of odontogenic origin (OCRS). The basis of management is the treatment of the dental cause by a dentist, and FESS is provided if necessary. Evaluation of the CT findings using the Lund-Mackay score (LMS) can help in deciding on the treatment method. The aim of the study was to compare the LMS, the type of dental pathology, and the reported symptoms with the chosen type of treatment in patients with OCRS, treated at the Otorhinolaryngology department at University Hospital Kralovske Vinohrady in Prague between 2012 and 2022.

Material and methods: Among 2067 patients with chronic rhinosinusitis, an odontogenic cause was identified in 61 patients. The value of the LMS was assessed for 57 enrolled patients, which was further compared with the therapeutic procedure. A comparison was made with a control group of 25 patients with a localized form of chronic rhinosinusitis of non-odontogenic etiology.

Results: From the observed group, 15 patients not indicated for FESS had a lower LMS (median 1), while 42 patients indicated for surgery had a significantly higher score (median 6) (Graph 2). The type of dental pathology and reported symptoms did not have a significant impact on the therapeutic procedure.

Conclusion: Based on the findings, it can be assumed that CT results may serve as the primary criterion for selecting the therapeutic approach, independent of the presence of individual symptoms or the type of dental pathology.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4361

Analysis of the efficacy of different Placement Times of fully degradable sinus drug stents in Chronic Rhinosinusitis with different endotypes

Yinyan Lai[1], Wufuerjiang Yiming[2], Min Lai[3], Jianbo Shi[4]

[1]Department of rhinology, the first affiliated hospital of Sun Yat-sen University, *[2]Department of rhinology*, *[3]Department of rhinology, Qifu Hospital*, *[4]Department of rhinology,The first affiliated hospital of Sun Yat-Sen University*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Objective: To explore the clinical efficacy of the placement time of fully degradable sinus drug stents in patients with different types of chronic rhinosinusitis (CRS).

Methods: A retrospective analysis was conducted on 45 patients with CRS who underwent functional endoscopic sinus surgery (FESS) and drug stent placement at Sun Yat-sen University First Affiliated Hospital from January 2022 to April 2024. Patients were classified into two groups according to the EPOS 2020 guidelines: Type 2 CRS (26 patients) and non-Type 2 CRS (19 patients). Within each group, patients were further divided into those receiving drug stent placement during surgery or within two weeks post-surgery, or after two weeks post-surgery. The recovery of the surgical sinus was evaluated by endoscopic E-score at 1, 3, and 12 months post-surgery.

Results: Endoscopic scores significantly improved at 3 and 12 months post-stent placement compared to the 1-month scores, with statistical significance. The E-score at 1 month was lower in the post-surgery placement group compared to the intraoperative placement group. However, no significant differences were observed between the two groups at 3 and 12 months. In the Type 2 CRS group, the intraoperative placement of the drug stent showed significant improvement in the E-score at 3 and 12 months post-surgery compared to the 1-month scores. In contrast, patients with Type 2 CRS who had post-surgery stent placement did not show significant improvements in endoscopic scores. No significant differences were found in E-scores between Type 2 and non-Type 2 CRS patients at 1, 3, or 12 months post-stent placement.

Conclusion: For all CRS patients undergoing functional endoscopic sinus surgery, regardless of whether the drug stent was placed during surgery or post-surgery, there was a significant improvement in the E-scores at 1, 3, and 12 months post-placement. However, patients with Type 2 CRS showed better outcomes when the drug stent was placed early during surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4468

A Case of Allergic Fungal Sinusitis Mimicking Malignancy:

Şeyda Akbal Çufalı[1], Kürşat Murat Özcan[1]

[1]Department of Otorhinolaryngology, Ankara City Hospital, Ankara, *[2]Department of Otorhinolaryngology,,Ankara City Hospital, Ankara*

Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: Allergic fungal sinusitis (AFS) is a chronic sinus disease characterised by an immune system response to fungal infection leading to mucosal inflammation, polyp formation and sinus obstruction. It can cause significant tissue damage and often requires surgical intervention. The diagnosis is made according to the Kuhn criteria; however, AFS can be misdiagnosed as a malignancy due to overlapping clinical and radiological features. This case describes a 43-year-old man with suspected malignancy who presented with proptosis and radiological evidence of optic nerve involvement and an anterior skull base defect. Further investigations confirmed AFS.

Methods: The patient underwent endoscopic sinus surgery including right Draf 2b frontal sinusotomy, right orbital decompression and repair of the anterior skull base defect. Fungal material, mucinous material and nasal polyps were observed during surgery. Pathological examination confirmed the presence of nasal polyps and mucinous material. Radiological imaging (CT and MRI) confirmed the diagnosis of AFS according to the Kuhn criteria.

Results: Postoperatively, the patient's proptosis improved totaly and the optic nerve involvement. Postoperative management included nasal steroids and intermittent systemic steroids. At 3-year follow-up, no recurrence was observed and no reoperation was required. Postoperative imaging showed no pathological findings in the paranasal sinuses.

Conclusions: AFS may be misdiagnosed as malignant tumor, especially in cases with optic nerve involvement and skull base defects. This case highlights the importance of considering AFS in the differential diagnosis. Surgical treatment was successful and early diagnosis, together with appropriate medical therapy, played a crucial role in preventing recurrence and improving the patient's outcome.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4348

Impact of heated saline irrigation on total blood loss and surgical field visibility in endoscopic sinus surgery: a randomized controlled trial.

Agnieszka Witkowska[1], Piotr Rot[2], Dariusz Tomaszewski[3], Andrzej Wojdas[1]

[1.] Department of Otolaryngology, Military Institute of Aviation Medicine, Warsaw, Poland; [2.] Department of Otolaryngology and Laryngological Oncology with Clinical Department of Cranio-Maxillofacial Surgery, Military Institute of Medicine - National Research Institute, Warsaw, Poland; [3.] Department of Anesthesiology and Intensive Therapy, Military Institute of Aviation Medicine, Warsaw, Poland.

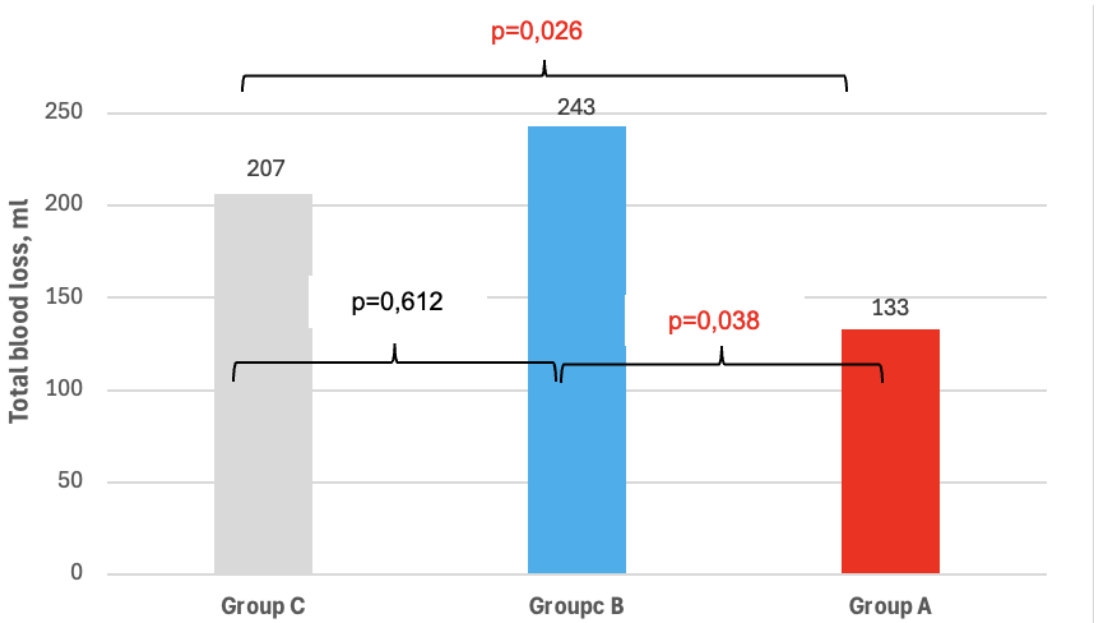
Poster Session | CRS – Surgical Management | 22 June – 25 June, 2025, All day

Introduction: Intraoperative bleeding during functional endoscopic sinus surgery (FESS) for severe rhinosinusitis can be significant, further compromising the surgical field. 0.9% sodium chloride (NaCl) heated to 50°C promotes vessel dilation and edema without leading to necrosis of the nasal mucosa. Moreover, it enhances the clotting cascade, reduces blood loss and improves endoscopic visibility. This study aims to assess the impact of 50°C saline irrigation on overall blood loss and surgical visualization during endoscopic sinus surgery for rhinosinusitis.

Material & Methods:
This randomized controlled trial involved 59 patients assigned to three groups. In the interventional group (Group A, n=24), intraoperative irrigation was performed using 0.9% NaCl heated to 50°C. In the control groups (Group B, n=22), saline at 22°C was used, while in Group C (n=13), no irrigation was administered. Intraoperative blood loss was recorded in milliliters and as milliliters per minute of operative time, and the surgical field was evaluated using the Boezaart score.

Results: The analysis revealed a statistically significant reduction in total blood loss when 50°C saline was used, with differences observed between Group A and Group B (110 ml; p=0.038) and between Group A and Group C (74 ml; p=0.026). A significant reduction in blood loss per minute was noted in Group A. The transparency of the surgical field, assessed using the Boezaart scale, was significantly better in Group A (2.18±0.87) compared to Group B (3.35±1.28; p=0.001) and Group C (2,8±0.78; p=0.039).

Conclusions: 0.9% NaCl heated to 50°C is a cost-effective method for reducing bleeding and achieving a nearly bloodless surgical field during endoscopic sinus surgery



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary







CSF leaks; diagnosis and management

3991

Endonasal Endoscopic Management of Cerebrospinal Fluid Rhinorrhea: A Study of 263 Patients

Seyed Mousa Sadrehosseini[1], Sevil Nasirmohtaram, Farhad Arbabzadeh[1], Mehdi Zeinalizadeh[2]

[1]Otolaryngology Head Neck Surgery Department, Tehran University of Medical Sciences, Tehran, Iran, [2]Neurological Surgery Department, Tehran University of Medical Sciences, Tehran, Iran

Poster Session | CSF leaks; diagnosis and management | 22 June – 25 June, 2025, All day

Background: Cerebrospinal fluid (CSF) rhinorrhea is a sign of a breach in the bony skull base. It should be verified, localized, and repaired surgically to alleviate the risk of intracranial infection. Endonasal endoscopic surgery is the standard technique for skull base reconstruction in these patients. The current study was undertaken to evaluate a large case series of patients with CSF rhinorrhea who underwent surgery, focusing on symptoms, etiology, specifics of skull base defects, reconstruction techniques, outcomes, and complications.

Methods: All patients with CSF rhinorrhea who were treated endoscopically for a skull base defect from 2010 to 2023 in a tertiary referral hospital were included.

Results: In this retrospective study, 263 patients were included. The chief presenting symptom was rhinorrhea. Spontaneous CSF leak was the most common etiologic factor, whereas accidental trauma accounted for about one-third of the cases. In cases of spontaneous CSF rhinorrhea, the most common sites of skull base defects were the cribriform plate, lateral lamella of the ethmoid, and the lateral recess of the sphenoid. The frontal sinus was the most common site of defect in cases of accidental traumatic CSF rhinorrhea. In the majority of cases, a two-layer technique using inlay fat and onlayfascia was employed for skull base reconstruction. Recurrences, including technical failures, missed skull base defects, and late new skull base defects, were observed in 10cases (3.8%). Three patients developed meningitis in the early postoperative period, but all recovered uneventfully.

Conclusion: Given the high success rate and low morbidity, all patients with CSFrhinorrhea should be counseled to undergo endoscopic surgery early.

Etiology	Total Number	Age	Female /Male	Cribriform Plate	Ethmoid Fovea	Ethmoid Lateral Lamella	Frontal Sinus	Sphenoid Planum	Sphenoid Sella	Sphenoid Lateral Recess	Sphenoid Clivus	Middle Cranial Base	Petroclival Area	More than One Site	Meningitis	Recurrence
Spontaneous	145 (55%)	45	110/35	54(37%)	9(6%)	27(19%)	13(9%)	4(3%)	2(1%)	23(16%)	6(4%)	0	1(1%)	7(5%)	6(4%)	5(3%)
Accidental Trauma	79 (30%)	29	30/49	18(23%)	9(11%)	7(9%)	25(32%)	10(13%)	0	0	2(3%)	1(1%)	0	7(9%)	29(29%)	4(5%)
Rhinologic Trauma	21 (8%)	35	11/10	7(33%)	3(14%)	6(29%)	0	2(10%)	0	0	0	0	0	3(14%)	22(28%)	1(5%)
Congenital	18 (7%)	11	7/11	7(39%)	1(6%)	2(11%)	4(22%)	0	0	0	0	0	0	4(22%)	7(33%)	0
Recurrence	10 (4%)	33	3/7	2(2%)	1(5%)	3(7%)	5(12%)	0	0	0	1(13%)	0	0	2(10%)	5(50%)	-
Total Number	263	38	158/105	86	22	42	42	16	2	23	8	1	1	20	3(17%)	10

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4041

Co-existing of sinonasal inverted papilloma and clival meningocele

Mohammad Aljohani[1]
[1]*Ministry of National Guard - Health Affairs*

Poster Session | CSF leaks; diagnosis and management | 22 June – 25 June, 2025, All day

Introduction: Clival meningocele is a very rare abnormality. Only four cases have been reported so far in the literature. The Co-existing of sinonasal inverted papilloma and clival meningocele is extremely rare. Case Report38 years old male patient complaining of 5 months history of left sided CSF rhinorrhea. No risk factors of high ICP. Diagnosed as a case of Clival meningocele. CT SCAN and MRI supported the diagnosis. Endoscopic sinus surgery was done. Histopathology report came as an inverted papilloma in addition to the presence of clival meningocele.

Conclusion: This is a unique case of sinonasal inverted papilloma and clival meningocele.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4165

Endoscopic Management of a Traumatic Cerebrospinal Fluid Leak through the 'Fat Valley' Technique – A Case Report

Balaji Rishab[1], Bhamra Navdeep[1], Karan Jolly[1]
[1]*University Hospitals Birmingham*

Poster Session | CSF leaks; diagnosis and management | 22 June – 25 June, 2025, All day

Case Report: This is the case of a 21-year-old female who suffered a traumatic brain injury in 2021, for which she underwent an open craniotomy for intracranial haemorrhage at the time of injury. Continuing to suffer from persistent left nostril rhinorrhoea, she underwent further open repair which was unsuccessful. On presentation, she had persistent left rhinorrhoea, dizziness, and nausea. Nasal discharge was confirmed to be cerebrospinal fluid (CSF). Imaging confirmed a large left anterior cranial fossa floor defect. A left sphenoethmoidectomy and frontal sinusotomy was performed to expose the cranial base. A complex irregular longitudinal defect measuring 75mm x 33mm was identified, with no clear dural planes, from the tuberculum sella anteriorly through the fovea ethmoidalis. A 'fat valley' endoscopic technique was adopted, harvesting fat from the right leg, and utilising a large nasoseptal flap overlap, with insertion of a lumbar drain. Follow up revealed no evidence of re-leak, with resolution in patient's symptoms.

Case Lesson: Endoscopic approaches to the management of traumatic CSF leaks allow for shorter operating time, reduced blood loss, and reduced morbidity and complications. The chosen method of endoscopic repair should vary by case depending on the size, complexity, and location of the defect. In this case of a large, irregular, and complex defect causing persistent CSF rhinorrhoea despite previous interventions, the 'fat valley' technique was successfully adopted with no complications. Further case studies are needed to evaluate the effectiveness of the 'fat valley' endoscopic approach in the management of traumatic CSF leaks.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4265

Endonasal endoscopic repair of spontaneous cerebrospinal fluid leak: The UHB experience

Anat Wengier[1], Karan Jolly[1], Asiya Zaidi[1], Duaa Dabbas[1], Shahzada Ahmed[1]

[1]*Department of Otolaryngology, University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom*

Poster Session | CSF leaks; diagnosis and management | 22 June – 25 June, 2025, All day

Introduction: A spontaneous cerebrospinal fluid (CSF) leak refers to a leak that is not preceded by trauma, surgery or underlying intracranial pathology. Although it represents only four percent of all CSF leaks, it carries significant risk of complications such as meningitis. We present our experience of repair via the endonasal endoscopic approach.

Methods: Data of all patients who underwent endoscopic spontaneous CSF leak repair at a tertiary UK hospital, between 1st January 2012 to 31st December 2024, were reviewed and analysed retrospectively.

Results: 56 patients were included in the cohort, 45 (80%) females, mean age at presentation was 51 (range, 31 to 89 years). Mean body mass index (BMI) was 35.1 kg/m2. All patients presented with unilateral rhinorrhoea and had a positive biochemical analysis. Computed tomography (CT) or magnetic resonance imaging (MRI) identified leak sites and correlated to surgical findings in 50 patients (89.2%). Repair was undertaken by one of two expert skull base surgeons. Repair techniques differed and included nasoseptal flaps (44.6%), mucosal free grafts (26.7%), middle turbinate flaps, fat grafts, fascia lata, additional support materials or a multilayer combination. The average length of stay was 1.5 days. Postoperative complications occurred in two patients (3.5%) (meningitis, epistaxis). Successful primary repair was achieved in 48 patients (90%). Features consistent with idiopathic intracranial hypertension were found to be a contributing factor to surgical failure.

Conclusion: Our results support spontaneous CSF leak repair in the endoscopic approach, with excellent success rates, low complication rate and minimal morbidity.



Epistaxis and HHT

3879

Management of patients with hereditary haemorrhagic telangiectasia

Stepan Novak[1]

[1]Department of Otorhinolaryngology and Head and Neck Surgery, First Faculty of Medicine, Charles University, University Hospital Motol, Prague, Czech Republic

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

Objective: Hereditary haemorrhagic telangiectasia (HHT) also known as Osler–Weber–Rendu disease is a rare autosomal dominant genetic disorder leading to often bleeding mucocutaneous telangiectasias but also life-threatening visceral arteriovenous malformations (AVMs).

Methods: The retrospective analysis over 11 years period of patients with HHT undergoing surgical treatment for recurrent epistaxis. A total of 75 patients were included in the study.

Results: All patients underwent argon plasma coagulation (APC) of telangiectatic lesions in the nasal cavity under general anaesthesia. In 55 patients, 1 or 2 surgical procedures were performed with good effect and regression of epistaxis. Young's procedure was performed in 2 patients with poor APC effect. Topical application of bevacizumab was performed in 9 patients (in 5 patients together with APC) and did not significantly improve the frequency of epistaxis. In 3 patients with refractory epistaxis, bevacizumab was administered intravenously with excellent effect in 1 patient. In 4 patients, residual telangiectasias were treated with the TruBlue laser under local anesthesia. AVMs were found in 19 patients.

Conclusion: APC is an effective method of treating epistaxis in patients with HHT. For refractory epistaxis, we may consider intravenous bevacizumab or Young's procedure. Because of the frequent AVMs with potentially serious complications, screening for them is recommended in all patients with HHT.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4005

Massive Epistaxis Due to Carotid Rupture in a Cocaine Addict

Ana Jimeno Picazo[1], Carmen Rosario Cuenca[1], Juan Aguilar Cantador[1], Román Carlos Zamora[1], Virginia García García[1], Nuria Cruz Cerón[1]

[1]*Hospital Reina Sofía*

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

INTRODUCTION: The internal carotid artery is a terminal branch of the common carotid artery, bifurcating at the level of the third cervical vertebra or the upper border of the thyroid cartilage. Cocaine, derived from the Erythroxylum plant, is a major global toxin, the abuse of which is often underdiagnosed. Cocaine use is increasing and can lead to various complications, including vascular injuries and mucosal damage. When inhaled, cocaine can cause nasal mucosal damage, potentially leading to severe complications.

MATERIALS AND METHODS: A 47-year-old male presented to the Emergency Department with massive epistaxis. The Otorhinolaryngology team initially controlled the bleeding with posterior nasal packing. However, the patient later experienced severe, high-flow bleeding from the nasal and oral cavities, which could not be managed with minimally invasive methods.

RESULTS: The patient was urgently transferred to the operating room, where infection, active necrosis, and osteomyelitis of the clivus and sphenoid were observed. Two high-flow bleeding points were identified along the right internal carotid artery. To control the hemorrhage, a balloon catheter was used to occlude carotid flow via interventional radiology, followed by the placement of a vastus lateralis muscle graft. Hemostasis was successfully achieved.

CONCLUSIONS: This case underscores the importance of addressing drug abuse, particularly among young individuals, due to the severe complications it can cause. It also highlights the necessity of a multidisciplinary approach and the rapid response of a highly qualified and trained emergency medical team.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4022

Unilateral versus Bilateral Sphenopalatine Artery Ligation - A Single Centre Perspective

Leyla Ozbek[1], Talisa Ross[1], Guled Jama[1], Catherine Rennie[1]
[1]*Imperial College Healthcare NHS Trust, London*

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

Objectives: There is a surprising paucity of literature surrounding the efficacy of unilateral versus bilateral sphenopalatine artery ligation (SPAL), with only one single centre study published in 2018. This study aims to compare the outcomes between unilateral and bilateral SPAL in managing recurrent epistaxis in our high volume tertiary rhinology centre.

Methods: A retrospective review was conducted on 93 patients who underwent unilateral or bilateral SPAL between 2017 and 2024 for both emergency and recurrent epistaxis. Demographics, pre-operative risk factors procedural details and postoperative complications (such as septal perforation) were collected. The rate of recurrent epistaxis post-operatively was analyzed between unilateral and bilateral SPAL.

Results: Both unilateral and bilateral SPAL reduced rate of epistaxis in 83% of cases. Bilateral SPAL was more effective in preventing recurrent epistaxis. This was regardless of ligation technique (endoscopic bipolar versus clips). No patients developed a post-operative septal perforation as a result of bilateral SPAL.

Conclusions: This study demonstrates that bilateral SPAL is a safe and effective treatment for acute and recurrent epistaxis. We would advocate that bilateral SPAL should be performed first line, due to its increased efficacy and minimal complications from treating both sides. Considerations should be made, however, to patient comorbidities, and unilateral SPAL still remains highly effective in patients for whom a shorter anaesthetic is required.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4111

Management of Epistaxis in the Emergency Department: Effect of Nasal Packing Materials on Hemostasis and Physician Workload

Hideaki Moteki[1], Hiroki Miyajima[1], Shiroto Kosuke[2], Ken Hiramatsu[1],Mariko Kasuga[1], Takayuki Nakagawa[3]

[1]Department of Otolaryngology, Aizawa Hospital, *[2]Department of Emergency Medicine, Aizawa Hospital*, *[3]Department of Otolaryngology, Head and Neck Surgery, Graduate School of Medicine, Kyoto University*

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

Introduction: Epistaxis is a common emergency encountered by primary care physicians. While otolaryngologists manage it routinely, it poses challenges for non-specialists. This study evaluates epistaxis management by emergency physicians, focusing on nasal packing materials, hemostasis success rates, and subjective mental workload (SMWL).

Methods: A prospective study was conducted on patients presenting with epistaxis from 2021 to 2023. Nasal packing materials were categorized as resorbable (Surgicel) or non-resorbable (gauze). Emergency physicians completed an SMWL questionnaire after initial treatment. Patients were assessed by otolaryngologists the following day, with additional interventions as needed.

Results: Ninety-one cases were analyzed (44 males, 47 females; mean age: 69 years). All required nasal packing (53 gauze, 38 Surgicel). No significant difference in hemostasis success was observed between materials. The accuracy of initial nasal packing was not significantly associated with re-bleeding. However, SMWL analysis revealed significantly lower "physical demand" and "effort" scores in the Surgical group, suggesting reduced physician burden.

Conclusion: Surgicel and gauze show comparable hemostasis success rates, but Surgical may reduce physician workload. Optimizing initial epistaxis management can enhance emergency care efficiency.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4423

Recurrent Epistaxis and Nasal Staphylococcal Carrier in Children

Felicia Manole[1]

[1]*University of Oradea, Faculty of Medicine and Pharmacy Oradea*

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

Introduction: Recurrent epistaxis is a common condition in children, often raising concerns about underlying causes such as infections, vascular fragility, or systemic diseases. Staphylococcus aureus is a frequent colonizer of the nasal mucosa and has been suggested as a potential contributing factor in recurrent nasal bleeding.

Objectives: This study aims to evaluate the association between recurrent minor epistaxis and nasal Staphylococcus aureus carriage in children, analyzing the prevalence of bacterial colonization and potential predisposing factors. To investigate the potential link between Staphylococcus carriage and epistaxis because limited data exists regarding this association in pediatric patients.

Material and Methods: We conducted a prospective study on 98 pediatric patients aged 4 to 14 years (28 boys and 70 girls) who experienced at least two or three episodes of minor epistaxis within the last two months. A detailed medical history were obtained from each patient after an detailed anamnesis of the parents and was taken to identify possible associated conditions. All patients underwent an otorhinolaryngological (ENT) examination, including endonasal inspection, and nasal secretions were collected for bacterial culture. Detailed medical histories Staph Testing: Nasal swabs were collected to identify Staphylococcus carriage. Staph Positive Indicates a significant association. Staph Negative These patients may have other risk factors. Comparative Analysis: Epistaxis Severity vs. Staph Carriage: Mild Epistaxis Lower Staph carriage rates observed. Severe Epistaxis Higher Staph carriage rates were documented.

Results: Staphylococcus aureus was isolated in 38% of the patients. No significant systemic conditions were identified as predisposing factors for epistaxis in these cases. The nasal mucosa appeared fragile in some patients, but no major anatomical abnormalities were observed.

Discussion: The study highlights a potential link between nasal colonization with Staphylococcus aureus and recurrent minor epistaxis. The presence of the bacterium may contribute to mucosal irritation although further studies are needed to clarify the exact pathogenic mechanisms. Linking Staph to Epistaxis - Potential Mechanisms. Inflammation Staph may induce nasal mucosal inflammation and increased susceptibility to bleeding,. Vessel Damage: Leading to increased fragility and bleeding. Biofilm Formation: Staph biofilms may exacerbate epistaxis. Implications: Treatment Strategies & Preventative Measures : Antibiotic Therapy Targeted antibiotics for Staph eradication. Nasal Hygiene Saline rinses to reduce bacterial load. Study Limitations : Small sample size, Single-center study, Lack of control group. Next Steps: Larger Studies Multi-center research with more participants.Key Findings and Future Research Directions: Staph Link; Severity ; Treatment Identified a strong correlation between recurrent epistaxis and Staphylococcus carriage. Causality : Investigate mechanisms between Staph and epistaxis. Prevention: Evaluate effectiveness of preventative measures.

Conclusions: Our findings suggest that nasal Staphylococcus aureus carriage may play a role in recurrent epistaxis in children. Routine nasal cultures could be considered in recurrent cases to guide targeted treatment and preventive strategies.



4464

Low-dose bevacizumab treatment in patients with hereditary haemorrhagic teleangiectasia.

Adrian Kawecki[1], Eliza Brozek-Madry[1]

[1]*Department of Otorhinolaryngology, National Medical Institute of the Ministry of Interior and Administration, Warsaw, Poland*

Poster Session | Epistaxis and HHT | 22 June – 25 June, 2025, All day

Introduction: Hereditary hemorrhagic teleangiectasia (HHT) is an autosomal dominant genetic disorder that disturbs the process of maturation of blood vessels. HHT affects more than 1.4 million people worldwide. The most common symptoms are recurrent nosebleeds, teleangiectasia on the skin, gastro-intestinal bleeding. To asses the effectiveness of low-dose bevacizumab administration in reducing Visual Analog Scale (VAS) and Epistaxis Severity Score (ESS) score and in changes of hemoglobin levels

Material and Methods: We included 9 patients with history of multiple blood transfusion due to epistaxis and Curacao Criteria>pts. Four of them were excluded during the trial because of sudden progression of Alzheimer's, lack of compliance, sudden death and brain abscess that required surgery. One was disqualified from a single dose because of orthopedic surgery. We assessed the effectiveness of low-dose bevacizumab administration (1mg/kg i.v or 50mg i.v) relying on VAS, ESS, hemoglobin levels, frequency and severity of epistaxis and adverse effects.

Results: Administering 1mg/kg or 50mg bevacizumab demonstrated reduction in the epistaxis severity score by 41%. It also showed increase of VAS score to 43% and hemoglobin levels to by 14,6%. Most common observed adverse effects were fatigue and diarrhea, which mostly subsided after 2nd dose.

Conclusions: Low-dose bevacizumab treatment in patients with hereditary hemorrhagic teleangiectasia leaded to significant reduction of the ESS score, VAS and hemoglobin level improvement. At the same time it seems safe with mild adverse effects.





Facial Pain

3689

Unilateral nasal mass. The value of differential diagnosis.

Aikaterini Lianou[1]

[1]*Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece*

Poster Session | Facial Pain | 22 June – 25 June, 2025, All day

Background & AimNasal: masses are a clinical entity with great diversity. They present various symptoms such as nasal obstruction, facial pain, epistaxis, headache, anosmia and visual disturbances. Especially unilateral ones are highly suspicious and differential diagnosis of benign and malignant lesions is required. Case Study A 37-year-old female presented to the emergency department with a sudden onset of severe headache, following an upper respiratory tract infection. Rhinoendoscopy revealed a non-hemorrhagic mass below the middle turbinate, in the area of the agger nasi, occupying the right nostril and morphologically not resembling a polyp. CT scan revealed complete invasion of the right frontal sinus with extension to the anterior and posterior ethmoidal sinuses. We performed a biopsy of the lesion under local anesthesia, which revealed an inflammatory polyp. Under general anesthesia, a septoplasty, maxillary antrostomy, anterior and posterior ethmoidectomy, and right frontal sinus opening (Draf IIA) were performed. Six months later, the patient is symptom-free and without signs of recurrence.

Results: Detailed history, thorough clinical examination, rhinoendoscopy, and imaging are essential for differential diagnosis. Rhinoendoscopy is a weapon in the quiver of otorhinolaryngologists. It is a quick, direct, and inexpensive examination that can be performed even at office level, allowing for rapid initiation of treatment.

Conclusions: Nasal masses affect a large percentage of patients. Any unilateral nasal mass should be carefully examined and the differential diagnosis should include benign and malignant diseases. Fortunately, these are usually inflammatory diseases, while neoplasms are rare, accounting for 0.2% to 0.8% of all malignancies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Facial Plastic surgery beyond the nose

3726

Is the basal cell carcinoma a challenging entity for ent surgeon?

Aikaterini Lianou[1], Dimitra Simou[2]

[1]Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece, *[2]Department of Otorhinolaryngology, Head and Neck Surgery, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece*

Poster Session | Facial Plastic surgery beyond the nose | 22 June – 25 June, 2025, All day

Background & Aim: ENT surgeons often encounter patients with skin cancer in their daily routine. Cutaneous basal cell carcinoma (cBCC) is the most common malignancy diagnosed in the human population, accounting for 70-80% of all skin malignancies in fair-skinned individuals and having an increasing incidence. It rarely metastasizes and has a low mortality rate, while its morbidity is influenced by local invasion.

Case study: A 56-year-old man with a lesion on the right zygomatic area extending to the medial canthus presented to the outpatient department of our hospital (Fig. 1). Through clinical examination, no other pathological findings were revealed. Surgical excision under local anesthesia was performed, and a superficial-based neck flap was used to reconstruct the defect (Fig. 2). The final postoperative outcome was satisfactory (Fig. 3). The histological examination revealed a BCC.

Results: BCC is one of the commonest skin cancers of the head and neck. Its localization can be anywhere, and many techniques are proposed for its surgical excision. Surgical removal of the entire lesion with clear margins is the “gold” standard. Surgical excision is followed by primary closure or reconstruction with tissue flaps, skin grafts, or healing by secondary intention.

Conclusions: cBCC is, and will continue to be, a major public health problem due to its increasing incidence, causing an increased financial burden on healthcare systems. Mainly are localized in the head and neck (80% of cases), making these lesions very important for ENT specialists who must be knowledgeable and committed to its management, as the main method of treatment remains surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3731

A Meta-Analytical Assessment of Efficacy and Cosmetic Outcome of 2-Octyl Cyanoacrylate versus Conventional Suture for Head and Neck Surgery

Thomase Jamilla Chiong[1], Amando Virgilio Santos[1]
[1]*Ospital ng Makati*

Poster Session | Facial Plastic surgery beyond the nose | 22 June – 25 June, 2025, All day

Introduction: Cosmetics, especially on the face and neck, impact self-image, self-confidence, and self-esteem. Thus, efficient methods for closing facial and neck wounds are essential. While sutures are the gold standard, research continues to explore alternatives that provide better cosmetic outcomes. Effective wound closure is crucial for optimal surgical results and improved patient quality of life.

Objective: This study aims to assess the efficacy and cosmetic outcomes of 2-octyl cyanoacrylate compared to conventional sutures in patients undergoing head and neck surgery.

Methodology: A meta-analysis was conducted, collecting data on the average time to close each centimeter of laceration to evaluate the efficiency of 2-octyl cyanoacrylate versus sutures. The Visual Analog Scale (VAS) and the Hollander Wound Evaluation Scale (HWES) were used to assess cosmetic results three months post-operation, with data analyzed using Review Manager version 5.0.

Results: The analysis revealed a significant difference in time efficiency between the two methods, with a standardized mean difference of -0.68 (95% CI: -1.26 to -0.09), indicating faster closure ($p = 0.01$). The VAS also showed a significant difference, with a mean difference of -0.55 (95% CI: -0.98 to -0.12) ($p = 0.01$). In contrast, the HWES score showed no significant difference (mean difference of 0.50, 95% CI: -0.42 to 1.42, $p = 0.28$) and exhibited considerable heterogeneity ($I^2 = 86\%$).

Conclusions: The findings suggest that 2-octyl cyanoacrylate is an effective alternative to conventional head and neck surgery sutures, offering faster closure times and comparable cosmetic outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Granulomatous diseases of the nose

3966

From chronic rhinosinusitis to Granulomatosis with Polyangiitis: A case study

Shirley Tarabichi[1], Codrut Sarafoleanu[3]

[1]1. "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania 2. ENT&HNS Department, "Sf. Maria" Clinical Hospital, Bucharest, Romania, [2]ENT&HNS Department, "Sf. Maria" Clinical Hospital, Bucharest, Romania, [3]1. "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania 2. ENT&HNS Department, "Sf. Maria" Clinical Hospital, Bucharest, Romania

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: Granulomatosis with Polyangiitis (GPA), which was previously referred to as Wegener's granulomatosis, is a systemic vasculitis that affects small and medium-sized blood vessels. The disease primarily affects the respiratory tract and kidneys, and between 70% and 90% of patients report nasal symptoms.

Case study: We present a case of a 45-year-old woman initially diagnosed in another clinic with seronegative polyarthritis and chronic rhinosinusitis. Years after the initial diagnosis, the patient presented to our clinic with persistent nasal symptoms—chronic nasal obstruction, rhinorrhea, and the appearance of nasal deformity despite several antibiotic and anti-inflammatory therapies. The patient also presented systemic symptoms such as fever, hematuria, and digital necrosis. The laboratory tests performed at the time of presentation revealed the presence of antineutrophil cytoplasmic antibodies (ANCA) and antinuclear antibodies (ANA). A biopsy of the nasal mucosa confirmed the diagnosis of GPA.

Results: This case illustrates the complex and multisystemic nature of GPA. A comprehensive clinical and paraclinical evaluation is essential for the diagnosis of GPA.

Conclusions: The occurrence of ongoing nasal symptoms and new systemic manifestations, along with significant findings such as positive ANCA and ANA, led to the reconsideration of the initial diagnoses. A biopsy of the nasal mucosa was necessary to confirm Granulomatosis with Polyangiitis (GPA). This shows the importance of a multidisciplinary approach to establishing a diagnosis and initiating treatment to prevent complications and control the progression of the disease.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3985

Nasal Breathing Dysfunction in a 44-Year-Old Woman with Psoriatic Dermatitis: A Case Study

Zacharias Kalentakis[1], Georgios Dritsas[1], Effrosuni Papatheodorou[1]
[1]*Sismanogleio General Hospital of Attiki*

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: Psoriatic dermatitis is a chronic autoimmune condition primarily known for affecting the skin. However, because of the continuous inflammation, its effects can potentially impact other systems in the body. One such area that is rarely discussed is nasal breathing dysfunction—issues like nasal obstruction and reduced airflow, which can significantly impact a person's quality of life. This case study explores a possible link between psoriatic dermatitis and nasal dysfunction in a middle-aged woman.

Case Presentation: A 44-year-old woman, who had been living with psoriatic dermatitis for about five years, began experiencing worsening nasal congestion and difficulty breathing through her nose. Her symptoms were particularly severe at night, and she noticed increasing nasal discharge that eventually formed dry crusts. When examined, an anterior rhinoscopy revealed the complete loss of her nasal septum, and a fibrotic nasal endoscopy showed almost total blockage of both choanae (the passages at the back of the nasal cavity).

Results: Further imaging and a biopsy ruled out granulomatous tissue but confirmed signs of systemic inflammation. From a surgical perspective, doctors reconstructed her nasal tip to provide better structural support, and a microdebrider was used to restore airflow through the choanae. While nasal stents are often effective for similar conditions like choanal atresia, they were avoided in this case due to the potential risk of a foreign body reaction. Fortunately, the patient had a smooth post-operative recovery and continues to be monitored with topical nasal treatments to manage her condition.

Conclusion: This case highlights how conditions we often think of as skin-related can have much broader implications. Psoriasis is not just a visible skin disease—it's a systemic condition that may quietly affect other parts of the body, including the nasal cavity. Symptoms like persistent nasal congestion might not always be due to common

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4080

Tuberculosis Sphenoid Sinusitis Complicated by Cranial Nerve Palsy and Pituitary Involvement: A Case Report

Joy Xin Yi Au[1], Caroline Chun Yun Lee[1]
[1]*Department of Otolaryngology, Khoo Teck Puat Hospital*

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Objective: Tuberculosis (TB) sphenoid sinusitis is a rare and potentially severe condition. This case highlights the importance of early diagnosis, timely intervention, and effective management options to prevent complications. We present a rare case of TB sphenoid sinusitis in a 62-year-old Chinese male, complicated by cranial nerve palsy, optic neuropathy, and pituitary involvement, alongside a brief literature review.

Case study: The patient, with a history of pulmonary TB on active treatment, presented with a one-month history of headache, diplopia, and left eye droop. Examination revealed left cranial nerve 3 palsy and optic neuropathy. Nasoendoscopy showed mucopus from the right sphenoid ethmoidal recess. Imaging revealed chronic sphenoid sinusitis with inflammation extending to the cavernous sinus and orbital apex as well as pituitary enlargement. Hormonal testing revealed central hypothyroidism and hypogonadism.

Results: The patient underwent functional endoscopic sinus surgery, anti-TB therapy, and appropriate hormone replacement therapy. Biopsy and PCR confirmed TB. 3 weeks post-surgery, the patient experienced worsening eye symptoms, including a new cranial nerve 4 palsy despite a well epithelized and patent sphenoid cavity. In view of a lack of leptomeningeal enhancement on imaging and negative CSF studies for TB, a paradoxical reaction to anti-TB meds was suspected hence he was commenced on intravenous steroids with subsequent improvement.

Conclusion: TB sphenoid sinusitis is rare but can lead to severe neurological complications. Early diagnosis and prompt treatment, including surgical intervention, anti-TB therapy, and steroids for paradoxical reactions, are crucial to improving outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4100

Three Cases of Eosinophilic Granulomatosis with Polyangiitis (EGPA) were Diagnosed after Surgery for Eosinophilic Chronic Rhinosinusitis (ECRS)

Koji Otsuka[1]
[1]Sanno Hospital

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Herein, we present three cases with EGPA who diagnosed after surgery for ECRS. Case 1: A 60-year-old female complained nasal smell disturbance for ten years. She was implanted with an ICD for complete atrioventricular block and diagnosed with eosinophilic pneumonia nine years ago. She was performed endoscopic sinus surgery (ESS), blood examination showed a markedly high eosinophil count (55%) and pathologic study for polyps made the diagnosis as ECRS. She was consulted a rheumatologist for complaining of a joint pain at left elbow and a numb in right leg after two months. She was diagnosed as having EGPA. Case 2: A 46-year-old male was evaluated for relapse nasal polyps and smell disturbance after four years performing ESS. We started treatment with dupilumab (DUP) for the recurrence. However, after the fourth administration of DUP, he complained about numbness and joint pain in both legs and arms. The patient consulted a rheumatologist and diagnosed as having EGPA. Case 3: A 55-year-old male complained nasal congestion for ten years. He was diagnosed with ECRS and ESS was performed, but the polyps recurred after three months. We planned him on treatment with DUP. Before administration of DUP, Blood tests showed serology for MPO-ANCA was positive. He was consulted a rheumatologist but did not diagnose as having EGPA at that time. Only two months later, CT showed increasing ground-glass opacity in his lung and blood test showed increasing eosinophil count from 14.6% to 28.5%. He was diagnosed with EGPA at this time.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4471

Nasal rinsing with probiotics in rhinosinusitis – analysis of symptoms and safety assessment

Zofia Burska[1], Eliza Brozek-Madry[1]

[1]*Department of Otorhinolaryngology, National Medical Institute of the Ministry of Interior and Administration, Warsaw, Poland*

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: The need for the trials evaluating the efficacy of topical probiotics in CRS is apparent. It is recognized that a healthy microbiome contributes to the reduction of pathogenic bacteria, restores the epithelial barrier and supports the host immune response. The aim of this study was to analyze the symptoms and assess safety of probiotic nasal rinses in patients with primary and secondary rhinosinusitis (granulomatosis with polyangiitis (GPA).

Material and methods: A total of 51 patients (31 females and 20 males) were included in the study, including 24 patients with GPA under immunosuppressive treatment (12 females and 12 males) and 27 patients (19 females and 8 males) with rhinosinusitis (chronic rhinosinusitis (CRS) with nasal polyps, CRS without nasal polyps, atrophic rhinitis with perforation of the nasal septum, and allergic rhinitis). Patients were scheduled for nasal rinsing with probiotic solution (Lactobacillus plantarum, Bifidobacterium animalis) with assessment of the following parameters before and after rinsing: SNOT-22 and severity of nasal lesions on the Lund-Kennedy scale. In the group of patients with rhinosinusitis, the ENS-6 questionnaire was also administered, as well as a visual analogue scale (VAS) symptom assessment: nasal discharge, nasal patency impairment, facial pain, olfactory impairment, nasal irritation, nasal itching and crusting.

Results: The study showed that nasal rinsing with probiotic solution was well tolerated and had no adverse effects. Both groups showed a reduction in discomfort based on the SNOT-22 questionnaire ($p=0.002$ in GPA, non-significant in CRS/AR/NAR). On the Lund-Kennedy scale, the reduction in scores in both groups was statistically significant. In addition, patients with CRS/AR/NAR also experienced a reduction in nasal mucosa irritation and crusting ($p<0.05$).

Conclusions: Nasal cavity rinsing with probiotics has a potential beneficial effect on the condition of the nasal mucosa in patients with both primary and secondary nasal mucosa diseases and is well tolerated by patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4516

Granulomatosis with polyangiitis: case report

Mariana Caetano[1], Carolina Arede[1], Cláudia Rosa[1], Rita Peça[1], Mariana Correia[1], Mariana Calha[1], César Silva[1], Vitor Oliveira[1], Diogo Tomé[1], Leonel Luís[1]

[1]Unidade Local de Saúde Santa Maria

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: Granulomatosis with polyangiitis (GPA), previously called Wegener's granulomatosis, is a systemic vasculitis primarily affecting the upper airways, lungs, and kidneys. Upper airway involvement is seen in over 90% of cases, with nasal obstruction and discharge commonly present at the time of diagnosis. Otologic manifestations, including middle ear effusion and conductive hearing loss, affect 30-50% of GPA patients.

Methods: Observational case report.

Results: A 72-year-old male with a history of arterial hypertension presented to the ENT department with nasal obstruction and discharge, hearing loss, and aural fullness for 4 months. The patient was under colchicine for the treatment of mesenteric panniculitis, two months before presentation. Nasal endoscopy revealed edematous, friable, and erythematous mucosa, while otoscopy showed right-sided effusion. Paranasal sinuses CT scan documented osteitis process, areas of demineralization in the bony portion of the nasal septum and pansinusitis. Nasal mucosa biopsy revealed an extensive active chronic inflammatory process with vessel wall necrosis, consistent with GPA. Screening for anti-neutrophil cytoplasmic antibodies (ANCA) was positive, showing a cytoplasmatic pattern (c-ANCA). Urine chemistry and chest CT were unremarkable. The patient started combination therapy with methotrexate and prednisolone. After two months of treatment, clinical signs and symptoms and ANCA levels normalized.

Conclusions: Due to the common presentation of sinonasal and otologic symptoms in GPA, rhinologists play a crucial role in its early detection and management. Diagnosis is confirmed through nasal biopsy and c-ANCA testing, while treatment typically involves a combination of corticosteroids and immunosuppressants, with regular follow-up.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4520

Misdiagnosis of Esthesioneuroblastoma Revealing Sarcoidosis – A Case Report

Rim Braham[1], Skander Kedous[1], Mohamed Wejden Trabelsi, Ameni Amri[1], Alia Methnani[1], Mohamed Dhaha[1], Souheil Jbali[1], Saoussen Dhambri[1]

[1]Head and neck surgery department of Salah Azaeiz Oncology Institute-Tunis

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: Esthesioneuroblastoma (ENB) is a rare neuroectodermal tumor of the olfactory epithelium. Clinical presentation associates headaches and anosmia. Given its nonspecific imaging findings, ENB may be confused with other expansile lesions, such as inflammatory or granulomatous conditions. Sarcoidosis, a multisystemic granulomatous disorder, can mimic sinonasal malignancies, arising diagnostic challenges. We present a case initially suspected as ENB but later identified as sarcoidosis.

Case Study: A 51-year-old female with history of type-2 diabetes and atrial fibrillation presented with a four-month history of unilateral chronic headaches and anosmia. CT scan revealed a 2 cm ethmoidal mass centered on the right olfactory cleft, extending beyond the midline, raising suspicion for ENB. MRI confirmed an expansile lesion with significant enhancement and adjacent sinus involvement. Nasofibroscopy was poorly tolerated, and no apparent mucosal abnormalities were observed. Given the suspicion of ENB, an endoscopic biopsy under general anesthesia was performed.

Results: Histopathology of the endonasal biopsy showed fibrous tissue with dense granulomatous inflammation, including lymphocytes, plasma cells, and multinucleated giant cells with focal necrosis. Initial suspicion of tuberculosis was ruled out by negative PCR. CT revealed numerous nodules and bilateral juxtapleural micronodules, mediastinal and hilar lymphadenopathy, as well as bilateral subcarinal and interbronchial lymphadenopathy. These findings were coherent with the final diagnosis, granulomatous inflammation, consistent with sarcoidosis.

Conclusion: Sinonasal sarcoidosis is a rare but critical differential diagnosis for ENB. This case underscores the importance of histopathological confirmation in ethmoidal masses, as imaging alone may be misleading.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4559

Rare case of erythematous nose

Georgios Fotiadis[1], Konstantinos Chaidas[1], Ipek Chatzisouleiman[1], Theodora-Eleftheria Defteraiou[2], Georgios Fyrmpas[1], Michael Katotomichelakis[1]

[1]Department of Otorhinolaryngology, Medical School, Democritus University of Thrace, Alexandroupolis, Greece., *[2]Laboratory of Histology-Embryology, Medical School, Democritus University of Thrace, Alexandroupolis, Greece.*

Poster Session | Granulomatous diseases of the nose | 22 June – 25 June, 2025, All day

Introduction: Leishmaniasis is a disease caused by protozoan parasites that are transmitted to humans through the bite of infected female phlebotomine sandflies. Nasal involvement in leishmaniasis is uncommon and can mimic other infectious orinfammatory diseases or even malignancies resulting in delayed diagnosis and management.

Materials and Methods: We present an unusual case of a 90-year-old patient with progressively worsening erythematous, painful, and oedematous nose, not responding to antibiotics that presents as a diagnostic dilemma.

Results: An initial diagnosis of infected rhinophyma was made by dermatologist. ENTclinical examination confirmed the presence of nasal skin erythema with nasalmucosal oedema and abundant secretions. Cultures were taken isolating three different microorganisms and targeted medical therapy was commenced. Interestingly, oral cavity evaluation also revealed a dark-colored hard palate lesion. Biopsies from both nasal and palatal lesions were performed. Despite the above medical therapy, the patient's condition continued to worsen. Histopathological analysis of nasal specimen was indicative of Rosacea Acne, whereas the findings of palatal biopsy raised a high suspicion of Leishmaniasis. Serological blood tests showed positive results for Leishmania. Unfortunately, further evaluation using advanced diagnostic techniques was not feasible in our institution. The patient immediately started treatment with intravenous Amphotericin B with significant clinical improvement and complete resolution after two weeks.

Conclusions: Leishmaniasis is a rare entity in the daily practice of an otorhinolaryngologist and its diagnosis can be challenging resulting in delayed treatment. Clinical suspicion should be raised in the presence of relevant patient history and certain clinical signs.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Imaging and Investigations

3718

Effect of Eye Closure on Nasal Valve Cross-Sectional Area During Endoscopy

Alisa Luria[1], Ofer Gluck[1], Oded Cohen[1], Keren Oren[1], Yehuda Schwarz[1]

[1]Department of Otolaryngology-Head and Neck Surgery, Samson Assuta Ashdod University Hospital, Faculty of Health Sciences, Ben Gurion University, Ashdod, Israel.

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Background: Nasal endoscopy is a common procedure in the otolaryngology clinic. Efforts to reduce discomfort have focused on medical and instrumental means. Yet, patient facial expression may affect the nasal valve cross-sectional area, which, in turn, may impact discomfort, as it is the narrowest part of the nasal passageway. Aim: To evaluate the effect of forceful eye opening and closure on the nasal valve's cross-sectional area using rigid video-endoscopy and digital image analysis.

Methods: A prospective case series study including 36 volunteers, of which 27 were females (75%). The mean age was 40 (SD=12.66) years. Nasal video endoscopy of the right nasal vestibule was performed by a rigid endoscope in three facial positions: relaxed, eyes tightly closed, and eyes wide open. Nasal valve images were evaluated using ImageJ software by an examiner blinded to the position in which they were taken.

Results: The nasal valve cross-sectional area was significantly larger at the "relaxed" position, compared with eyes tightly closed (41.2% increase, Z=5.232, p-value<0.001). No significant difference was found between the "relaxed" and "eyes wide open" positions.

Conclusion: Tight eye closure causes a significant decrease in the cross-sectional area of the nasal valve, which in turn may increase the risk for rubbing contact of the endoscope. The results imply that instructing patients to keep their eyes open during nasal endoscopy may reduce discomfort during the procedure. Future clinical studies are needed for validation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3788

Cone Beam Computed Tomography in a One-Stop Rhinology Service

Morris Simon[1], Whittet Heikki[1]
[1]*Morriston Hospital Swansea, Wales, UK*

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Introduction: Cone-Beam Computed Tomography (CBCT) provides a focused field of view with reduced radiation dose, typically with applications within dental surgery. Our unit provides a regional service for septal perforation, epiphora and frontal sinusitis; pathologies that frequently require cross-sectional imaging for surgical planning or prosthesis manufacture. In some cases, this imaging can be degraded by nasal crusting. This study assesses the impact of a one-stop rhinology service utilizing CBCT as the primary imaging modality.

Methods: The one-stop CBCT rhinology clinic was established in Morriston Hospital in 2024. Prospective review of indication for referral, patient opinion, clinical outcomes and appointment savings was undertaken.

Results: 36 patients have attended the rhinology CBCT clinic thus far for septal perforation prosthesis manufacture (n=25), epiphora dacrocystogram (n=8) and frontal sinus disease (n=3). This has saved a total of 108 combined radiology/ENT appointments, with a total of> miles in car travel saved. The narrow field of view reduces the patients' radiation dose by>% per scan.

Conclusion: CBCT provides a valuable yet underused resource in the ENT department for imaging sinonasal pathology. This is the first known description utilizing CBCT for extended applications in epiphora and bespoke septal prosthesis manufacture. Continued use within this service can reduce the patient distance travelled, radiation dose and number of appointments needed for managing rhinological complaints; providing a benefit to patients and departments alike.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3881

Evaluation of Sphenoid Sinus Variants and Their Association with the Internal Carotid Artery Using Enhanced Paranasal Sinus CT.

Tsuyoshi Okuni[1], Kenichi Takano[1], Keisuke Yamamoto[1]
[1]*Sapporo Medical University Hospital*

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Introduction: The sphenoid sinus is anatomically located in the deepest region of the craniofacial area and is closely associated with critical structures such as the internal carotid artery. Injury to the internal carotid artery during endoscopic endonasal sphenoid sinus surgery is a serious complication. This study aimed to identify high-risk anatomical variations of the sphenoid sinus associated with the risk of internal carotid artery injury by analyzing findings from enhanced paranasal sinus CT images.

Materials & Methods: Enhanced paranasal sinus CT images (axial, coronal, and sagittal planes) of 526 sides (263 cases) obtained between January 2013 and December 2024 at our institution were collected. Patients with tumors, polyposis, trauma, a history of prior surgery, or those under 18 years of age were excluded. The degree of sphenoid sinus pneumatization and the presence or absence of bony structures linked to the carotid artery in the sphenoid sinus were evaluated.

Results: On sagittal images of enhanced paranasal CT, the attachment of anterior sphenoid sinus wall to the posterior optic canal latellary was frequently associated with the parasellar carotid artery. In the axial images, the sphenoid sinus septum and inter-sinus septa frequently aligned with the paraclival carotid artery.

Conclusions: Preoperative assessment of the anterior sphenoid sinus wall tilt and the attachment sites of the sphenoid sinus septum and inter-sinus septa on paranasal sinus CT scans is essential to minimize the risk of internal carotid artery injury.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3905

Maxillary sinus dimensions and recesses – a computed tomography assessment

Lalee Varghese[1], Rakesh Bright[1], Madhavi Kandagaddala[2], Aparna Irodi[2], Regi Kurien[1]

[1]Department of Otorhinolaryngology, Christian Medical College, Vellore, [2]Department of Radiology, Christian Medical College, Vellore

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Background: Maxillary sinus is the largest paranasal sinus and excessive pneumatization forms recesses beyond its normal anatomical limits. Aim of the study was to determine the dimensions of the maxillary sinus and prevalence, angle and depth of its various recesses.

Methods: Retrospective review of Computed Tomography of paranasal sinuses of patients who underwent imaging for various unilateral nasal conditions from January 2010 to December 2019 were done and dimensions of the maxillary sinus and its various recesses on the uninvolved side were recorded and analyzed.

Results: Mean age of the 90 patients included in the study was 47.92 years. The maxillary sinus height (34.81+- 6.41mm) and depth (35.13+-4.23mm) were comparable while the width (24.78+-5.03mm) tended to be much smaller. Zygomatic recess was the most commonly present recess (92.2%) followed by prelacrimal (70%) and palatonasal recess (55.7%). Sphenomaxillary plate was not seen in any of the patients in this cohort. Among the three recesses, the zygomatic recess had the maximum depth (13.27+- 3.89mm) with females having a deeper recess than males. There was no significant difference in any of the dimensions between males and females.

Conclusions: There is no significant difference in maxillary sinus height and depth. However, the width tended to be much smaller. Excessive pneumatization of maxillary sinus forms various recesses of which zygomatic recess is most common. An in-depth assessment of the maxillary sinus recesses during preoperative evaluation of sinus surgery could help in complete disease clearance and reduce the rate of revision surgeries.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4047

The use of intralesional embolization with N-butyl cyanoacrylate in a nasoseptal cavernous haemangioma

Abdullah Hadi[1], Deepa Samuel[1], Ding Yang[1], Rajeev Advani[1], Siddhartha Wuppalapati[1], John De Carpentier[1]
[1]Royal Preston Hospital, Sharoe Green Ln, Fulwood, Preston, PR2 9HT

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Introduction: Cavernous haemangioma of the nasal septum is a rare entity with only a few cases reported in the literature. We present a case of a 55 year old patient who presented with a large nasoseptal cavernous haemangioma. Initial attempts at endovascular embolization were unsuccessful due to a lack of an appropriate feeding vessel and the patient suffered a pseudoaneurysm of the femoral artery. The patient underwent successful intralesional embolization with n-butyl cyanoacrylate followed by complete endoscopic surgical excision

Methods: Prospective data was collected through the patient journey with consent. Intraoperative photographs and pre-operative embolization and cross-sectional images are included.

Results: The patient underwent successful surgery following intralesional embolization with N-butyl cyanoacrylate under general anaesthesia on the day of surgery. Post-operative histology confirmed a cavernous haemangioma. She did not suffer from any complications following the intralesional embolization. Our intraoperative photos demonstrate the honeycomb like post-embolization appearance of the lesion and the ease of which they can be excised using this technique. Using this technique there was minimal blood loss throughout the procedure.

Conclusions: We have shown that intralesional embolization with n-butyl cyanoacrylate is an effective adjunctive method to allow surgical excision without major bleeding demonstrated with the images and scans we have provided. It also reduces the local vascular risks of endovascular embolization and can be used when there is no appropriate feeding vessel identified on angiography.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4547

Imaging of Complicated Acute Bacterial Rhinosinusitis

Safa Nefzaoui[1], **Wejdan mohamed Trabelsi[1]**, Nadia Romdhane[1], Ines Hariga[1], Imen Zoghlami, Chiraz Mbarek[1]
[1]ENT departement of habib thameur hospital . Tunis .tunisia

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Introduction: Acute rhinosinusitis is a common condition, primarily of viral origin. Bacterial superinfection is rare but can lead to severe complications that may impact functional and vital prognosis. The objective of this study was to evaluate the role of imaging in the diagnosis and follow-up of complicated rhinosinusitis.

Methods: This was a retrospective, descriptive, monocentric study conducted on 65 patients diagnosed with complicated acute rhinosinusitis over a 24-year period (January 1998 to December 2021).

Results We identified 54 cases of oculoorbital complications and 12 cases of cranial complications. Oculoorbital complications were observed in patients with a mean age of 30 years, with a male predominance (sex ratio: 3.3). The most common clinical manifestations included rhinorrhea (60%), eyelid edema (81.5%), and headaches (92.2%). CT imaging revealed ethmoidal opacification in 100% of cases, and the most frequent complication was a suborbital abscess (Chandler Stage III).Cranial complications were identified in 12 patients with a mean age of 56 years. CT scans showed a frontal extradural empyema in one case, while MRI was performed in another case to differentiate inflammatory changes from an abscess.

Conclusion: Oculoorbital and intracranial complications of acute rhinosinusitis significantly impact visual and vital prognosis. CT imaging is crucial for assessing infection spread and ensuring prompt and effective management. Prognosis has improved with the introduction of antibiotics and systematic CT evaluation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4549

Importance of Imaging in the Management of Sinonasal Inverted Papilloma

Wejdan Mohamed Trabelsi[1], **Imen Zoghlami**, Safa Nefzaoui[1], Nadia Romdhane[1], Emna Rejeb[1], Ines Hariga[1], Chiraz Mbarek[1]
[1]ENT departement of habib thameur hospital . Tunis .tunisia

Poster Session | Imaging and Investigations | 22 June – 25 June, 2025, All day

Objective: Clarify the interest of preoperative and post opertative imaging in the topographic diagnosis, the presumption of an associated or added carcinoma and in the choice of the surgical approach.

Methods: This is a retrospective study of 82 cases of inverted papilloma over a 22-year period (2000 and 2022).

Results: The sex ratio was 3.1 with a mean age of 49 years. The main symptom was nasal obstruction found in 80 of the cases. On endoscopy, the tumor was bilateral in 4 cases and unilateral in 78 cases. The typical grape-like appearance was observed in 52 patients (63%). A preoperative CT scan was performed in all patients which revealed tissue filling in all cases, with heterogeneous contrast enhancement in 54 cases. A lobulated appearance was observed in 35 cases. The most common tumor locations were the nasal cavities and maxillary sinus. Bone erosion was observed in 41 cases, primarily affecting the inter-naso-sinus wall (28 cases). MRI was performed in 44 patients mainly in cases of frontal sinus involvement, suspected orbital extension (papyraceous plate erosion), or diagnostic uncertainty. The MRI findings typically showed a tissue process appearing isointense or hypointense on T1-weighted imaging, while T2-weighted imaging predominantly displayed hyperintensity (19 cases).. The inverted papillomas were classified T2 in 47 cases and T3 in 25 cases according to the Krouse classification. Postoperative imaging was performed in all patients, revealing only 3 cases of recurrence with an average delay of 6 years.

Conclusion: CT remains the imaging modality of first choice for nasosinusal inverted papilloma. However, magnetic resonance imaging can better define the extent of the tumor and differentiate it from adjacent inflammatory tissue. The preoperative evaluation usually involves the use of a combination of these two imaging modalities.



Lacrimal Surgery

3730

Dirofilaria repens human infection in dacryological practice in Latvia

Ekaterina Kondratishko[1], Irina Kornilova[2], Aleksejs Derovs[3], Girts Brigis[4], Angelika Krumina[4]

[1]Rīga Stradiņš University, JSC Veselības Centru Apvienība, Medical Centre Consilium Medicum, [2]JSC Veselības Centru Apvienība, [3]Rīga Stradiņš University, JSC Veselības Centru Apvienība, [4]Rīga Stradiņš University

Poster Session | Lacrimal Surgery | 22 June – 25 June, 2025, All day

Dirofilariasis, caused by Dirofilaria spp., is an emerging zoonotic disease. Once limited to the Mediterranean, Dirofilaria repens has spread to southern and eastern Europe, including the Baltic states, driven by climate change and host movement. This study reports the case of Dirofilaria repens infection in a Latvian human without travel history, highlighting its growing prevalence. A 59-year-old man with outdoor exposure and canine contact presented with a painful subcutaneous lesion near the lacrimal sac. Conservative treatment with antibiotics and anti-inflammatory drugs was ineffective. CT dacriography imaging and functional tests revealed no abnormalities in lacrimal pathway, but surgical removal of a pseudocyst identified a nematode, confirmed as Dirofilaria repens. This case underscores the diagnostic challenges posed by nonspecific symptoms and reliance on invasive methods for confirmation. It highlights the need for clinician awareness in non-endemic regions, interdisciplinary collaboration, and improved diagnostic and epidemiological frameworks. Preventive measures, including canine management and mosquito control, are essential to curb the disease's spread. Greater attention to dirofilariasis in public health and medical research is crucial to developing effective diagnostic protocols and preventive strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Nasal and facial trauma

3850

Transorbital frontal sinus bone fracture management

Glavan Matic[1]

[1]*University department of Otorhinolaryngology and Head and Neck surgery, University Medical Centre Maribor, Slovenia*

Poster Session | Nasal and facial trauma | 22 June – 25 June, 2025, All day

Traditionally frontal sinus bone fractures are treated with bicoronal incision and exposure of fractured area. Bone fragments are than repositioned and fixated with titanium plates or titanium mash. In our study small group of patient were treated without external exposure of fragments. We approached to fracture endoscopically trough upper palpebral incision, after exposure of the ceiling of the orbit we drilled small trephination hole. Trough that hole we entered in the sinus and repositioned fragments without removal of periosteum and without external fixation of fragments. In all patients we achieved good postoperative result and no revision surgery was needed With that new approach we avoid big scars of the scalp. Scars of upper palpebrae are aesthetically acceptable and invisible.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4155

Introduction of Telephone Consultation for Nasal Injury in Acute ENT Emergency Clinic at Guys and St Thomas Hospital

Liza Delfin[1], Thomas Kurian[2], Shina Ardani[2], Nora Haloob[1],Rakan Joudi[3]

[1]NHS , [2]nhs, [3]Kings college hospital

Poster Session | Nasal and facial trauma | 22 June – 25 June, 2025, All day

Introduction: The ENT department at Guy's Hospital strives to deliver high-quality care, supported by continuous research, audits, and data collection. NHS data from July 2022 shows that 26 million appointments were delivered, with 65% face-to-face and 30% via telephone consultations. The NHS Long-Term Plan promotes online and video consultations, which offer patient convenience but also pose accessibility challenges.

Objective: To assess the effectiveness of remote consultations (telephone) in reducing outpatient waiting times, improving clinic capacity, enhancing diagnosis speed, and offering cost savings for both patients and the NHS.

Methods: A retrospective analysis was conducted on 23 patients assessed for nasal injuries. Data collected included demographics, referral times, clinic waiting times, diagnostic procedures, and treatment outcomes. The study also explored the impact of remote consultations on service delivery, patient experience, and clinic management. Results: The mean age of the cohort was 37.5 years, with 52.1% (12) diagnosed with a nasal fracture. A total of 34.8% (8) underwent imaging, and 34.8% (8) proceeded to have manipulation under anaesthesia (MUA) under local anaesthetic in the ENT Emergency Clinic.

Conclusion: Remote consultations provide an effective solution for reducing clinic overbooking, improving patient access, and optimizing clinical capacity. The study highlights the feasibility of remote consultations for nasal injury cases, particularly in reducing waiting times and offering faster diagnoses. Continued integration of remote care models can further enhance patient outcomes, streamline services, and reduce operational cost.



Non-allergic rhinitis

3897

The impact of hormonal changes in women on nasal patency and eustachian tube function

Karolina Dżaman[1], Alicja Grajczyk[1]
[1]*Department of Otolaryngology, Centre of Postgraduate Medical Education, Warsaw, Poland*

Poster Session | Non-allergic rhinitis | 22 June – 25 June, 2025, All day

Hormonal changes occurring during the menstrual cycle and pregnancy significantly influence the tendency to swell the nasal mucosa. The study aimed to assess the patency of the nasal cavity and the Eustachian tube in women during the third trimester of pregnancy and in different phases of the menstrual cycle. We examined 50 healthy women in the third trimester of pregnancy (SG – study group) and 40 healthy, non-pregnant women assessed during both menstrual phases (CG – control group). Nasal patency and Eustachian Tube function were evaluated using rhinomanometry, tympanometry and the SNOT-22. Menstrual cycle phases were confirmed via ultrasound and hormonal assays. SNOT-22: 96% of women in the SG reported a sensation of nasal obstruction, which increased with pregnancy progression. 68% of women in the SG reported a sensation of ear blockage. A correlation was found between pregnancy week and both subjective and objective assessments of Eustachian tube patency($p=0.001$). The volumes of inhaled and exhaled air decreased as the pregnancy weeks advanced($p<0.001$).The rhinomanometry results correlated with the subjective nasal obstruction reported by women in the third trimester of pregnancy($p<0.001$).Tympanometry results correlated with rhinomanometry results (worse nasal patency was associated with higher negative pressure values). In the CG nasal obstruction and ear blockage, as reported in the SNOT-22, rhinomanometry, and tympanometry, were significantly more pronounced in the luteal phase(LP) than in the follicular phase(FP). In the LP group, rhinomanometry results correlated with subjective nasal obstruction in SNOT-22($p=0.012$). A correlation was found between the menstrual cycle phase and both subjective and objective assessments of Eustachian tube patency ($p=0.001$) (in the LG group – Eustachian tube obstruction was more frequent). Recognizing and addressing these challenges is pivotal for ensuring the well-being of women and enhancing the quality of antenatal care.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4482

Non-Allergic Rhinitis in Preschool Children

Felicia Manole[1]

[1]*University of Oradea, Faculty of Medicine and Pharmacy Oradea*

Poster Session | Non-allergic rhinitis | 22 June – 25 June, 2025, All day

Introduction: Non-allergic rhinitis (NAR) is a prevalent condition affecting preschool children, characterized by nasal congestion and obstruction without an allergic etiology. Understanding the underlying causes and prevalence of NAR is essential for effective diagnosis and management in this vulnerable age group. Objectives: This study aims to evaluate the incidence of non-allergic rhinitis among preschool children aged 4 to 6 years and to identify potential associated conditions that may contribute to the development of this condition.

Materials and Methods: We conducted a cross-sectional study involving a total of 76 pediatric patients, consisting of 32 boys and 44 girls. All participants had experienced 2 to 3 episodes of nasal obstruction within the preceding two months. A detailed medical and family history was obtained to identify any associated diseases or environmental factors. Following this, an endoscopic ENT examination was performed to assess the nasal passages. Serum Immunoglobulin E (IgE) levels were also measured to evaluate potential allergic responses.

Results: Among the 76 patients, 24 individuals presented with elevated IgE levels, suggesting a possible immunological component. However, the clinical features aligned more closely with NAR rather than allergic rhinitis. Notably, many of the patients reported exposure to common environmental irritants, such as tobacco smoke and pollutants, as well as a history of recurrent viral respiratory infections. Discussion: The results indicate that while elevated IgE levels are typically associated with allergic rhinitis, a significant subset of preschool children diagnosed with NAR also exhibited increased IgE. This finding highlights the complexity of diagnosing nasal conditions in young children, where distinguishing between allergic and non-allergic forms is crucial. Recognizing the role of environmental factors and infections in exacerbating NAR can lead to more targeted interventions and preventive strategies.

Conclusions: Non-allergic rhinitis is a common condition among preschool children, with a noteworthy incidence of elevated IgE levels. These findings underscore the need for clinicians to perform thorough assessments to differentiate between NAR and allergic rhinitis effectively. A comprehensive understanding of the multifactorial nature of NAR will enhance management strategies and improve patient outcomes. Further research is warranted to investigate the long-term implications of NAR in preschool-aged children and to explore potential therapeutic approaches.



Orbital surgery

3891

Orbital Exenteration and Reconstruction for Advanced Basal Cell Carcinoma in the Lower Eyelid

Joana Guincho[1], Luís Baptista[1], Carlota Sousa[1], Inês Carreiro[2], Nelson Gilberto[1], Rui Cabral[1], Pedro Escada[1]

[1]NOVA Medical School , [2]Unidade Local de Saúde de Lisboa Ocidental

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Basal cell carcinoma (BCC) is a locally invasive tumor, particularly in the eyelids or periocular skin, associated with severe comorbidities. Treatment is tailored to tumor location, size, and growth pattern, but complete eradication is challenging due to frequent recurrences.

Objective: To present a case of BCC in the lower eyelid with orbital invasion, detailing the surgical procedure and reconstruction of the defect.

Material and Methods: A 79-year-old patient with BCC of the right lower eyelid, previously treated with two excisions and a Tenzel flap, had a recurrence confirmed by biopsy. MRI revealed an expansive formation in the right inner canthus, infiltrating the subcutaneous tissue of the lateral aspect of the nasal pyramid, in contact with the tendon of the medial rectus muscle, and extending into the lacrimal canal. After a multidisciplinary case discussion, surgical excision of the lesion with orbital exenteration was decided.

Results: Orbital exenteration was performed up to the medial bony wall (papyraceous lamina, lacrimal bone, and posterior limit of the nasal bone) to ensure clear margins. The surgical defect was reconstructed by filling the cavity with a temporal muscle flap, inserted through a bone window created in the lateral orbital wall, and skin closure was performed using a nasogenian rotation flap.

Conclusion: BCC is the most common human neoplasm, and although it rarely metastasizes, it is associated with severe comorbidities and a high recurrence rate. The approach described allowed the treatment of a locally advanced orbital tumor with an acceptable aesthetic outcome.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4120

Urgent Endoscopic Orbital Decompression for Thyroid Eye Disease at a Tertiary Rhinology Centre – A Service Evaluation and Outcome Analysis

Marlene Speth[1], Daniel Saad[1], Vickie Lee[1], Catherine Rennie[1]
[1]*Imperial College Healthcare NHS Trust*

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Dysthyroid optic neuropathy (DON) is the most feared sight-threatening complication affecting 5% of patients with thyroid eye disease (TED). Adjunctive orbital decompression is recommended in the 'European Group on Graves' Orbitopathy' guidelines when treatment with high dose intravenous steroids fails to relieve visual loss. An endoscopic approach provides a minimally invasive effective decompression of the optic nerve to avoid extensive surgery in an inflamed orbit. This study describes the patient cohort who underwent endoscopic orbital decompression (EOD) for DON over five years and analyses their operative outcomes.

Material and Methods: Cohort study of consecutive patients from 2019-2024 including demographics, thyroid diagnosis and status, TED clinical activity score, and management (selenium, methylprednisolone, mycophenolate mofetil (MMF) and ocular radiotherapy). Outcome measures recorded: changes in vision, ocular motility, exophthalmos, surgical complications, and further interventions.

Results: All 15 patients received intravenous methylprednisolone preoperatively and all had stabilization or improvement of their visual status and improvement in orbital pain. Demographics: 40% male, 27% smokers, 53% had bilateral decompression and median age was 58.Other treatments included MMF (86%), selenium (47%), ocular radiotherapy (13%), local steroid injections (27%), thyroidectomy (27%) and tocilizumab in one patient.

Conclusions: Our data show EOD is a safe and effective adjunctive treatment for DON refractory to maximum medical therapy with improvements in optic nerve function, exophthalmos and pain. However EOD is associated with a significant risk of postoperative diplopia. Multidisciplinary management and ongoing immunosuppression of the orbital inflammation remain paramount. Further, the immergence of biologics may herald a new treatment paradigm for this condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4463

Orbital Decompression in Graves' Disease

Andreea Udrea[1], Catalina Voiosu[2], Irina-Gabriela Ionita[3], Ruxandra-Oana Alius[3], Andreea Rusescu[4], Razvan Hainarosie[3]

[1]"Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery Bucharest , [2]"Carol Davila" University of Medicine and Pharmacy Bucharest, [3]"Carol Davila" University of Medicine and Pharmacy Bucharest ; "Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery Bucharest , [4]"CAROL DAVILA " University and Pharmacy Bucharest, Romania

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Thyroid-associated orbitopathy stands out as the predominant etiology behind unilateral or bilateral proptosis among adults. A cornerstone in its surgical management entails orbital decompression, wherein osteotomies and partial bone excisions are employed to expand the affected orbit, accommodating the augmented soft tissue volume. Despite myriad approaches delineated over recent decades, orbital decompression remains a potentially perilous intervention due to the intricate osseous and soft tissue anatomy within the orbit. Nonetheless, advancements in three-dimensional imaging have significantly ameliorated procedural precision and outcomes.

Material and Methods: This paper aims to examine the case of a 67-year-old patient diagnosed with Graves' disease, displaying proptosis and divergent strabismus. His case had been previously overseen by the endocrinology and ophthalmology departments, and he was directed to our service when treatments failed to yield therapeutic benefits. The clinical aspects encountered, the particularities of the surgical treatment carried out and the subsequent follow-up plan are presented and underlined.

Results: The pathology required undergoing a comprehensive therapeutic regimen, outlining two surgical approaches (external and endonasal), resulting in the progressive partial correction of the ocular axes in subsequent evaluations.

Conclusions: Effective collaboration between the aforementioned disciplines and the utilization of advanced, tailored surgical techniques can yield favorable outcomes regarding the long term treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4466

Management of intraorbital foreign body- Case report

Laura-Maria Burlacu[1], Razvan Hainarosie[3], Andreea Rusescu[3], Irina- Gabriela Ionita[3], Catalina Voiosu[3], Andreea Udrea[1], Selma-Andra Cretu[1], Mara-Andra Rebosapca[1], Augustina Iurkovski[1], Ruxandra-Oana Alius[3]

[1]„Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery, Bucharest, Romania, *[2]Institute of Phonoaudiology and Functional ENT Surgery Prof. ,,Dorin Hociota,Bucharest, Romania*, *[3]University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania*

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Intraorbital foreign body refers to the presence of the foreign body within the orbit, but without involvement of the ocular globe. A classification based on composition divides these into metallic, non-metallic, and vegetal categories. The latter group is associated with the highest risks of infection, requiring prompt removal. In this context, the patient history plays a crucial role. Manipulating foreign bodies also carries significant risks, sometimes leading to major functional deficits (hemorrhage, optic nerve damage). The therapeutic decision must consider the foreign body's structure, its location, the clinical impact and the risks of either not performing or performing surgery.

Materials and Methods: This paper aims to present the case of a 54-year-old patient, admitted to our hospital with suspected intraorbital foreign body, diagnosed after the patient complained of diplopia, ptosis, and left periorbital swelling. The methods of diagnosis, surgical treatment, postoperative care, and follow-up plan are highlighted.

Results: After surgical treatment through an external approach, a 5 cm foreign body was extracted, leading to the subsequent resolution of diplopia. Attempts to remove the foreign body via an endonasal approach were unsuccessful.

Conclusions: The therapeutic management of intraorbital foreign bodies presents a challenge for the ENT specialist, as it requires knowledge of the anatomy, as well as the risks associated with damaging noble structures (the optic nerve and ophthalmic artery). It is essential to have advanced skills in endoscopic sinonasal surgery, as well as proficiency in open surgical approaches.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4486

Orbital Solitary Fibrous Tumor: A Rare Entity with Surgical Challenges - case report

Augustina Iurkovski[1], Razvan Hainarosie[1], Viorel Zaine[1], Oana Ruxandra Aliuș[1], Gabriela Irina Ioniță[1], Andreea Rusescu[1], Cătălina Voiosu[1], Oana Raluca Pulpă[1], Teofana Carazanu[1], Anda Selma Crețu[1], Andreea Udrea[1], Mara-Andra Reboșapcă[1], Maria Laura Burlacu[1], Răzvan Hainăroșie[1], Viorel Zainea[3]

[1]Carol Davila University of Medicine and Pharmacy Bucharest, Romania, *[2]ORL*, *[3]"Carol Davila" University of Medicine and Pharmacy Bucharest*

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Solitary fibrous tumors are rare masses with orbital development, representing less than 5% of these tumors. They are generally found to be slow-growing and well-circumscribed. The histopathological hallmark of solitary fibrous tumors includes a 'patternless' architecture with alternating hypercellular and hypocellular areas. On immunohistochemistry, these tumors are CD34 and STAT6 positive.

Materials and Methods: This paper aims to present the case of a 42-year-old female patient admitted with complaints of epiphora, chemosis, and blurred vision in the left eye. MRI revealed a well-defined, round-oval heterogeneous lesion (20 × 22 mm) in the inferomedial extraconal left orbit, compressing the ocular globe and adjacent muscles. The patient underwent tumor resection via a transnasal endoscopic approach under general anesthesia. The procedure included the removal of concha bullosa, medial maxillectomy, anterior-posterior ethmoidectomy, excision of the lamina papyracea, and a transconjunctival incision at the medial angle of the left eye. The tumor was carefully mobilized and successfully removed endonasally.

Results and discussions: The postoperative course was favorable, with minimal bleeding and spontaneous hemostasis following nasal packing removal at 48 hours. Diplopia resolved during recovery, and the patient was discharged in good general condition.

Conclusions: Endoscopic surgical management of orbital tumors extending into the nasal cavity allows precise resection with minimal invasiveness. This approach facilitates excellent visualization and tissue preservation, reducing morbidity compared to traditional open techniques. Key-words: orbital tumor, transnasal endoscopic surgery, epiphora, chemosis



4512

Orbital Exenteration as adjunct treatment strategy in Head and Neck tumors: Insights from a Tertiary Referral Center

Mariana Caetano[1], Cláudia Rosa[1], Maria José Santos[1], Rodrigo Franco[1], Tomás Carvalho[1], Paulo Pereira[1], Mafalda Oliveira[1], Vitor Oliveira[1], Ana Rita Santos[1], Diogo Tomé[1], Leonel Luís[1]

[1]Unidade Local de Saúde Santa Maria

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Periorbital and orbital tumors exhibit significant histopathological diversity, presenting a challenge for therapeutic management. When unresponsive to medical treatment, orbital exenteration is a viable option.

Methods: Retrospective cohort study of patients who underwent orbital exenteration for head and neck tumors between January 2015 and December 2024 at a tertiary centre.

Results: A total of 16 patients were identified, including 11 males (68.8%). The median age was 59.0 ± 18.2 years. Secondary orbital tumors accounted for 81.2% of cases, while primary orbital tumors comprised 18.8%. Histopathological results revealed that 6 patients had squamous cell carcinoma (SCC) and 4 had basal cell carcinoma. Other tumour types included rhabdomyosarcoma (n=1), melanoma (n=1), pleomorphic liposarcoma (n=1), cystic adenoid carcinoma (n=1), myoepithelial carcinoma (n=1) and meningioma (n=1). Most patients required reconstruction, with temporalis muscle and rectus abdominis musculocutaneous flaps being the most commonly used. Flap necrosis occurred in 2 patients (12.5%), and pulmonary embolism was observed in 1 patient (6.7%). Recurrence occurred in 31.3% of cases, with a mean time of 29.3 months, and most being local (60%). Four patients died, two from local and one from systemic disease progression, and one died from hypoxemic respiratory failure.

Conclusions: In accordance to literature, SCC was the most common histologic subtype requiring orbital exenteration in our series. The histopathological heterogeneity and sample size prevent definitive conclusions on the correlation between histologic subtype and patient outcomes. Nevertheless, given the morbidity and recurrence risk associated with this procedure, discussions regarding postoperative survival and quality of life remain crucial.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4519

Endoscopic Nerve Decompression in a Rare Case of Hematoma Following Retrobulbar Anesthesia

Andreea Rusescu[1], Irina Gabriela Ionita[1], Viorel Zainea[1], Raluca Oana Pulpa[1], Catalina Voiosu[1], Ruxandra Oana Alius[1], Razvan Hainarosie[1]

[1]*"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania*

Poster Session | Orbital surgery | 22 June – 25 June, 2025, All day

Introduction: Retrobulbar anesthesia is a widely utilized technique in ophthalmic surgeries, offering effective anesthesia and akinesia. However, it carries a small risk of complications, including retrobulbar hemorrhage, with reported incidences ranging from 0.03% up to 1,7%- 3%. While many retrobulbar hemorrhage cases resolve with conservative management, severe hematomas can lead to orbital compartment syndrome, threatening vision due to optic nerve compression. Traditional emergency interventions, such as lateral canthotomy and cantholysis, aim to alleviate increased intraocular pressure. In refractory cases where these measures are insufficient, endoscopic nerve decompression emerges as a viable surgical option. This minimally invasive procedure allows for direct visualization and decompression of the optic nerve and orbital apex, facilitating hematoma evacuation and pressure relief.

Material and Method: The aim of the paper is to present a case of retrobulbar hemorrhage after retrobulbar block anesthesia for CATARACT surgery and to highlight the role of endoscopic decompression of the optic nerve in such situations. The authors intend to emphasize the role of team work and interdisciplinary collaboration in achieving favourable outcomes in such circumstances.

Results and Conclusions: To preserve visual acuity, it is crucial to rapidly identify haemorrhage following a retrobulbar block before a significant increase of pressure occurs intraorbital. Delayed recognition can lead to orbital compartment syndrome, resulting in optic nerve ischemia and irreversible vision loss.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Paediatric rhinology

3715

Congenital midnasal stenosis? – a case report

Katja Rainer[1], Jure Urbančič[1], Domen Vozel[1]
[1]*University Medical Centre Ljubljana*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Congenital midnasal stenosis (CMNS) is a type of the congenital bony nasal cavity stenosis caused by abnormal embryological development of the nasal cavity. Diagnosis in made by clinical examination with nasal endoscopy where there is inability to endoscopically visualize the middle turbinate. Suspicion of CMNS should afterwards be confirmed with CT scan which reveals obstruction between mucosa of the inferior turbinate and septum. Before we start the treatment of CMNS (conservative, surgical) it is important to determine the severity of symptoms and how the newborn tolerates them.

Case Report: We present a newborn girl with acute respiratory distress with falling saturation immediately after birth. An attempt of passing nasal cavities with catheters was unsuccessful and she was intubated. Third day after birth ENT specialist was consulted and described a hard blockage after 1 cm bilaterally with another attempt of catheterization. By that time it has already been clear a girl had a craniofacial abnormality. Imaging was performed and confirmed CMNS. After ten days rigid laryngoscopy and endoscopic correction of CMNS was performed. Larygoscopy revealed a subglottic stenosis grade I. During endoscopic nasal procedure first local anesthetic with adrenaline was injected into inferior turbinates followed by submucosal resection of both conchal bone in middle and posterior third. At the end of operation nasopharyngeal stent was inserted both sides for three days. The girl did not have any residual breathing problems after this operation.

Conclusion: With every kind of nasal stenosis a newborn develops more or less difficult and dangerous symptoms. It is important to try any forms of conservative therapy until this is sufficient. When symptoms are too severe and a newborn has problems tolerating them we must think about surgical help. In our case with CMNS we learned endoscopic resection of conchal bones with nasal stenting was a great option.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3725

Juvenile angiofibroma: the value of coblation technique.

Aikaterini Lianou[1], Aris Giotakis[2], Aris Papapetropoulos[3], Vasileios Ragos[4], Panagiotis Hadoulos[2], Evangelos Giotakis[2]

[1]Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece, *[2]1st Department of Otolaryngology, School of Medicine, National & Kapodistrian University of Athens, "Ippokratio" General Hospital, Athens, Greece.*, *[3]Department of Pediatric Otolaryngology, Agia Sophia Children's Hospital, Athens, Greece.*, *[4]Department of Maxillofacial Surgery, School of Medicine, University of Ioannina, Ioannina, Greece.*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Background & Aim: We present our experience with the successful debulking of an extensive juvenile nasopharyngeal angiofibroma (JNA) without complications through the coblation technique in a 15-year-old boy. JNA is a rare benign tumor that mainly affects adolescents. It exhibits gradual progression, local extension, increased vascularization, and a notable tendency for persistence and recurrence.

Case Study: A 15-year-old boy was admitted to the Otolaryngology Department of the General Children's Hospital "Agia Sophia" with persistent nasal congestion and recurrent epistaxis. Flexible rhinoendoscopy revealed a rubbery vascular mass at the level of the nasopharynx (Fig. 1). Contrast-enhanced CT and MRI images demonstrated that the tumor occupied the right pterygopalatine fossa and extended to the nasal cavity, nasopharynx, right superior parapharyngeal space, ethmoid sinuses, right infratemporal fossa to the edge of the buccal space, right masticatory space, inferior posterior part of the right orbit, and sphenoid sinus (Fig. 2, 3).

Results: JNAs require complete surgical removal, and treatment usually includes both preoperative embolization and endoscopic methods. Their management can lead to significant bleeding due to the rich blood supply and lack of superficial muscle fibers. The use of coblation offers advantages, particularly in terms of blood loss control, reduced thermal damage, improved visibility of the surrounding area, better postoperative recovery, and limited trauma to vital anatomical structures (Fig. 4).

Conclusions: JNA removal is still performed using classical endoscopic or open surgical techniques. The coblation technique could serve as a surgical tool for tumor debulking due to its excellent hemostatic capabilities.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3753

Adenoid Tissue as a Source of Persistent “Hemoptysis:” a Case Report

Laura Orvidas[1]

[1]Department of Otorhinolaryngology – Head and Neck Surgery, Mayo Clinic, Rochester, MN

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Background: The differential diagnosis for aerodigestive bleeding is broad, with numerous possible sources and contributory pathologies. This report describes a unique etiology of upper airway bleeding in a pediatric patient.

Methods: Case Report Results: An otherwise healthy 17-year-old female presented with a three month history of "coughing up blood” without identifiable source. Referrals were made to gastroenterology, otorhinolaryngology, and pulmonology for comprehensive aerodigestive evaluation. In-office flexible fiberoptic nasolaryngoscopy with otorhinolaryngolgoy revealed adenoid hypertrophy without a clear upper aerodigestive source. Initial CTA imaging was notable for 2 mm pulmonary arteriovenous malformation in the left upper lobe. Suspicion was high for hereditary hemorrhagic telangiectasia, and genetic testing was performed. The patient was taken to the operating room and underwent EGD and flexible fiberoptic bronchoscopy with bronchoalveaolar lavage. Evaluation was notable for adenoid growth with a newly apparent polypoid structure that bled profusely with minimal manipulation. No additional source of bleeding was identified in the gastrointestinal tract or airway. Hemosiderin macrophage index was 0, making the lungs an unlikely source. Adenoidectomy and tissue biopsy was performed. Final pathology demonstrated benign nasopharyngeal mucosa with lymphoid hyperplasia. The patient has done well post-operatively without recurrence of bleeding .

Conclusions: Differential diagnosis for aerodigestive bleeding is broad. This report highlights the importance of comprehensive multidisciplinary evaluation and demonstrates the rare occurrence of adenoid hypertrophy as a contributory source of unexplained aerodigestive bleeding.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3759

Partial Tonsillectomy Effects on Quality of Life in Children with Obstructive Sleep Apnea: An Analysis Based on OSA-18

Constança Oom[1], João Barbosa[1], João Rainha[1], António Trigueiros[1], Filipa Morgado[1], Inês Delgado[1], Carlos Macor[1]
[1]Hospital Beatriz Ângelo

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Pediatric obstructive sleep apnea (OSA) is a prevalent condition characterized by intermittent upper airway obstruction during sleep, leading to disrupted sleep architecture and symptoms such as snoring, restless sleep, and behavioral disturbances. Radiofrequency-assisted partial tonsillectomy has emerged as a less invasive alternative to total tonsillectomy, aiming to alleviate symptoms with reduced postoperative morbidity. This study evaluates the efficacy of radiofrequency-assisted partial tonsillectomy in improving QoL in children with suspected OSA, using the OSA-18 questionnaire.

Material and Methods: This prospective study included pediatric patients aged 2-15 years with OSA symptoms, assessed through clinical history and physical examination. All patients underwent partial tonsillectomy using radiofrequency ablation to reduce tonsillar volume, combined with adenoidectomy. QoL was assessed preoperatively and 3-6 months postoperatively using the OSA-18 questionnaire, which evaluates symptoms across five domains: sleep disturbance, physical suffering, emotional distress, daytime problems and caregiver concerns. Statistical analysis compared pre and postoperative scores.

Results: 44 children (mean age 5,5 years) completed the study. There was a statistically significant improvement in total OSA18 scores after surgery ($p < 0.001$) decreasing from 73,5 to 32,5. The greatest improvements were in sleep disturbance and caregiver concerns, though all domains showed significant reductions. The improvement in OSA18 scores was independent of tonsil size, age, gender or BMI. The procedure was well-tolerated, with no major complications reported.

Conclusion: Radiofrequency-assisted partial tonsillectomy with adenoidectomy effectively improves QoL in children with suspected OSA, offering an effective, minimally invasive alternative to total tonsillectomy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3771

Endoscopic Transnasal Repair of Bilateral Choanal Atresia in a Neonate: A Step-by-Step Approach

Kelvin Yong Jie Lim[1], Tze Choong Charn[1], Ching Yee Chan[1]
[1]KK Women's and Children's Hospital

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Bilateral choanal atresia (CA) is a rare congenital condition characterised by nasal obstruction causing neonatal respiratory distress. Management requires establishing a definitive airway and planning for surgical correction. This report presents our experience with endoscopic transnasal repair of bilateral CA in a neonate, focusing on surgical techniques and postoperative care. Intraoperative photos and a step-by-step video (via QR code) are included as educational resources. A full-term neonate was diagnosed postnatally with bilateral mixed bony-membranous CA following recurrent desaturations and failure to pass a nasogastric tube. Initial stabilization included elective intubation, followed by extubation and placement of a McGovern nipple to maintain airway patency. High-resolution CT imaging confirmed thickened vomer, bowing of the medial pterygoid plates, and mixed bony-membranous obstruction. Definitive surgical correction was deferred until 1 month of age to allow for nasal cavity growth and weight gain. Surgery employed a hemitransseptal approach, with endoscopic drilling of the sphenoid body and removal of the vomer and bony extensions of the medial pterygoid plates. Posterior septectomy ensured bilateral patency, while laterally based nasoseptal flaps were utilised to cover denuded surfaces, reducing the risk of restenosis. Postoperatively, the patient underwent nasal toileting and stenting, with serial EUA to manage oedema and mucus. The procedure achieved widely patent choanae with excellent airflow. The patient was extubated on postoperative day 1 and discharged on day 5, with ongoing follow-up to monitor growth and nasal patency. This case highlights the importance of meticulous planning, precise surgical techniques to preserve mucosa, and rigorous postoperative care.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3811

Endoscopic endonasal management of paediatric congenital skull base encephaloceles: a retrospective case series of 15 patients

Edward Balai[1], Liam Sutton[1], Andrew Hoey[1], Elizabeth Maughan[1], Colin Butler[1], Richard Hewitt[1]
[1]*Great Ormond Street Hospital*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Descriptions of endoscopic endonasal management of paediatric skull base encephaloceles in the literature are limited to case reports and small case-series. Concerns regarding the endoscopic approach in paediatric patients are that performing a multi-layer skull base repair can be challenging due to the smaller size of the piriform aperture limiting trans-nasal access. Our project aimed to review all patients undergoing endoscopic endonasal management of skull base encephaloceles at our tertiary paediatric centre and assess the methods of skull base repair and outcomes relative to patient age.

Methods: Retrospective case-series analysis of all patients undergoing endoscopic endonasal management of congenital skull base encephaloceles between 2017 – 2025. Electronic patient records were used to collect data relating to the location of the skull base defect, method of skull base repair, use of lumbar drain intra-operatively, and post-operative complications.

Results: There were 15 patients in our case-series with a mean age of 6.8 years (SD 5.2) at the time of surgery, with four patients ≤2 years. Average duration of follow-up was 487 days. A multi-layer repair was performed in 87% of patients, including 75% of the patients ≤2 years. There was one postoperative complication of CSF leak, which was related to prolapse of the Medpor implant and required revision surgery.

Conclusions: Our case series demonstrates that endoscopic endonasal management of skull base encephaloceles with a multi-layer skull base repair can be performed successfully in paediatric patients of all ages.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3937

Efficacy of Topical Azelastine and Fluticasone Dipropionate Combination in Children With Adenoid Hypertrophy

Konstantina Chrysouli[1], **Maria Korodima**[2], Georgios Grivas[5]

[1]ENT Department, Penteli Children's Hospital, Athens, Greece, [2]ENT department of "Pammakaristos" hospital, Athens, Greece, [3]PENTELI CHILDREN'S HOSPITAL, ATHENS, GREECE, [4]ENT department of Penteli Children's Hospital, Athens, Greece, [5]ENT Department, Pammakaristos Hospital, Athens, Greece

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Adenoid hypertrophy (AH) is one of the common childhood conditions. In recent years, intranasal sprays have been reported in uncomplicated cases in order to replace surgery. We aim to evaluate the effectiveness of a new combination of azelastine - fluticasone (AZE-FLU) (137mcg azelastine and 50mcg fluticasone) nasal spray in children with uncomplicated AH.

Case study: Sixty-five children diagnosed with AH were included in the study. The mean age of the children was 7.42 ± 2.26 (4-13 years). The cohort consisted of 29 males and 36 females. All children were evaluated clinically and endoscopically. AZE-FLU nasal spray was applied twice a day for three months. Adenoid/choana ratio and symptom scores were evaluated before treatment and at the end of the 12th week.

Results: At the end of 24 weeks of AZE-FLU application, there was a statistically significant decrease in both adenoid/choana ratio and symptom scores. While the initial adenoid/choana (A/C) score was 3.57 ± 0.58, it decreased to 1.74 ± 0.61 following treatment. A decrease in total symptom scores was also observed. The total symptom score average was 15.63 ± 1.28 before treatment, while it was 2.31 ± 1.4 after the treatment with the difference being statistically significant (P <0.01).

Conclusions: This study provides an effective alternative to the surgical approach in children with uncomplicated adenoid hypertrophy. Using this protocol, 96% of patients were removed from the surgery list.



3971

"Cystic fibrosis- Experience from Tertiary Cystic Fibrosis Referral Center"

Tamara Tačigin[1], Gorazd Poje[2]

[1]Department of Otorhinolaryngology, General Hospital Pula, Croatia, *[2]Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital Centre Zagreb, University of Zagreb, School of Medicine, Croatia*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Cystic fibrosis (CF) is a complex, multisystem genetic disorder requiring specialized multidisciplinary care. Advances in diagnosis, treatment and multidisciplinary care have significantly improved life expectancy and quality of life for CF patients. Although CFTR modulators have led to a reduction in sinus disease, rhinologists are still involved in the care of almost all CF patients. At the tertiary cystic fibrosis referral center at University Hospital Centre Zagreb 142 CF patients are under continuous rhinological surveillance. Our experiences and current controversies in the treatment of patients with CF in the era of CFTR modulator therapy will be presented.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3990

Craniopharyngioma in a Pediatric Patient with Growth Delay

César Luis González Cuello[1], Juan Aguilar Cantador[1], Roman Carlos Zamora[1], Virginia Garcia Garcia[1], Ana Jimeno Picazo[1]
[1]*Hospital Universitario Reina Sofía de Córdoba*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Growth disorders in pediatric patients can be associated with various endocrine and structural causes. Among them, pituitary abnormalities, such as tumors in the sellar region, can lead to symptoms secondary to hormonal dysfunction or mass effect. Craniopharyngioma is an epithelial tumor of embryonic origin that, despite being benign, can cause severe symptoms due to its location and expansive behavior. We present the case of a pediatric patient with symptoms suggestive of pituitary dysfunction, whose definitive diagnosis was craniopharyngioma.

Case Study: A 12-year-old female patient presented with stagnation in growth velocity over the past year and intermittent headaches. Hormonal tests revealed an alteration in growth hormone (GH) production. Magnetic resonance imaging (MRI) showed a pituitary hemorrhage associated with a pituitary mass, and computed tomography (CT) revealed calcifications within the mass, leading to the indication of transsphenoidal surgery for treatment.

Results: A transsphenoidal pituitary surgery was performed, including cyst drainage, mass excision(1), and closure with a free middle turbinate flap. Histopathological analysis confirmed the presence of a craniopharyngioma. Postoperatively, the patient did not present with hormonal deficiencies except for GH deficiency, for which hormone therapy was initiated.

Conclusion: Surgical treatment in children depends on the extent of the tumor. Transsphenoidal surgery is the technique of choice as it is less invasive. In pediatric patients, given the smaller working space, resection of the middle turbinate or ethmoidectomy may be necessary. However, for extensive lesions, a transcranial approach may be required.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4075

A Case of Unilateral Choanal Atresia Successfully Treated with Endoscopic Surgery Using Osteotomy and a Nasal Mucosal Flaps

Rena Kobayashi[1], Yu Hosokawa[1], Masafumi Sawada[1], Tetsuo Ikezono[1]
[1]*Saitama Medical University Hospital*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Choanal atresia can be classified as bilateral or unilateral, and each type can be further categorized as bony and membranous. While bilateral cases require treatment in the neonatal period, unilateral cases are typically addressed during adolescence when nasal cavity growth is more advanced. Postoperative re-occlusion remains a concern, and although stent placement and mitomycin C application have been reported as preventive measures, their low level of evidence and associated patient burden pose challenges. Here, we report a case successfully treated with endoscopic surgery alone, without the need for additional interventions such as stenting. The patient was an 18-year-old female who had been unable to breathe through her right nostril since birth and was diagnosed with right choanal atresia in childhood. She was referred to our hospital for evaluation and surgical treatment. Both nasal cavities were narrow, and the right posterior choana was completely occluded, preventing visualization of the nasopharynx. Computed tomography (CT) confirmed right-sided bony choanal atresia. The surgical approach involved accessing the atretic site via the nasal septum. The mucosa overlying the vomer bone and the occluded posterior choana was carefully elevated, and the atretic bony structure was drilled open. The defect was then covered with mucosal flaps from the nasal septum and nasal cavity floor, effectively reconstructing the neochoana. No stents were placed, and routine postoperative secretion clearance was performed. At the two-year follow-up, no evidence of re-occlusion was observed, indicating a successful and sustained surgical outcome.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4146

Study of cellular distribution and proliferation, and glycosaminoglycan synthesis in nasal septal cartilage

Wilma Anselmo_lima[1], Rodolfo Jorge[1], Edwin Tamashiro[1], Francisco Rocha[2], Guilherme Silva[2], Marco Silveira[2], Fábio Távora[2], Igor Nogueira[2], Fabiana Valera[1]

[1]Faculdade de Medicina de Ribeirão Preto – USP, *[2]Universidade Federal do Ceará*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: This study addresses the limited knowledge regarding the histology, biology, and development of the nasal septum, particularly in children.

Objectives: to describe, via histopathological analysis, the cellular distribution and proliferation, and the production of sulfated glycosaminoglycans (GAGs) in whole nasal septal cartilage samples from stillbirths to 21-year-old adults obtained via autopsy.

Materials and Methods: This study analyzed whole nasal septal cartilage from 23 individuals obtained via autopsy. Cartilage was removed via an internal nasal approach, fixed in 10% buffered formalin, and processed for paraffin embedding. 3µm sections were stained with hematoxylin-eosin (HE) and Safranina O, and digitized. Using QuPath software, cellular density and proliferation were quantified, and GAGs production was determined using ImageJ software across nine septal cartilage regions. Statistical analysis compared age groups: 0-2 years, 2-10 years, pubertal, and post-pubertal.

Results: Analysis of septal cartilage from stillbirths to 21 years old revealed distinct patterns in cell density, isogenous groups, and proteoglycan content. Cell density was highest in children aged 0-2 years, particularly in the anterior and middle regions, decreasing significantly after 2 years and at puberty. Isogenous group density, indicative of proliferation, increased in the 2-10 year and pubertal groups, decreasing in the post-pubertal group. Proteoglycan concentration, measured by Safranin O staining, was highest in 0-2-year-olds, significantly decreasing after 2 years and at puberty, then progressively increasing in the post-pubertal phase.

Conclusion: This study reported a strong correlation between age, cell density, proliferation, and extracellular matrix production in septal cartilage, indicating significant structural and functional changes during development.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4321

Pott's Puffy Tumor in young-age patients

Konstantina Chrysouli[1], Georgios Kokolakis[1], Anastasia Gounari[1]
[1]*ENT Department, Penteli Children's Hospital*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Pott's Puffy Tumor (PPT) in young-age patients is a rare clinical entity characterized by osteomyelitis of the frontal bone with a subperiosteal abscess collection. This study aims to present the largest, most up-to-date systematic review of clinical findings, diagnostic procedures and treatment approaches for managing PPT in children and adolescents.

Material and Method: A systematic review of PubMed, Scopus, Prisma and Web of Science databases until 2024 was performed. The study included 185 patients from 109 articles.

Results: PPT commonly derives from untreated rhinosinusitis, especially, acute pansinusitis, frontal acute rhinosinusitis and chronic rhinosinusitis, and direct head trauma. Infections typically involve a polymicrobial anaerobe-predominant microbiome. Computed tomography and magnetic resonance imaging are routinely used for presurgical assessment and posttreatment surveillance. Intracranial complications were significantly associated with the type of surgical treatment.

Conclusion: PPT is a significant and morbid disease often underestimated and misdiagnosed due to its variable clinical presentation. Management includes both antimicrobial therapy and surgical intervention, emphasizing the importance of an interdisciplinary approach.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4322

Endoscopic endonasal CSF rhinorrhea repair in children: A systematic review of the literature

Konstantina Chrysouli[1], Anastasia Gounari[1], Petros Vrettakos[1]
[1]*ENT Department, Penteli Children's Hospital*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: Cerebrospinal fluid (CSF) rhinorrhea in children is relatively uncommon; it remains still a challenging problem in diagnosis and management. Posttraumatic leaks frequently present by intermittent rhinorrhea or by recurrent attacks of meningitis, which can be the only presenting symptom. This meta-analysis looks at the success rates of CSF leak cessation following endoscopic repair in children.

Material and method: A computerized search of MEDLINE, EMBASE and the Cochrane library from 1990 to 2024 on the subject of CSF leak repair in children using endoscopic technique was performed. Preoperative radiological evaluation included both multidetector computed tomography (MDCT) with ultra-thin 1mm cuts, and magnetic resonance imaging (MRI) high resolution coronal T2-weighted sequence. Postoperative follow-up was done clinically by regular endoscopic examinations and radiologically by MRI assessment using the same preoperative protocol.

Results: A total of 15 studies met inclusion criteria. Endoscopic repair of CSF rhinorrhea in children shows a success rate of 94% in the first attempt after a mean follow-up duration of 29.4 ± 14.4 months (range 12-52 months).

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4422

Nasal Obstruction and Freedom to breathe

Dilyana Vicheva[1], Dimitar Pazardzhikliev[1], Valery Stavrev[2]

[1]Department of Otorhinolaryngology, Medical University of Plovdiv, Bulgaria, *[2]Medical Student*

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Nasal obstruction is a very frequent symptom in children and a frequent cause for ENT consultation. Adaptive growth as a compensatory role of naso-maxillo-mandibular growth differentials in children. Some genetic reasons are important. When does nasal obstruction play a role and what is quality of life in children? The history of parents, nasal clinical examinations, the causes of nasal obstruction – congenital, inflammatory, traumatic, granulomatous, neoplastic and others. The pediatric rhinologist has to test the nasal patency with objective methods (acoustic rhinometry, rhinomanometry, PINF, computational dynamics, allergy testing in all aspects, imaging) and OSAS in children with PSG. The ENT doctor has to measure also some maxilla-facial deformities and to do a consultation with orthodonts. Quality of life in children with freedom to breathe is very important for their healthy start in their life and for their normal physiological development. The best way is when we are measuring objective their daytime symptoms.



4514

Advanced nasopharyngeal cancer in childhood: presentation of two cases and literature review

Eleftheria Miliori[1], Stavroula-Alexandra Faliagka[2], Evgenia Magkou[3], Ifigeneia Karakasidi[2], Paraskevi Veneti[2], Katherine Ploumidou[3], Ahmad Alghoj[2], Valentinos Sofokleous[4]

[1]ENT resident, First University Department of Otorhinolaryngology, University of Athens, Hippocration Hospital, Athens, Greece, [2]ENT resident, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece, [3]Consultant, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece, [4]Director, Department of Pediatric Otorhinolaryngology Athens Children's Hospital "P. & A. Kyriakou", Athens, Greece

Poster Session | Paediatric rhinology| 22 June – 25 June, 2025, All day

Introduction: We present two cases of nasopharyngeal cancer in pediatric patients to highlight the differences in presentation, treatment, and prognosis compared to adults.

Material and Methods: We examined the institutional medical records of patients diagnosed with nasopharyngeal cancer over the last four years.

Results: A 12-year-old girl was admitted with nasal obstruction that had persisted for two months, difficulty swallowing for one month, and severe headaches accompanied by right-sided ear pain for the past ten days. Clinical examination revealed a mass in the nasopharynx extending into the oropharynx and nasal cavities, along with bilateral cervical lymphadenopathy in the anterior and posterior triangles of the neck. The second case involved a 12-year-old male presenting with persistent bilateral cervical lymphadenopathy in the posterior cervical triangles for one month. Examination revealed a soft tissue mass in the nasopharynx. Both cases were diagnosed via surgical biopsy and tested positive for QEBV (RT-PCR), classified as undifferentiated non-keratinizing carcinoma (WHO IIb), staged T2N2M0 and T3N2M0. Both patients received induction chemotherapy with cisplatin and 5-fluorouracil, followed by concurrent chemoradiotherapy. The first patient also underwent six months of maintenance therapy with IFN-β. Currently, both patients show no signs of recurrence.

Conclusions: The rarity of the disease in children can delay diagnosis, often resulting in more advanced stages at presentation. Treatment generally involves induction chemotherapy followed by concurrent chemoradiotherapy, with adjuvant IFN-β considered in select cases. Despite the advanced stages at diagnosis, pediatric patients typically have a better prognosis than adults, with a five-year survival rate exceeding 80%.



4294

Nasal hypersecretion or CSF leak after endoscopic pituitary surgery in acromegaly patients

Katarina Duric Vukovic[1], Marcel Marjanovic Kavanagh[1], Vjerislav Peterkovic[1], Marija Pastorcic Grgic[1]
[1]*University Hospital Centre Zagreb*

Poster Session | Pituitary Surgery | 22 June – 25 June, 2025, All day

Introduction: CSF leak following endoscopic pituitary surgery is a major complication and early recognition is vital. Excessive watery nasal discharge is the first sign of a CSF leak prompting an urgent and invasive work-up. In acromegaly, somatotropin overproduction affects many tissues, causing hypertrophy and soft tissue edema. Inferior turbinate changes are possible causes of nasal hypersecretion. We aimed to assess the incidence of clinical suspicion of CSF leak and CSF leaks after endoscopic pituitary surgery.

Materials & methods: The retrospective analysis included all patients who underwent endoscopic surgery for pituitary adenoma from 2020 to 2023. Clinical suspicion of CSF leak was addressed by nasal endoscopy, beta-transferrin analysis in nasal discharge, lumbar puncture, intrathecal fluorescein application, and head CT scan.

Results: A total of 192 patients were analyzed. Clinical suspicion of CSF leak, followed by intensive workup, was raised in 31 (16,1%) patients. CSF leak was positive and repaired in 11 (5,7%) patients. There was no difference in the incidence of CSF leak in different types of pituitary adenoma. The group of 20 patients with acromegaly was compared to other patients. Suspicion of CSF leak was observed in half of the patients with acromegaly, compared to 13,9% in another group, the observed difference was statistically significant (p=0,00014).

Conclusion: In acromegaly patients, the risk for postoperative CSF leak is comparable to other pituitary adenomas, although suspicion of CSF leak is raised more often due to difficulty distinguishing CSF leak from nasal hypersecretion. A more conservative approach should be implemented in acromegaly patients when a CSF leak is suspected.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Rhinology – miscellaneous

3675

Dentigerous Cyst in the Maxillary Sinus: A Case Report and Review of Literature

Xin Lei Goh[1], Jian Li Tan[2]
[1]Tan Tock Seng Hospital, *[2]Tan Tock Seng Hospital*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction & Background: Dentigerous cysts (DC) are the second most common developmental odontogenic cysts (OC) that arise from the crown of embedded or unerupted teeth. We describe the uncommon presentation of a DC extending into the maxillary sinus, followed by successful enucleation using a combined endonasal and intraoral approach (with radiological and intraoperative images), along with a review of the literature.

Case Study: A 54-year-old Indian female presented to our ENT department with blood-stained sputum persisting for 9 months, without any nasal, facial, or dental symptoms. Nasoendoscopic examination revealed blood-stained mucus from the left middle meatus. Cone-beam CT paranasal sinuses showed a well-circumscribed hypodense lesion within the left maxillary sinus, closely associated with an unerupted left maxillary third molar.

Results: Intraoperatively, the left maxillary sinus was accessed via endoscopic prelacrimal approach, revealing a large intra-maxillary sinus component of the DC with an unerupted third maxillary molar at the cyst floor. The cyst wall was removed, and the bony remnants were drilled down to the sinus floor. The impacted tooth was extracted, and the mucosal incision closed primarily via intraoral approach by oral maxillofacial surgery. Histopathological analysis confirmed the diagnosis of a DC.At the 1-month follow-up, there was no oroantral fistula, and patient only had numbness in the left upper teeth which was resolving.

Conclusions: OC have traditionally been treated using external approaches; however, advances in endoscopic surgery have changed this paradigm. Our case supports the current literature, demonstrating the feasibility and efficacy of endoscopic approach in managing OC without significant morbidity, and the advantage of ongoing endoscopic surveillance.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3678

Nasal Diphtheria in the Post-Vaccination Era: A Case Report and Review of Literature

Justin Chee Rui Tzen[1], Chee Justin[1], Caroline Lee Chun Yun[1]
[1]*Khoo Teck Puat Hospital, Singapore*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background & Aim: Corynebacterium diphtheriae are known to cause respiratory or cutaneous infections with the formation of pseudo-membranes. Diphtheria limited to the anterior nose is rare, especially in the post-vaccination era. Using endoscopic photographs, we describe a case including the unique presentation, treatment and clinical resolution of a patient with nasal diphtheria in a developed country and a review of the literature.

Case Study: A 74-year-old gentleman with recent travel to Vietnam and Australia presented with two weeks of blocked nose. Nasoendoscopy showed greenish yellow crusting and pus over bilateral middle turbinates and the post-nasal space. No pseudo-membranes were seen in the rest of the upper airway. Swab cultures grew multiple bacterial organisms including Corynebacterium diphtheriae. The patient's diphtheria vaccination status was unknown, and he had no other systemic manifestations of diphtheria.

Results: Crusting and nasal symptoms were persistent despite a one-week course of ciprofloxacin; hence an additional two weeks of ciprofloxacin was given together with regular nasal toileting and nasal douches. Repeat cultures did not grow Corynebacterium diphtheriae. Computed tomography scans showed sporadic mucosal thickening in the paranasal sinuses with patent drainage pathways. Turbinate crusting had largely resolved a month later during follow-up.

Conclusion: Diphtheria infections are increasingly uncommon due to mandatory vaccinations in Singapore. However, vaccinated patients may serve as asymptomatic carriers that can infect non-vaccinated or immunocompromised individuals. Nasal diphtheria usually has an indolent course with mild symptoms. Treatment primarily includes culture-directed antibiotics and prognosis is favorable. It is important to recognize nasal diphtheria early to institute appropriate management which has public health implications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3683

Local anaesthetic eustachian tube balloon dilatation: a prospective case-series analysis of 31 patients

Edward Balai[1], Elizabeth Bullock[1], Mark Ferguson[1]

[1]Imperial College Healthcare NHS Trust, [2]Great Ormond Street Hospital

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Eustachian tube balloon dilatation (ETBD) performed for obstructive eustachian tube dysfunction (ETD) can lead to improvements in symptoms and a reduction in ETDQ-7 scores. While historically performed under general anaesthetic, studies have demonstrated that ETBD can be performed under local anaesthetic with equivalent efficacy. We describe our local anaesthetic protocol used to perform ETBD in the outpatient setting and report outcomes from our case-series.

Materials & Methods: Prospective analysis of all patients undergoing ETBD between October 2019 and July 2024. Data was collected on demographics, indications, pre-operative examination, and investigations. ETDQ-7 questionnaires were completed pre-operatively and at each follow up appointment.

Results: Thirty-one patients underwent 40 dilatations (31 primary, 9 revision) under local anaesthetic. All were well tolerated, with no adverse events. There was a statistically significant decrease in the average total ETDQ-7 score of -6.75 points (p=0.0029) at short-term follow-up and of -7.58 points (p=0.034) at long-term follow up following primary ETBD. Follow revision ETBD procedures, there was a decrease in the average total ETD-7 score of -3.50 (SD 5.43) but this did not reach statistical significance. Three patients underwent ETBD for baro-challenge-induced ETD and all reported subjective improvement with reduced baro-challenge-induced symptoms when flying or scuba diving. No adverse events were reported and all patients tolerated the procedure at the manufacturer-recommended insufflation pressure and duration. Performing ETBD under local anaesthetic in the outpatient setting is estimated to lead to potential savings of £367/patient.

Conclusions: Our study provides further evidence that ETBD for obstructive ETD can improve ETDQ-7 scores and can be performed successfully under local anaesthetic in the outpatient setting.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3760

A Qualitative Study of Surgical Hesitancy Among Chinese Americans Compared to Hispanic Americans with Chronic Rhinosinusitis

Kevin Hur[1], Yue Sun[1], Claire Olivas[1], Shinyi Wu[1]
[1]*University of Southern California*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Little is known about the decision-making processes and concerns for endoscopic sinus surgery (ESS) among minority populations, particularly Chinese and Hispanic Americans. This study aimed to explore factors affecting surgical decision-making in Chinese and Hispanic Americans with chronic rhinosinusitis (CRS) to provide more effective and culturally informed care.

Materials and Methods: This qualitative study recruited Chinese and Hispanic Americans diagnosed with medically refractory CRS from metropolitan clinical settings. Semi-structured interviews were conducted in the participant's preferred language. The interviews explored participants' CRS symptoms, help-seeking behaviors, and decision-making processes and concerns regarding ESS. All interviews were transcribed and analyzed using thematic analysis with Dedoose software.

Results: Of the 35 participants, 51.4% were female, the average duration of U.S. residency was 27.38 years, and 64.1% held a college degree. Chinese Americans participants' decision-making processes regarding ESS manifested three distinct patterns: optimistic, hesitant, and resistant. Predominant concerns encompassed postsurgical recovery, potential complications, and apprehensions about future regret. Conversely, Hispanic American participants demonstrated strong motivation to alleviate symptoms and trust in their ENT providers. These attitudes were influenced by cultural values such as respect for authority, family prioritization, and reliance on religion.

Conclusion: This qualitative study reveals distinct differences in surgical decision-making between Chinese and Hispanic American patients. Chinese Americans exhibited greater risk aversion and concerns about surgery, while Hispanic Americans were less risk-averse and more focused on symptom relief. Understanding these differences can guide tailored, culturally sensitive approaches to patient care, improving decision-making support and health outcomes for these populations.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3799

Quality of Life Among Patients with Nasal Obstruction- Does Etiology Matter?

Lev Chvatinski[1], Lirit Levh[2], Amir Levi[2], Amir Oved[2], Noam Koch[2], Aiman El Mograbi[2], Nimrod Amitai[2], Ethan Soudry[2]

[1]Technion Israel Institute of Technology, Technion City, Haifa, Israel , [2]Sackler school of medicine, Tel Aviv university, Tel Aviv, Israel

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Nasal obstruction is one of the most frequent otolaryngological complaints. The most common causes for nasal obstruction include allergic and non-allergic rhinitis, hypertrophy of the inferior turbinates (HIT) and deviation of the nasal septum (DNS). The literature is scarce regarding the impact of nasal obstruction on quality of life (QoL) and its association with the etiology of the obstruction.

Methods: Retrospective study of patients with nasal obstruction who completed the 22-item Sino-nasal Outcome Test questionnaire (SNOT-22), Nasal Obstruction Symptom Evaluation (NOSE) Scale and the Visual analog scale (VAS). Patients were stratified to three groups- rhinitis, anatomical obstruction or both.

Results: A total of 170 patients were included, 109 of them were males (62%) and 68 females (38%), with a mean age of 38.4. Average SNOT 22, VAS and NOSE scores were 38 ,61 and 6.5 accordingly and there was no significant difference between the groups. Furthermore, QoL scores were not statistically significantly different between subgroups of anatomical obstruction- DNS, HIT, or both. Analysis of SNOT-22 subdomain shows that rhinological symptoms had the worst scores. Patients with rhinitis had significantly higher rhinologic and ear/facial symptoms scores than patients with anatomical obstruction (p=0.04 and p=0.005, respectively). Finally, SNOT-22, NOSE and VAS scores for entire cohort were highly correlated.

Conclusions: Nasal obstruction is associated with significant impairment of quality of life affecting both Rhinological and non-Rhinological aspects of quality of life, regardless of obstruction etiology. Further studies are needed on larger groups of patients including analysis of expected improvement following surgical treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3871

The effect of nasal airway obstruction on pulmonary function: a systematic review and meta-analysis

Gabriel Osie[1], Raymond Sacks[3], Richard Harvey[4], Janet Rimmer[5], Rhea Darbari Kaul[1], Blake Lindsay[1], Christine Choy[1], Larry Kalish[7], Raewyn Campbell[9]

[1]1. Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia, [2]1. Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia , [3]5. Faculty of Medicine, University of Sydney, Australia, [4]1. Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia 6. Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia, [5]1. Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia 2. Woolcock Institute, University of Sydney, Australia 3. Faculty of Medicine, Notre Dame University, Sydney, Australia, [6]2. Woolcock Institute, University of Sydney, Australia 3. Faculty of Medicine, Notre Dame University, Sydney, Australia, [7]4. Department of Otolaryngology, Head and Neck Surgery, Concord General Hospital, University of Sydney, Australia, [8]Rhinology and Skull Base Research Group, Applied Medical Research Centre, University of New South Wales, Sydney, Australia, Faculty of Medicine, University of Sydney, Australia, [9]6. Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia 7. Department of Otolaryngology Head and Neck Surgery, Royal Prince Alfred Hospital, Sydney, Australia

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Patients often report the experienced benefit of nasal breathing on their overall respiratory function. However, the nasal airway is one of two conduits to the lungs and humans fractionally switch to greater mouth breathing as exertional exercise increases. The impact of nasal obstruction on overall respiratory function was sought from published research.

Methods: A systematic review was performed for any original research assessing pulmonary function in patients with nasal obstruction. Only controlled studies with a normal nasal population were included. The primary outcomes were percent-predicted forced vital capacity (FVC), 1-second forced expiratory volume (FEV1), FEV1/FVC, tidal volume (mL), forced mid-expiratory flow (FEF25-75%), and peak expiratory flow rate (L/min) (PEFR). MEDLINE, EMBASE, Web of Science, Scopus, and CINAHL were searched from inception to July 9th 2023. A randomised effects model was used to predict pooled mean differences in patient groups with 95% confidence intervals.

Results: A total of 8504 articles were identified with 10 included studies, comprising a total of 1331 patients. There was significant deterioration of respiratory function in patients with nasal obstruction. The pooled mean difference between nasally obstructed patients and normal nasal functioning patients for FVC was -5.58%[-10.96, -0.20], FEV1 -9.41%[-13.36, -5.45], FEV1/FVC -3.42%[-7.83, 0.98], for tidal volume was -0.62mL[-41.95, 40.72], for FEF25-75% was -4.97%[-7.15, -2.79], and for PEFR was -36.58L/min[-115.95, 42.80].

Conclusion: Significantly lower mean differences of FVC, FEV1, and FEF25-75% for patients with nasal obstruction compared to normal nasal functioning patients suggests that breathing through the nose may be physiologically advantageous compared to mouth breathing.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3925

Antibiotic prophylaxis prescription habits among Belgian ENTs for patients undergoing rhinologic surgeries

Kylian Ladriere[1], Sophie Krings[1], Julien Degreef[2], Caroline Briquet[3], Daniel Langer[4], Caroline De Toeuf[1], Philippe Rombaux[1], Caroline Huart[1], Valerie Hox[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery, Cliniques Universitaires St-Luc, Brussels, Belgium, *[2]Department of Internal Medicine and Infectious Diseases, Cliniques Universitaires St-Luc, Brussels, Belgium*, *[3]Department of Pharmacy, Cliniques Universitaires St-Luc, Brussels, Belgium*, *[4]Department of Rehabilitation Sciences, KULeuven, Leuven, Belgium*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background & Aim: Evidence regarding antibiotic prophylaxis for patients undergoing rhinologic surgeries is limited and ENT surgeons show a high variability in prescription habits. In this study, we analysed the current antibiotic prescribing practice among Belgian ENT specialists.

Methods: An anonymized survey was sent out to 838 Belgian ENTs to collect information about their habits regarding prophylactic antibiotic use in rhinologic surgeries. Prescription habits and their determinants were studied.

Results: In total, 126 ENTs completed our survey (15.3%). Our analysis revealed a tendency towards overprescription of prophylactic antibiotics, with significant inconsistencies observed depending on the geographic region, with French-speaking surgeons are more likely to prescribe postoperative antibiotics for septoplasty (p=0.01) and FESS (p=0.008). Dutch-speaking surgeons demonstrated a higher tendency to prescribe intra-operative antibiotics in open rhinoplasty (p=0.0017) and endoscopic anterior skull base surgeries (ASBS) (p<0.001). Also academic ENT surgeons prescribed significantly less intra-operative antibiotics for septoplasty (p=0.04) and significantly less postoperative antibiotics for septoplasty, closed and open rhinoplasties (respectively p=0.002, p=0.027 and p=0.016) compared to private practice ENTs. The use of packing was significantly associated with intra-operative antibiotics prescription for FESS and endoscopic ASBS (respectively p=0.031 and p=0.007) and with postoperative antibiotics for FESS (p=0.038). The main reason cited for antibiotic prescription was the fear of postoperative infection (70.6%). 40.5% of the respondents mentioned being aware of current guidelines.

Conclusion: This study demonstrates the significant variation in intra- and postoperative antibiotic use among surgeons performing rhinologic surgery, with a tendency to overprescribing when comparing to general guidelines.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3939

Frontal osteoplastic flap with obliteration in the era of endoscopic endonasal approach – a case report

Kaamil Gani[1], André Pereira[1], Catarina Morais[1], Beatriz Rodrigues[1], Rui Cabral[1], Sara Sequeira[2], Luís Marques[2], Luís Roque Reis[1], Pedro Escada[1]

[1]Department of Otorhinolaryngology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, *[2]Department of Neurosurgery, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Technologic advances in imaging and instrumentation resulted in a dominance of endoscopic endonasal surgery in frontal sinus surgery. In complicated cases, however, open approaches remain a useful treatment option. The frontal osteoplastic flap with obliteration of the frontal sinus may be suitable in the presence of certain anatomical and disease factors. The aim of this work is to report a case of a recurrent mucocele of the frontal sinus approached through an osteoplastic flap with fat obliteration.

Materials & Methods: Literature review and discussion of the case.

Results: 34-year-old male patient, with history of chronic rhinosinusitis without nasal polyps and a lateral frontal sinus mucocele submitted to an endoscopic endonasal surgery which included a Draf 3 approach. Despite the location of the mucocele it was successfully marsupialized. During follow up nasal endoscopy revealed a progressive stenosis of the left frontal recess and patient began complaints of left frontal headaches. Computed tomography (CT) of the paranasal sinuses showed a complete opacification of the left frontal sinus and marked neo-osteogenesis with complete stenosis of the ipsilateral frontal recess. Magnetic resonance was compatible with recurrence of the left frontal sinus mucocele. The patient was submitted to an osteoplastic flap with frontal sinus obliteration with abdominal fat. At months follow-up, patient reported improvement in all his disease-related symptoms.

Conclusions: This case illustrates the importance of external approaches to frontal sinus as a salvage procedure. The lateral location of the mucocele associated with a significant stenosis/neo-osteogenesis of the left frontal recess favored this approach.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3940

Bilateral giant osteoma of the frontal sinuses – case report

Kaamil Gani[1], Catarina Morais[1], Beatriz Rodrigues[1], André Pereira[1], Luís Castelhano[1], Nelson Gilberto[1], Sara Sequeira[2], António Cuco[2], Luís Roque Reis[1], Pedro Escada[1]

[1]Department of Otorhinolaryngology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, *[2]Department of Neurosurgery, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Osteomas are rare benign tumors of osteogenic origin. These tumors are frequently asymptomatic. When they are symptomatic, headache is the most common symptom in patients with frontal osteomas. Although benign, these tumors can lead to intracranial and orbital complications. Symptomatic osteomas or osteomas with complications should be treated surgically. The aim of this work is to report a case of a giant osteoma of the frontal sinus and to demonstrate its surgical management through a combined approach.

Materials & Methods: Case presentation, literature review and discussion of the case.

Results: 59-year-old man, presented to us with frontal headache and pressure of 1 year duration. Physical examination was unremarkable. Computed tomography (CT) of the paranasal sinuses showed an almost complete obliteration of both frontal sinuses by a fibro-osseous mass with approximately 5 cm diameter associated with chronic sinusitis. The patient was submitted to a combined cranial and endonasal approach. A small area of cerebrospinal fluid leak at the posterior table was identified and repaired with synthetic dura. Histopathology revealed an osteoma. Patient's complaints were resolved and at three months follow-up there are no clinical/radiological signs of relapse.

Conclusions: Depending on the location and size of the tumor, osteomas can be managed by an endonasal, external or combined approach. This case illustrates the utility of a combined approach, in which the external approach allows adequate exposure and reduction of the operative time, and the endonasal approach helps to confirm complete removal of the tumor and adequate patency of both frontal recesses.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3941

Cutaneous fistula secondary to recurrent frontal sinus mucocele post craniotomy – case report

Kaamil Gani[1], André Pereira[1], Filipe Correia[2], Luís Castelhano[1], Sara Sequeira[3], Luís Marques[3], Luís Roque Reis[1], Pedro Escada[1]

[1]Department of Otorhinolaryngology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, *[2]ENT department, Hospital CUF Tejo*, *[3]Department of Neurosurgery, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Opening of the frontal sinuses during a craniotomy is a common event. Even with proper reconstruction, development of a frontal sinus mucocele is possible. The aim of the work is to report a case of a recurrent frontal sinus mucocele with cutaneous fistula following craniotomy, including the diagnostic and therapeutic approach.

Materials & Methods: Review of clinical records, literature and intraoperative images.

Results: 58-year-old female patient, with history of a fronto-basal craniotomy for a right fronto-basal fibrous tumor. Three years post-surgery, magnetic resonance revealed an extradural lesion. After re-opening the craniotomy, a mucocele of the frontal sinus was identified, and cranialization of the sinus with anterior base reconstruction with polymethylmethacrylate was performed. Two years later, the patient developed an intense headache and a right pterional fluctuation, with subsequent cutaneous fistula. Imaging exams showed a frontal mucocele with intracranial extension and subcutaneous invasion. The patient was submitted to a combined approach. A Draf IIb, complete cranialization of the frontal sinus and reconstruction of the nasal fossa roof were performed by endonasal approach. The cranial approach included the reopening of craniotomy, removal of the polymethylmethacrylate plate and reconstruction with a titanium plate, free temporal fascia flap and fat graft. At 1 year follow-up there is no clinical or imaging recurrence.

Conclusions: In patients with history of frontal sinus opening and reconstruction, it is important to be aware of the possibility of mucocele development as a complication. The discussion in a multidisciplinary team is often required to optimize surgical planning.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3944

Ectopic sphenoid sinus pituitary adenoma – case report

Kaamil Gani[1], André Pereira[1], Luís Castelhano[1], Pedro Soares[2], Paula Calvo[3], Luís Marques[4], Martinha Chorão[5], Luís Roque Reis[1], Pedro Escada[1]

[1]Department of Otorhinolaryngology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, [2]Department of Neuroradiology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, [3]Department of Endocrinology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, [4]Department of Neurosurgery, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal, [5]Department of Pathology, Unidade local de Saúde de Lisboa Ocidental, Lisboa, Portugal

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Adenomas are the most common pituitary tumors. Rarely they can occur in ectopic sites, being the sphenoid sinus the most common. Ectopic sphenoid sinus pituitary adenoma (ESSPA) originates from embryologic remnants of Rathke's pouch. Treatment includes surgical resection or in some cases medical therapy. The aim of this work is to report a rare case of an ESSPA and to demonstrate the surgical management.

Materials & Methods: Literature review and discussion of the case.

Results: 60-year-old man, presented with headache and tiredness of 2 months duration. Physical examination was unremarkable. Computed tomography of the paranasal sinuses showed an expansive lesion centered to the sphenoid sinus with soft tissue density and regular contours with approximately 30 x 25 x 18 mm. Magnetic resonance confirmed the presence of a sphenoid sinus mass with 24 x 16 x 23mm, enhancement after gadolinium administration, causing bone remodeling, without sellar expression. Hormonal profile revealed elevation of TSH (7.15 mUI/mL), free T4 (26.4 pmol/L), free T3 (7.74 pmol/L) and prolactin (111 ng/mL). The possibility of an ectopic macroadenoma of the sphenoid sinus producing thyrotropin was raised and the patient was submitted to an endoscopic endonasal transsphenoidal approach. Histopathology was consistent with an ectopic pituitary macroadenoma. At three months follow-up there are no clinical/radiological signs of relapse.

Conclusions: ESSPA is a rare entity that should always be considered in differential diagnosis of a sphenoid sinus lesion, mainly in the elderly. The diagnosis and treatment require a high index of suspicion and collaboration with a multidisciplinary team.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3954

Nasal Microbiota in Immune Disorders: Bacterial and Fungal Colonization Patterns and Aspergillus Detection Methods

Kai-Li Liang[1]

[1]Department of Post-Baccalaureate Medicine, College of Medicine, National Chung Hsing University, Taichung, Taiwan

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: The human respiratory tract hosts a complex microbial ecosystem balanced by the immune system. Disruptions to this equilibrium, particularly in immunodeficient or allergic individuals, can lead to alterations in the airway microbiota and an increased risk of opportunistic infections. This study investigated the impact of immune disorders on bacterial and fungal colonization of the nasal cavity and explored detection methods for Aspergillus, the main pathogen of immunodeficient hosts.

Methods: Nasal swabs from healthy volunteers, patients with type 2 allergic airway disease, and immunodeficient patients were analyzed using full-length 16S rRNA-based bacterial and ITS2 fungal microbiome analysis. Aspergillus colonization in immunodeficient individuals was further investigated by galactomannan testing, quantitative PCR, and fungal cultures. The effects of nasal irrigation on fungal colonization were also evaluated.

Results: No significant differences in the overall microbial composition were found among the groups, but distinct features within each group were observed. Immunodeficient patients exhibit significantly higher Aspergillus DNA concentrations and positive culture rates than healthy subjects. Nasal irrigation resulted in a significant decrease in Aspergillus DNA concentration.

Conclusion: This study highlights the complex interplay between the immune system and the airway microbiota. Although microbiome analysis may not be optimal for analyzing upper respiratory tract microbiology in immunomodulated patients, the findings suggest that nasal irrigation could be a potential strategy for reducing fungal colonization in immunocompromised individuals at risk of invasive fungal infections.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3974

Clinical features of chronic fungal rhinosinusitis in geriatric and non-geriatric patients

Eun Jung Lee[1], Hee Sung Chae[1], Minheon Kim[1]
[1]*Yonsei University Wonju College of Medicine*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: The incidence of chronic fungal rhinosinusitis (CFRS) has increased worldwide. Although ageing leads to weakening of the immune system, the CFRS characteristics in geriatric patients are unclear. Therefore, we comparatively analyzed the clinical characteristics of CFRS in geriatric and non-geriatric patients.

Methods: This retrospective analysis compared the demographics, rhinologic symptoms, multiple allergen simultaneous tests, olfactory function tests, paranasal sinus computed tomography findings, and outcomes of 131 patients with CFRS who underwent functional endoscopic sinus surgery and 131 enrolled patients were divided in geriatric (> 65 years) and non-geriatric (≤ 65 years) groups.

Results: Among the geriatric and non-geriatric participants, hypertension and diabetes mellitus were more common in the geriatric group. Normosmia and hyposmia were significantly less prevalent, whereas phantosmia and parosmia were more prevalent in the geriatric group than in the non-geriatric group. Sphenoidal sinus involvement was significantly higher in geriatric patients than in non-geriatric patients.

Conclusions: Based on greater sphenoidal sinus involvement, a deeper anatomical area is more vulnerable to fungal infection in the geriatric group than in the non-geriatric group. Increasing clinicians' awareness of CFRS in geriatric patients with olfactory dysfunction, including phantosmia and parosmia, is important for early intervention.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3982

Nasolabial Cysts: A Case Series and Comparative Review of Surgical Approaches

Bárbara Rodrigues[1], Gonçalo Quadros[1], André Gonçalves[1], Inês Pereira[1], Joana Silva[1], António Alves[1], Miguel Silva[2]

[1]Unidade Local de Saúde Viseu Dão-Lafões, [2]Unidade Local de Saúde de Viseu Dão-Lafões

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: The nasolabial cyst (NLC) is a rare, benign, non-odontogenic lesion in the alar nasal region, representing 0.7% of all maxillofacial cysts. Conventional treatment involves surgical excision via a transoral sublabial approach, though endoscopic transnasal marsupialization has emerged as an alternative. This study aims to analyze a series of four NLC cases and review the literature on different surgical approaches for their treatment.

Material and Methods: A retrospective review of four patients' medical records was conducted, including demographic data, clinical findings, imaging studies, surgical approaches, histological analyses, and postoperative outcomes. A literature search on nasolabial, nasoalveolar, and Klestadt cysts was performed using the PubMed/MEDLINE database.

Results: Female patients were most affected (75%), with an average age of 59 years. The cysts were evenly distributed between the left and right sides. Clinically, all cases presented as a swelling in the nasolabial region, sometimes associated with nasal obstruction, recurrent infections, and epiphora. Computed tomography was the preferred imaging modality. Surgical excision via transoral sublabial approach was performed in all patients, with no recurrence during the mean follow-up period of 23 months.

Conclusions: NLCs, though rare, can have significant aesthetic and functional impacts. In this study, excision via the transoral sublabial approach was effective, with no major complications or recurrences. According to the literature review, endoscopic transnasal marsupialization is a promising alternative with similar efficacy, shorter operative time, and potentially fewer postoperative complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4012

User Evaluation of a Single-Use Flexible Rhinolaryngoscope for Flexible Nasal Endoscopy Procedures

Meeta Patel[1], Emilie Dehlholm-Lambertsen[1]
[1]*Ambu Limited, Dept. of Marketing – Health Economic Market Access*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Flexible nasal endoscopy is essential for diagnosing a wide range of acute and chronic diseases. Reusable rhinolaryngoscopes require extensive cleaning and frequent, costly repairs, impacting availability. This study assessed the performance and usability of the single-use Ambu aScope 4 RhinoLaryngo Slim (AS4RL), in clinical settings.

Methods: Following flexible ear, nose, and throat (ENT) endoscopy procedures, ENT surgeons completed an evaluation survey. The study, conducted from September 2022 to March 2023, used a five-point rating scale to assess the performance of AS4RL. The survey evaluated image quality, navigation, and overall functionality, as well as whether a laryngoscope change was required during procedures and whether AS4RL could replace their current laryngoscope.

Results: Sixty flexible ENT endoscopy procedures were performed across hospitals in the UK and Ireland. Image quality was rated 'good' or 'very good' in 68% of cases, navigation 'easy' or 'very easy' in 72%, and overall quality 'good' or 'very good' in 67%. Ninety-eight percent of users did not need to switch to their usual laryngoscope during the procedure and a majority of users (78%) found AS4RL could replace their current laryngoscope.

Conclusion: AS4RL demonstrated high clinical performance ratings in image quality, navigation, and functionality. The majority of ENT surgeons did not need to switch laryngoscope during the procedure, and most believed AS4RL could replace their current laryngoscope. These findings suggest aScope 4 RhinoLaryngo Slim as a potential single-use alternative, addressing issues of availability and post-procedure processing. Comparative studies with larger sample sizes and patient-specific outcomes are warranted.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4053

Empowering Allied Healthcare Professionals in Nasal Endoscopy: A Structured Framework to Enhance Rhinology Service Delivery

Najma Chowdhury[1], Shahzada Ahmed Ahmed[1]

[1]*University Hospitals Birmingham - Skull Base Unit, Queen Elizabeth Hospital, Mindelsohn Way, Birmingham, B15 2TH.*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: The rising demand for rhinology services has increased the need for efficient resource allocation within ENT clinics. Nasal endoscopy remains a pivotal diagnostic tool in rhinology, and empowering Allied Healthcare Professionals (AHPs) to perform these procedures can enhance service capacity and patient care. This study evaluates the implementation of a structured nasal endoscopy training framework designed to upskill AHPs and improve rhinology service delivery.

Materials & Methods: A comprehensive training program was developed, incorporating theoretical instruction, supervised practical sessions, and formal competency assessments. AHPs were required to observe a minimum of 10 flexible and 10 rigid nasal endoscopies, followed by supervised practice of the same number of procedures before competency sign-off. Training covered patient preparation, consent, procedural technique, equipment handling, and complication management. Competency was assessed via direct observation and reflective practice.

Results: The successful implementation of this framework led to the safe transfer of a significant proportion of follow-up surveillance patients from consultant-led clinics into AHP-led nasal endoscopy clinics. This shift allowed consultants to allocate more time for new patient consultations and complex case management, improving overall service efficiency. The model demonstrated increased clinic throughput without compromising patient safety or care quality, with high patient satisfaction reported in AHP-led clinics.

Conclusions: A structured nasal endoscopy framework effectively upskills AHPs, enabling them to manage follow-up and surveillance cases. This has optimized resource utilization in rhinology clinics, allowing consultants to focus on new and complex patients, thereby enhancing overall service delivery and patient care.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4056

Polydimethylsiloxane Injection for patulous Eustachian tube dysfunction: A Case Report

Eduardo Franco[1], Beatriz Castanheira[1], José Pais[1], Hugo Estibeiro[1], Maria Caçador[1], Diogo Oliveira e Carmo[1]
[1]*ENT department, Hospital CUF Tejo*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Patulous Eustachian tube (pET) dysfunction is characterized by aural fullness and autophony. This condition can impose a significant psychological burden, leading to reduced quality of life. After conservative treatment fails multiple surgical options have been described with inconsistent results. Treatment should be individualized and augmentation of the Eustachian tube's nasopharyngeal orifice is a viable option.

Materials & Methods: A case report of a patient diagnosed with patulous Eustachian tube dysfunction and literature review of different surgical options.

Results: A 29-year-old male presented with a six-year history of autophony and a sensation of tympanic membrane vibration on both sides during respiration. Symptoms improved in the supine position and with nasal congestion. Physiotherapy provided partial relief of autophony but did not alleviate the vibration sensation, particularly during physical exertion or singing. MRI findings were unremarkable. Multiple attempts at tympanostomy tube placement provided no significant improvement in left-sided symptoms. Polydimethylsiloxane injection was performed under general anesthesia.

Conclusions: Patulous Eustachian tube dysfunction remains a challenging condition with a substantial impact on patients quality of life. When conservative management fail, augmentation of the nasopharyngeal orifice of the Eustachian tube with polydimethylsiloxane may be a viable option.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4218

Silent sinus or Imploding antrum syndrome, our experience

Alicia Maria Pérez Orribo[1], Alba aparicio Parrado León[1], Maria Gabriela Muñoz Cordero[1], Beatriz sacramento[1]

[1]SEORL. Servicio Canario de Salud, [2]Hospital Universtario de Canarias. Servicio Canario de Salud

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: The imploding antrum or silent sinus syndrome is a rare and unusual phenomenon. It presents with facial asymmetry due to spontaneous painless enophthalmos and hypoglobus. Most patients present in the third to fifth decades. Patients usually present with progressive painless enophthalmos. There is no history of acute or chronic sinus mucosal disease and prior facial trauma. Physical examination findings may include upper lid retraction, lid lag, malar depression, facial asymmetry, and diplopia. CT scan is the best diagnostic method because it best delineates the osseous and anatomic changes needed for its diagnosis and differentiation from other conditions. The treatment has two objectives - to reestablish maxillary antral ventilation and restore orbital architecture. The former is achieved by endoscopically. Orbital floor repair depends on the degree of enophthalmos and the consequent cosmetic defect.

Material: A descriptive observational retrospective study was conducted. The following were analyzed: patient characteristics, surgical technique used, clinical symptoms and previous nasal surgeries of the patients, as well as post-surgical results. A total of 10 patients diagnosed with silent maxillary sinus between 2018 and 2024 were included. The average age is 41.8 years, being more frequent in women (75%). Eight patients have undergone endoscopic naso-sinusal surgery with wide antrostomy.100% of the patients have shown clinical improvement and no complications.

Conclusion: The “imploding antrum” is a rare and unusual entity characterized by spontaneous painless enophthalmos and hypoglobus caused by chronic obstructive maxillary sinus atelectasis. The imaging findings are characteristic and confirmatory

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4247

Epistaxis and high blood pressure in ENT emergency department

Joana Matos[1], Jorge Moutinho[3], Jorge Rodrigues[4], Ricardo Vaz[4]

[1](1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (2) Unidade de Otorrinolaringologia, Departamento de Cirurgia e Fisiologia, Faculdade de Medicina, Universidade do Porto, Porto, Portugal , [2] (1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (2) Unidade de Otorrinolaringologia, Departamento de Cirurgia e Fisiologia, Faculdade de Medicina, Universidade do Porto, Porto, Portugal , [3] (1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal , [4](1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (3) Unidade de Anatomia, Departamento de Biomedicina, Faculdade de Medicina, Universidade do Porto, Porto, Portugal (4) NeuroGen Research Group, Centro de Investigação em Tecnologias e Serviços de Saúde (CINTESIS), Porto, Portugal. (5) CINTESIS@RISE, Faculdade de Medicina da Universidade do Porto, Universidade do Porto, Porto, Portugal

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction/Objective: Epistaxis is one of the most common reasons for admission in otolaryngology emergency department. This study aims to compare the clinical characteristics of patients with and without hypertension who are admitted to the ENT emergency department with epistaxis.

Methods: A single-center retrospective study was conducted, including 100 consecutive patients admitted with epistaxis to the otolaryngology emergency department of a tertiary referral center. Several variables were analysed between patients with and without high blood pressure, including cardiovascular disease, diabetes mellitus, smoking, chronic alcoholism, identification of the bleeding source, and the need for hospitalization.

Results: The patients in this study had a median age of 66.0 ± 21.51 years, and 60% were male. The prevalence of anticoagulant therapy (22% vs. 0.03%, p<0.001), cardiovascular disease (27% vs. 0.05%, p<0.001), dyslipidemia (43% vs. 0.08%, p<0.001), and diabetes mellitus (16% vs. 0.03%, p=0.04) was significantly higher in the group with high blood pressure. Additionally, the median age was significantly higher in this group (72.0 ± 11.26 vs. 41.0 ± 22.69, p=0.01). No significant differences were found between the groups regarding the risk of 30 days-recurrence, need for hospitalization, smoking, chronic alcoholism, or active bleeding. Three patients required inpatient management, and only one underwent endoscopic ligation of the sphenopalatine artery.

Conclusion: Patients with high blood pressure had more comorbidities but did not appear to have increased risk of epistaxis recurrence or a greater need for invasive treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4275

Rudolph Sign: diagnosing beyond the obvious

Noémi Nogueira[1], Joana Ferreira[1], Simão Bessa[1], Nuno Lousan[1], Clara Lima[1]

[1]*Department of Otolaryngology – Head and Neck Surgery at Unidade Local de Saúde do Tâmega e Sousa*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: The Rudolph sign is a clinical finding characterized by nasal erythema and edema often attributed to common conditions such as viral infections or allergic rhinitis. However, a broader differential diagnosis must be considered, as other underlying causes - including cutaneous infections, autoimmune disorders and dermatologic conditions - can mimic these presentations. Recognizing less obvious etiologies is crucial for accurate diagnosis and appropriate treatment. This report highlights the importance of a comprehensive differential diagnosis in patients with the Rudolph sign, emphasizing the critical role of otolaryngologists in distinguishing between different causes.

Methods: We present a case of persistent nasal erythema and edema initially presumed to be infectious. The diagnostic approach, therapeutic strategies, and multidisciplinary management are analyzed to illustrate the diagnostic challenges, complemented by a literature review.

Results: A healthy female patient presented with isolated nasal erythema, edema, and localized pain. Despite multiple treatment attempts, including corticosteroids, antibiotics and an autoimmune workup, symptoms persisted. Given the lack of a definitive diagnosis and response to treatment, a nasal tissue biopsy was performed, diagnosing rosacea. Dermatology consultation was sought, and treatment was adjusted accordingly. This case underscores the importance of considering dermatologic conditions in the differential diagnosis of nasal erythema. Infection is often presumed, but in the absence of systemic infectious signs, alternative diagnoses should be explored. Early recognition prevents unnecessary treatments and ensures appropriate management.

Conclusions: The Rudolph sign highlights the need for a thorough diagnostic approach extending beyond infectious causes. Otolaryngologists play a pivotal role in differentiating these conditions, ensuring timely and accurate diagnosis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4293

Systematic Review and meta-analysis of surgical treatments for Empty Nose Syndrome

Manuel Bernal Sprekelsen[1], Octavio Garaycochea Mendozadel Solar[2], Isam Alobid[1], Leire Aguirre-Peña[3]

[1]Hospital Clinic, Univ.of Barcelona, [2]ENT-Dept. Clinica Universitaria de Navarra, [3]Univ.of Barcelona

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Empty Nose Syndrome (ENS) is a rare condition characterized by a paradoxical sensation of nasal obstruction despite a structurally patent airway. It commonly arises from excessive turbinate resection, leading to structural and functional abnormalities within the nasal cavity. Diagnosis relies on a comprehensive patient history, endoscopic examination, imaging studies, and validated assessment tools such as the ENS6Q and SNOT-25 questionnaires. Conservative treatments offer limited relief, whereas surgical interventions aim to restore turbinate volume and improve nasal airflow.

Methods: A systematic review and meta-meta-analysis, conducted in accordance with PRISMA guidelines, incorporated three meta-analyses encompassing 1,528 patients. Surgical outcomes were evaluated using ENS6Q and SNOT scores at 1, 3, 6, and 12 months postoperatively. Heterogeneity among the studies was assessed using the I^2 statistic.

Results: ENS6Q scores demonstrated a gradual reduction in improvement over time, from a mean difference (MD) of 10.18 at 1 month to 8.54 at 1 year post-surgery (I^2 = 48%-91%). In contrast, SNOT scores indicated progressive quality-of-life improvements, with a standardized mean difference (SMD) of 1.02 at 1 month and 1.52 at 1 year (I^2 = 88%-100%). ENS-specific symptoms stabilized early in the follow-up period, while broader quality-of-life measures showed continuous improvement over time.

Conclusion: Surgical treatments for ENS provide significant symptom relief, particularly in the early postoperative period, with sustained long-term benefits reflected in SNOT scores. However, the substantial heterogeneity observed underscores the necessity for standardized methodologies, larger-scale studies, and extended follow-ups to optimize and evaluate treatment outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4319

Validation of the Arabic Chronic Rhinosinusitis Patient-Reported Outcome (CRS-PRO): Translation and Cultural Adaptation

Ameen Biadsee[1], Leigh Sowerby[2], Tomer Boldes[1], Firas Kassem[1]

[1]*Tel-Aviv University*, [2]*Western University*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: The chronic rhinosinusitis patient-reported outcome (CRS-PRO) is a newly developed, disease-specific questionnaire designed for patients with CRS. This study focused on translating the CRS-PRO into Arabic, conducting cross-cultural adaptation and validation of the questionnaire, and assessing its reliability and validity.

Methods: This prospective study involved 112 patients divided into CRS, functional endoscopic sinus surgery (FESS), and control groups. Participants completed the questionnaire at enrollment and again after one month. The Arabic version of the CRS-PRO was created following the International Society for Pharmacoeconomics and Outcomes Research guidelines for translation and cross-cultural adaptation.

Results: This study included 74 males (66.1%) and 38 females (33.9%), with an average age of 37.4 ± 14.8 years. The Arabic CRS-PRO questionnaire has high internal consistency and reliability (Cronbach's alpha 0.97). It also has strong discriminant validity in distinguishing between groups (ANOVA, $p < 0.001$). The assessment of test/retest symptom scores and their consistency over time confirmed the reliability of the CRS-PRO in differentiating CRS patients from healthy individuals and in monitoring surgical outcomes. This was validated through Pearson's correlation coefficients ($p < 0.01$) and intraclass correlation ($p < 0.0001$).

Conclusions: The Arabic version of the CRS-PRO proved simple, reliable, and valid. It showed high internal consistency, reliability, and strong discriminant validity in distinguishing between healthy individuals, CRS patients, and those pre- and post-FESS.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4349

Enhancing the Quality of the Rhinology Consenting Process through Patient Teach-back

Marios Stavrakas, Ra'ed Al-ashqar[1], Benedict Brandreth[2], Yazan Kanaan[1], Hisham Khalil[1]

[1]University Hospitals Plymouth NHS Trust, *[2]University of Plymouth Peninsula Medical School*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: Effective patient consent in Rhinology surgical practice is crucial, and ensuring patients fully understand the interventions they are scheduled for, and their possible outcomes is an important part of the consenting process. The teach-back method, which involves patients relaying their understanding of information given in their own words to the consenting surgeon, is a known strategy to ensure adequate comprehension. We aim to evaluate the effectiveness of using teach-back as part of the consenting process in our Rhinology service, to assess and improve patient understanding and perception of common and complex rhinology procedures.

Methods: We introduced the teach-back method as a tool to improve the quality of the consenting process. Patients receive information leaflets/a link to the departmental YouTube channel highlighting their surgical procedure at the time of listing. Prior to the formal consenting process in the preoperative consent clinic, the teach-back method is integrated into the process, and the consenting surgeon assigns a subjective score to the patients understanding of the procedure to be done. The teach-back method is repeated a second time post-consent, and another subjective score is assigned. Changes in these scores were analyzed to determine the impact of teach-back on aiding patient comprehension.

Results: We present examples of how the 'teach-back' technique and its scoring system is implemented in practice for consenting for Rhinology procedures.

Conclusion: The use of the teach-back technique is a useful strategy to ensure patients understand the details of the surgical procedures they are undergoing in terms of process, risks and outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4365

Evaluating the Role of Objective Airflow Measures in Functional Nasal Reconstructive Surgery

Jemima Russell[1], **Issa Beegun**[1], **Hesham Saleh**[1]

[1]*Imperial College London*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: Nasal reconstructive surgery aims to restore nasal airflow in patients with nasal obstruction. However, current methods of evaluating airflow primarily rely on subjective patient reports, presenting challenges for accurate diagnosis and prediction of surgical success. This study aims to evaluate the role of objective airflow measurements in improving prediction of surgical success and assessing outcomes at both intra-operative and post-operative stages. Specifically, we utilised acoustic rhinometry intra-operatively, alongside rhinomanometry and peak nasal inspiratory flow (PNIF) measurements pre-operatively and post-operatively, to provide a comprehensive assessment of surgical outcomes.

Method: Acoustic rhinometry was performed pre-operatively during clinical consultations, intra-operatively, and 8-12 weeks post-operatively. These measurements were analyzed alongside patient quality of life scores, radiological findings (CT/MRI), endoscopic assessments, PNIF measurements and rhinomanometry results, providing a comprehensive evaluation of surgical interventions.

Results: Data collected from multiple nasal reconstructive techniques including Z-plasty, septoplasty and functional rhinoplasty demonstrated that intra-operative improvements were sustained in patients followed up 8-12 weeks post-operatively. These findings also highlight the utility of acoustic rhinometry in improving diagnostic accuracy and aiding prediction of surgical success. Rhinomanometry, PNIF and subjective patient scores further supported these findings.

Conclusion: Incorporating objective measures of nasal airflow, particularly intra-operative acoustic rhinometry, into clinical practice can improve functional outcomes following nasal reconstructive surgery. Our findings highlight the value of acoustic rhinometry in providing reliable, quantifiable data, which can improve both diagnostic precision and the likelihood of favorable patient outcomes following surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4371

A Rare Case of Spontaneous Sphenoid Sinus Organized Hematoma: A Diagnostic Dilemma

Tanvi Rekhade[1], Hisham Khalil[2], Marios Stavrakas[2], Yazan Kanaan[2]

[1]StR Higher, University Hospitals Plymouth, UK, *[2]Consultant ENT Surgeon, University Hospitals Plymouth, UK*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: Expansile masses of destructive nature within the sinonasal cavity, whether benign or malignant, can significantly affect a patient's quality of life due to their proximity to critical anatomical structures. One such pathology, the sinonasal organized hematoma, often leads to a clinico-radiological diagnostic challenge.

Case Presentation: We report the case of a 69-year-old male referred to our department from ophthalmology, presenting with a 6-week history of sudden onset vision blurring in the right eye, without any specific sinonasal symptoms. Radiological imaging revealed an expansile mass centered in the right sphenoid sinus with skull base erosions. The patient underwent a diagnostic biopsy followed by functional endoscopic sinus surgery (FESS). Histopathological analysis revealed an infarcted sinonasal polyp. The patient was discharged with resolution of symptoms thereafter.

Discussion: Sinonasal hematomas are extremely infrequent, and their presentation can be misleading, as they are often indistinguishable from other more common sinonasal pathologies. In this case, the spontaneous sphenoid sinus hematoma was likely secondary to infarction within an incidental angiomatous polyp. This case highlights the importance of considering rare pathologies in the differential diagnosis when faced with expanding masses in the sinonasal region.

Conclusion: This case represents one of the very few known instances of spontaneous sphenoid sinus hematoma, and possibly the first sphenoid sinus case to be associated with infarction within an angiomatous polyp. Clinicians should be aware of this uncommon entity, as early recognition and management are crucial for preventing and reversing complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4406

Unilateral Chronic Nasal Crusting with Septal Perforation: A Case of Diagnostic Challenge

Luciana Rodrigues[1], Inês Gambôa[1], Miguel Campos Lopes[1], Ana Raquel Andrade[1], Paulo Gonçalves[1], Tiago Soares Santos[2], Diogo Nascimento[1]

[1]Department of Otorhinolaryngology, Unidade Local de Saúde Entre o Douro e Vouga, Santa Maria da Feira, Portugal, *[2]Department of Otorhinolaryngology, Unidade Local de Saúde Entre o Douro e Vouga, Santa Maria da Feira, Portugal; Multidisciplinary Biomedical Research Unit - UMIB, ICBAS-UP*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: Chronic nasal crusting presents a diagnostic challenge, often requiring extensive investigation to differentiate between infectious, autoimmune, inflammatory and neoplasic etiologies. Despite extensive investigations, the underlying cause may not always be identified, making treatment decisions difficult. Management strategies often focus on symptom relief, including nasal irrigation, topical therapies, and, sometimes, surgical debridement. This case presents a diagnostic and therapeutic challenge in a patient with chronic nasal crusting.

Case Report: A 29-year-old male presented with acute-onset intense nasal pain, progressive nasal obstruction, and daily epistaxis for two months. He denied drug use or trauma, but reported prolonged use of topical vasoconstrictors. Initial examination revealed extensive crusting and necrotic lesion on the right nasal cavity. A CT scan showed no significant findings. Despite antibiotic and corticosteroid, symptom improvement was partial. Endoscopic surgical debridement and biopsy revealed necrotic tissue with fungal spores, later identified as Aspergillus Fumigatus, and topical antifungal therapy provided only partial relief. Nasal crusting and mucosal necrosis persisted, resulting in anterior septal perforation. Due to ongoing disease, the patient underwent another endoscopic debridement and biopsy, which revealed only granulomatous inflammation with necrosis, while autoimmune screening was negative. Despite extensive investigations, the cause of chronic nasal crusting remained unknown. However, symptoms stabilized with daily nasal irrigation, despite persistent septal perforation and right-sided crusting and inflammation.

Conclusion: This case highlights the diagnostic complexity of nasal crusting and septal lesions. In this case, despite persistence inflammation and septal perforation, symptoms stabilized with conservative management, showing that symptomatic control is possible despite structural damage.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4410

Cauterization of the inferior nasal turbinates as a treatment of chronic rhinitis: a literature review

Konstantina Chrysouli[1], **Maria Korodima**[1], Georgios Grivas[1], Alexandros Ninos[1], Zacharias Kalentakis[1], Ioanna Papavasileiou[1], Georgios Mylonas[1], Georgios Dritsas[1], Eyfrosyni Papatheodorou[1]

[1]ENT Department Sismanogleio General Hospital Athens

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Purpose of the Study: Chronic rhinitis combined with hypertrophy of the lower nasal cavities are among the most common diseases in rhinology and significantly affect the quality of life of patients. The purpose of this study is to investigate the latest data regarding the treatment of chronic rhinitis through cauterization of the inferior nasal turbinates.

Material and Method: A systematic review of the literature in PubMed and Cochrane Library was performed on the effectiveness and potential complications of cauterization of the inferior nasal turbinates for the treatment of chronic rhinitis. Selected publications during the last twenty years.

Results: In the studies reviewed, cauterization of the inferior nasal turbinates was performed using silver nitrate, radiofrequency, and unipolar diathermy. The effectiveness of the operation was assessed through questionnaires that were given to the patients during their follow-up, while the possible side effects from it were also assessed.

Conclusions: From the findings of the bibliographic review, it appears that cauterization of the inferior turbinates for the treatment of chronic rhinitis is a safe, effective and minimally invasive method. However, the small number of publications during the last twenty years shows that further research is needed to reach safer conclusions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4419

Effectiveness of nasal irrigations in the treatment of allergic rhinitis: a literature review

Maria Korodima[1], Aikaterini Drylli[2], Georgios Grivas[3], Alexandros Ninos[1], Konstantina Chrysouli[1]

[1]ENT Department Sismanogleio General Hospital Athens, [2]ENT Department ,Health Center of Athens, Athens, Greece, [3]ENT Department, Pammakaristos Hospital, Athens, Greece

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Purpose of the Study: Allergic rhinitis is a condition caused by a type I allergic reaction of the nasal mucosa after exposure to allergens and is characterized by nasal congestion, rhinorrhea, sneezing and itching. The purpose of this study is to determine the results of the use of nasal irrigations in the treatment of patients suffering from allergic rhinitis.

Material and Method: A systematic review of selected publications of the last decadethe in PubMed and Cochrane Library was conducted examining the latest data on the effectiveness of nasal irrigations in the treatment of allergic rhinitis.

Results: According to studies , patients who performd nasal irrigations had a significant improvement in the severity of disease symptoms compared to who did not, without significant adverse effects. Furthemore, in certain studies, the use of large-volume nasal irrigation in combination with corticosteroids versus the use of nasal corticosteroids as monotherapy has been shown to be particularly effective in alleviating the nasal symptoms of allergic rhinitis.

Conclusions: The use of nasal irrigation either as a complimentary treatment or in combination with corticosteroids leads to a significant improvement in the clinical condition of allergic rhinitis. These data provide encouraging evidence about the efficacy of nasal irrigation in the treatment of this type of rhinitis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4485

Choanal imperforation in adults - case report

Ileana Alexandra Sanda[1], Razvan Hainarosie[1], Viorel Zainea[1], Catalina Voiosu[1], Irina Gabriela Ionita[1], Rusescu Andreea[1], Ruxandra Oana Alius[1]

[1]"Carol Davila" University of Medicine and Pharmacy Bucharest, [2]"CAROL DAVILA " University and Pharmacy Bucharest, Romania

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Choanal atresia, a rare congenital anomaly, occurs when the naso-oral membrane fails to properly regress during embryological development, leading to a blockage of bones, membrane, or a combination of both. This condition, affecting about 1 in 5,000 to 8,000 live births, is newborns' most common nasal malformation.

Material and Methods: We present the case of a 19-year-old male with a history of unilateral choanal atresia. He was initially operated on at the age of 3 months and is now experiencing a relapse. The patient, a non-smoker from a rural background, came to our clinic seeking treatment for symptoms of chronic right-sided nasal obstruction, persistent oral breathing, and mucopurulent discharge from the right nasal cavity.

Results: This condition required a surgical procedure to improve airflow in the nasal passages and improve the patient's quality of life.

Conclusion: The onset of symptoms of choanal atresia varies markedly between patients, reflecting the types of presentation of this condition. The present article discusses a patient diagnosed as a young adult. Through this case, we underscore the unique nature of the clinical presentation and thus underline the need for a responsible and attentive approach to evaluation, particularly when symptoms are neglected.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4518

The surgical treatment of nasal synechiae

Olga Vereshchagina[1], Sergey Karpishchenko[1], Elizaveta Teplova[1]
[1]RF, Saint Petersburg, str. L.Tolstoy,6-8, ENT department

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction: Synechiae of the nasal cavity is a scar tissue between two opposite surfaces of the mucous membrane formed as a result of the respiratory epithelium surgical traumatization or spontaneous occurrence of tissue proliferation during the inflammation. The study's aim was to compare the efficiency of cold and hot instruments for nasal synechia treatment.

Material and Methods: Our study included 60 patients in total who had nasal synechia and underwent rhino sinus surgery. Patients' age varied from 19 to 80. The main complaints regarding synechial obstruction of the nasal cavity were difficulty of nasal breathing and nasal congestion. Other complains such as nasal discharge, postnasal drip, recurrent nosebleeds and decreased sense of smell were less worrying. During our study all patients were divided into 2 groups before surgery. The first group had synechia removed using cold instrument, and the second group had synechia removal using diode laser. Laser parameters were selected in the experimental study. We assessed the likelihood of tissue re-scarring in the postoperative period.

Results: The recurrence case of synechial stenosis for the second group was 13 times lower compared to the first group. The differences were statistically confirmed. Treatment methods in the postoperative period were the same for both groups.

Conclusions: Using laser for the surgical treatment of nasal synechia is characterized by easy implementation, the absence of complications and the need for nasal packing in the postoperative period. Using laser technology ensures the prevention of adhesion process recurrence in nasal cavity.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4568

A case of localized sinonasal amyloidosis in a post radiotherapy patient

Patil Ashutosh Vishwasrao[1], Christina Ng Hui Lee[1], Phua Chu Qin[1]

[1]Department of Otorhinolaryngology and head-neck surgery Sengkang General Hospital, Singapore

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Background: Amyloidosis is a heterogenous group of disorders, the exact mechanism of which is still poorly understood. It presents more commonly as a systemic disease and less commonly as a localized variety involving the head and neck. In the localized variant laryngeal involvement is more common, whereassinonasal amyloidosis is more rarer with only few cases described in literature so far.

Case presentation: We present a case of localized sinonasal amyloidosis in a 73 year old woman, with a background ofnasopharyngeal cancer post treatment with radiotherapy. She presented with multiple episodes of epistaxis over a period of time and was noted to have a right sided sphenoethmoidal recess polyp onnasoendoscopy. She underwent CT paranasal sinuses which showed features of pansinusitis. The patient underwent right sided functional endoscopic surgery and definitive histology reports from surgical samples showed the presence of amyloidosis. Subsequently, she was referred for evaluation by the hematology team who performed a myeloma panel for her and concluded she did not have any systemicinvolvement by amyloidosis.

Conclusion: Sinonasal amyloidosis is a rare entity and can mimic the presence of a tumour or sinusitis. This variant ofamyloidosis has better prognosis as compared to systemic amyloidosis, hence awareness of this disease is important. Though there is no definite consensus on management of this entity, conservative surgeries widely practiced with regular follow-ups to monitor for relapses.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4569

Bulk Cation Concentrations in Commercial Nasal Douches

David Hill[1]

[1]*Consultant ENT Surgeon, Ysbyty Gwynedd, Bangor, Wales UK, and formerly School of Chemistry, Bangor University.*

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

There are many different sprays and douches on the market, but there is little detailed information about electrolyte concentrations in these products, or if they match normal values. Information about the physiological concentrations of the major cations sodium, potassium, calcium and magnesium, in normal nasal mucus, was presented in the 6th Congress of European ORL-HNS in October 2022. Using ion chromatography for solutions, and mass spectrometry for mucus samples, I analysed commercial nasal products for the above four cations. The results were compared to the physiological values for unselected nasal mucus, and also for undiluted seawater, the base material for many of these sprays. Results are presented as mmol/lit concentrations, in accordance with most clinical pathophysiology reports. Results for mucus are median concentrations, based on 80 analysed samples, results for solutions are means of ten duplicate samples. Total osmolality values for solutions were determined by freezing point technique. Na (mmol/lit) K Ca Mg Osmolality (mmol/kg) Nasal Mucus 131.8 14.8 5.3 0.8 ‘290 Sterimar Nasal Hygeine 151 3.5 3.9 13.8 309 Sterimar Allergy Response 260 5.8 18.1 23.7 555 Sterimar Cold Defence 153 3.5 4.5 14.6 334 Sinomarin Hypertonic 402 8.0 8.8 33.9 739 NeilMed Sinus Rinse 156.8 0.0 0.0 0.0 300 Seawater 460 9.7 9.8 52.3 ‘1000’ (640-1480) Seawater @130mmol Na 130 3.3 3.2 14.2 ‘300’ It can be seen that NeilMed is indeed an isotonic solution with only sodium as an identifiable cation. Seawater based sprays can be isotonic or hypertonic, up to a percentage of approx. 70% of seawater, which is the maximum tolerable concentration. Seawater based sprays contain significantly more magnesium than human plasma or mucus, and some are also hyperkalaemic compared to plasma. Sterimar Allergy Response adds calcium to the seawater (as advised on the label), which quadruples the concentration compared to the Nasal Hygeine isotonic version.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4247

EPISTAXIS AND HIGH BLOOD PRESSURE IN ENT EMERGENCY DEPARTMENT

Joana Matos[1], Jorge Moutinho[3], Jorge Rodrigues[4], Ricardo Vaz[4]

[1](1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (2) Unidade de Otorrinolaringologia, Departamento de Cirurgia e Fisiologia, Faculdade de Medicina, Universidade do Porto, Porto, Portugal , [2] (1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (2) Unidade de Otorrinolaringologia, Departamento de Cirurgia e Fisiologia, Faculdade de Medicina, Universidade do Porto, Porto, Portugal , [3] (1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal , [4](1) Serviço de Otorrinolaringologia, Centro Hospitalar Universitário de São João, Porto, Portugal (3) Unidade de Anatomia, Departamento de Biomedicina, Faculdade de Medicina, Universidade do Porto, Porto, Portugal (4) NeuroGen Research Group, Centro de Investigação em Tecnologias e Serviços de Saúde (CINTESIS), Porto, Portugal. (5) CINTESIS@RISE, Faculdade de Medicina da Universidade do Porto, Universidade do Porto, Porto, Portugal

Poster Session | Rhinology – miscellaneous | 22 June – 25 June, 2025, All day

Introduction/Objective: Epistaxis is one of the most common reasons for admission in otolaryngology emergency department. This study aims to compare the clinical characteristics of patients with and without hypertension who are admitted to the ENT emergency department with epistaxis.

Methods: A single-center retrospective study was conducted, including 100 consecutive patients admitted with epistaxis to the otolaryngology emergency department of a tertiary referral center. Several variables were analyzed between patients with and without high blood pressure, including cardiovascular disease, diabetes mellitus, smoking, chronic alcoholism, identification of the bleeding source, and the need for hospitalization.

Results: The patients in this study had a median age of 66.0 ± 21.51 years, and 60% were male. The prevalence of anticoagulant therapy (22% vs. 0.03%, p<0.001), cardiovascular disease (27% vs. 0.05%, p<0.001), dyslipidemia (43% vs. 0.08%, p<0.001), and diabetes mellitus (16% vs. 0.03%, p=0.04) was significantly higher in the group with high blood pressure. Additionally, the median age was significantly higher in this group (72.0 ± 11.26 vs. 41.0 ± 22.69, p=0.01). No significant differences were found between the groups regarding the risk of 30 days-recurrence, need for hospitalization, smoking, chronic alcoholism, or active bleeding. Three patients required inpatient management, and only one underwent endoscopic ligation of the sphenopalatine artery.

Conclusion: Patients with high blood pressure had more comorbidities but did not appear to have increased risk of epistaxis recurrence or a greater need for invasive treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Rhinoplasty

3688

Concurrent Septorhinoplasty and Functional Endoscopic Sinus Surgery (FESS): Risks, Benefits and Reality

Ithzel Maria Villarreal Patiño[1], Ramon Moreno Luna[2], Guillermo Plaza[1], Serafin Sanchez[3]

[1]Hospital Universitario de Fuenlabrada, [2]Hospital Virgen de Macarena, [3]Hospital Universitario Virgen Macarena

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: As our society has become more concerned with aging and appearance, and plastic surgery more accepted and available, there has been an increased demand to combine elective aesthetic surgery with medically indicated procedures. The potential risk of contaminating the cosmetic surgical field or spreading infection from the infected sinus into adjacent areas has been considered by some as a serious threat to the favorable outcome of the elective procedure. Concurrent Septorhinoplasty and functional endoscopic sinus surgery (FESS) has been a controversial topic in the literature over the last decade.

Methods: We performed a literature review of the most relevant publications regarding both concurrent procedures.

Results: When FESS and rhinoplasty are combined, neither the risk profile nor the complication rate of the procedures changes substantially. Functional airway problems can be related to external nasal deformities and nasal valve deficiencies, as well as to the nasal septum and turbinates. Addressing the septal, turbinate, or sinus abnormalities without correcting the external deformities may leave the patient with persistent nasal airway obstruction, requiring subsequent surgery. It is well recognized. that adequate correction of external nasal deformities generally entails correction of any underlying septal deviation. Concurrent surgery offers several clear advantages, including single manipulation of the septum, shorter hospital stays, reduced operative time and costs, and faster healing and recovery. Additionally, as the nose undergoes repair only once, the risk of scar formation is minimized.

Conclusions: Patient selection is crucial when considering concurrent rhinoplasty and endoscopic sinus surgery. Literature from the past decades demonstrates that with appropriate medical indications this combined approach is both safe and effective, offering substantial benefits while addressing both functional and aesthetic concerns in a single procedure.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3690

The Value Of Nasal Valve Management In Rhinoseptoplasty

Aikaterini Lianou[1]

[1]*Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: Traditionally, treatment of nasal obstruction centered on a septoplasty. The need to address the nasal valve as a contributing factor to nasal obstruction was recognized in 1984 when Sheen first described the use of spreader grafts to dilate the internal nasal valve. According to the international literature, nasal valve dysfunction (NVD) is relatively common, with a prevalence of up to 13%. The purpose of this study is to provide a detailed description and evaluation of the therapeutic techniques for the management of the nasal valve in rhinoseptoplasty.

Material & Methods: An extensive review of the international literature has been conducted to identify published articles on nasal valve pathology and therapeutic measures to address it.

Results: To date, many techniques have been described to increase the cross-sectional area of the nasal valve. Selection of the appropriate technique poses a significant challenge to the nasal valve surgeon. Long-term correction of NVD requires surgical intervention. Correction typically involves the use of various grafts or suture techniques to enlarge and/or support the nasal valve.

Conclusions: The nasal valve plays an important role in nasal airflow. If it is not the primary cause of obstruction, it is often a contributing factor. If NVD is diagnosed, it should be addressed during surgery (functional rhinoplasty) to avoid a suboptimal outcome. Currently, there are many options available for nasal valve management in septoplasty. Most of them have been shown positive results, although there is a lack of randomized controlled trials that directly compare the techniques.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3724

Psychosomatic dimensions of rhinoplasty. Literature review.

Aikaterini Lianou[1], Elena Dragioti[2], Stefanos Mantzoukas[2], Dimitra Simou[3], Mairi Gouva[2]

[1]Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece, *[2]Research Laboratory of Psychology of Patients, Families & Health Professionals, University of Ioannina, Ioannina, Greece.*, *[3]Department of Otorhinolaryngology, Head and Neck Surgery, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: Rhinoplasty is a widespread aesthetic procedure. However, its success is not determined exclusively by the surgical results but by the psychosomatic dimensions of the patient and their impact on the quality of life, which we studied in this review. Understanding these is crucial to enhancing patient satisfaction and ensuring successful outcomes.

Material & Methods: A literature review was conducted to identify published articles on the psychosomatic dimensions of rhinoplasty and their role in quality of life and self-care.

Results: The popularity of rhinoplasty has increased due to increased social acceptance and media exposure. Postoperative psychological outcomes vary, with dissatisfaction often associated with pre-existing psychopathology. Patient satisfaction depends on factors such as gender, age, education, culture, occupation, expectations, financial, and psychological profile. Men often present higher levels of psychopathology and are less satisfied postoperatively compared to women, indicating the need for further research into the underlying causes of this gender difference. Prudent patient selection, realistic expectations, and preoperative psychological screening are imperative for successful outcomes. The use of PROMs (Patient Reported Outcome Measures) has become increasingly important for the assessment of health-related quality of life, as they provide information on functional and psychosocial changes from the patient's perspective. The assessment of outcomes is crucial because patient satisfaction and improvement in health-related quality of life (QoL) are the dominant factors determining success.

Conclusions: In conclusion, understanding the psychosomatic dimensions of rhinoplasty is essential to enhance patient satisfaction and improve quality of life (QoL), thus ensuring successful outcomes in facial plastic surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3748

Initial experience of high fidelity models for training in septorhinoplasty

Stephen Williams[1] , Samuel Leong[1]
[1]*Liverpool University Hospitals NHS Foundation Trust, UK*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: Surgical "craft" courses have long been a way for surgeons to safely improve their skills under direct instruction. Whilst such courses have traditionally been cadaveric, continuing technological advancements have led to the development and propagation of a number of non-cadaveric courses. This pilot study reports on the utility of a 3D-printed model for septorhinoplasty training.

Material and methods: The life-size 3-D printed models are made by Fusetec Ltd. (Adelaide, Australia). The composite materials used in their construction are designed to mimic mucosa, cartilage and bone. Fellowship trained rhinologists were recruited as participants (n=9) and their opinions, regarding both the face and content validity of the model as a training tool, measured using a purpose built 20-item questionnaire tool.

Results: The majority of surgeons felt that the model was a good tool for teaching nasal anatomy and was useful for surgical planning. Participants were also positive on the 3D-printed models as learning tools for what might be considered bony work (osteotomy or procedures involving the nasal dorsum). Mixed responses were gathered on the face and content validity of the cartilaginous structures in the model, with concerns over the haptic feedback from the models and, accordingly, its strength for teaching techniques involving the septum, nasal tip or grafting.

Conclusion: Results from this pilot study suggest this model has particular utility in understanding anatomy, surgical planning and in learning osteotomy and both dorsal reduction and augmentation. This work hopes to fuel the ongoing development of 3D models as a training platform.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3815

When and where endoscopic surgical techniques are useful in endoscopic septorhinoplasty

Nakagawa Takayuki[1], Matsunaga Mami[1], Hideaki Moteki[2]

[1]Department of Otolaryngology, Head and Neck Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan, *[2]Department of Otolaryngology, Aizawa Hospital*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: In 2024, a new category of endoscopic nasal septum surgery has been established in Japan. Types I and II are conventional endoscopic septoplasty for the posterior portion of the nasal septum. Type III is endoscopic septoplasty for the anterior portion of the nasal septum. Type IV is a combined surgery of endoscope-assisted rhinoplasty and endoscopic septoplasty. However, the optimal use of endoscopic techniques in Type III and IV is a matter of debate. In this paper, we discuss when and where endoscopic techniques are useful in endoscopic nasal septum surgery Type III and IV.

Methods: Surgical procedures were analyzed in a case series containing 28 cases of Type III and 12 cases of Type IV that underwent surgery from June 2024 to December 2024.

Results: In all cases, skin incision and dissection of the alar were performed macroscopically. Dissection of the anterior edge of the septal cartilage and the dorsal aspect of the lateral cartilage was also performed macroscopically. Residual surgical procedures, including dissection of the perichondrium in the anterior portion of the septal cartilage and the endonasal aspects of the lateral cartilage, were performed endoscopically. To perform stable dissection in these regions, the order of dissection was critical. In particular, dissection of the upper region of the septal cartilage and detachment of the septal cartilage from the anterior nasal spine should be performed as the final step.

Conclusions: Extensive use of endoscopic surgical techniques in septorhinoplasty may contribute to low invasiveness and accurate procedures.



3825

Posterior columella strut 'Tetris design' technique

Asen Asenov[1], Mila Asenova[2], Ivan Delchev[1]

[1]Medical University of Plovdiv, [2]UMHAT Plovdiv

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: Posterior columella strut 'Tetris design' is a technique developed by Dr Asenov that can be used in rhinoplasty cases mainly as a tool for correction of the 'droopy tip'.

Methods: PCS 'Tetris design' technique uses unilateral endonasal hemitransfix incision of the nasal mucosa and configuration of the caudal end of the nasal septum. It can be used in primary rhinoplasties, in septoplasties on its own and in revision rhinoplasty cases. The main purpose of the technique is to create a step at the caudal end of the nasal septum as the Posterior columella strut is placed over this 'step'. In this way, stability of the septum is achieved and this does not allow the PCS to return to its original position.

Results: PCS 'Tetris design' technique is used for achieving projection, cephalic rotation and stability of the nasal tip around 3-4mm. It is a minimally invasive technique that can be done under both local or general anaesthesia.

Conclusions: PCS 'Tetris design' technique is preferred because of its easy access and fast execution. It improves both the aesthetic appearance of the nose and the functional breathing of the patients by elevating the apex of the nostrils. The main goal of this technique is to find a minimally invasive and permanent solution for the drooping of the nasal tip by achieving cephalic rotation and tip rotation.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3918

Nasal Columella Reconstruction Using a Superior Lip Advancement Flap: A Viable Option in High-Risk Patients

Virginia Garcia Garcia[1], Nuria Cruz Ceron[3], Cesar Luis Gonzalez Cuello[4], María Cerezo Arenas[5], Juan Aguilar Cantador[5]

[1]European Rhinology Society, [2]European Rhinology Society; Sociedad Española de Otorrinolaringología , [3]Sociedad Española Otorrinolaringología, [4]Sociedad Española de Otorrinolaringología , [5]Sociedad Española de Otorrinolaringología

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

INTRODUCTION: Nasal tip reconstruction poses a challenge for surgeons, particularly when repairing defects located in the columella. The available locoregional flaps are limited and must be carefully evaluated to suit both the defect and the patient.

MATERIALS AND METHODS: We present two cases of male patients with multiple comorbidities diagnosed with squamous cell carcinoma and basal cell carcinoma, respectively, both affecting the nasal columella, septum, and other nasal tip structures. An incisional biopsy was performed for diagnosis, along with contrast-enhanced computed tomography of the head and neck for initial staging.

RESULTS: Surgical tumor resection was performed using the Mohs technique, with intraoperative histopathological analysis until clear margins were achieved. A superior lip advancement flap was chosen to repair the defect in a single surgical procedure. In one case, a septal cartilage graft was used as a caudal extension. The aesthetic and functional outcomes at follow-ups one, three, and six months post-surgery were satisfactory, with no signs of recurrence.

CONCLUSION: The superior lip advancement flap is a viable technique that provides acceptable results in high-risk surgical patients, for whom more complex flap procedures may carry a higher risk of complications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4354

PIEZORHINOPLASTY for middle eastern nose

Mohamed R. Hadi[1]

[1]*American College Of Surgeon, ISAPS, ASPS, IBMS PRS,*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Introduction: Rhinoplasty is one of the most requested cosmetic intervention in our private practice and even in the region and the world, optimizing the results and giving the patient what they want is of prime importance to guarantee minimal complains post operatively[1].There are a lot of intrinsic differentiating characteristics of ethic group of populations that specify each nose both regarding skin type and other anatomical variation in the shape of the cartilage and bony framework of each group that sometimes make it difficult to deal with using PEIZO machine.

Methods: Plastic surgery is the art of restoration of form and function, and as the definition applies, the surgeon should be careful in restoring and altering the shape, whilst being vigilant to preserve function as well. We mostly operate via and open technique, through an inverted V columellar incision, but sometimes it can be done via closed approach, we do skin marking with knife before we inject the dissecting fluid for ease of completion of incision latter, then we infiltrate with normal saline only sub-perichondrial plane. Most of the times we cut free the piece of bone that make the webster triangle to use in for support in form of bone expansion preventer (like a door stop, to keep the bone fixed in its new position while putting the piece of bone as a spacer in the freshly cut space To reduce the dorsal hump, rasping is used to guarantee serial reduction in the nasal dorsum. Osteotomy is used in very prominent humpy nasal dorsum to start with and to refine reduction with the rasp.

Results: We have been doing surgery since 2018, and we tried to always change the procedures that we use to the safest possible, in a way that preserves the function and gives the better shape and it can be reproduced easily without complications. During this long period of time, we did almost thousands of cases and we have changed a lot in almost every aspect including the surgical techniques, types of sutures,

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4357

Morphing course for the beginner surgeon - how to plan a successful rhinoplasty and simulation

Yitzhak Izak Golan[1], Lilach Kornblit[1], Pietro Palma[2]

[1]Tel Aviv University, [2]The Face Clinic Milan

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Hi I would like to offer a course intended for residents/ fellows/ surgeons regarding preoperative simulation and morphing in rhinoplasty. The course is based on our paper which has just been published : Morphing of the frontal view - Rhinoplasty as a surface contour surgery .The purpose of the course is to give tools for analysis, setting a game plan for a good simulation and a good game plan - as a rehearsal before surgery. I can give a 20 minutes fundamentals or more if needed. Also I can give an interactive course with iPad in which every participant will bring his/her preoperative photos of a selected patient and morph it according to the presented principles. So 20 minutes + 2o min for practicing.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4054

"Lateral Nasal Wall Cantilever Graft: A Novel Solution for Post-Oncologic Nasal Reconstruction"

Hammaad Khan[1], Yinan Zhu[1], Alison Lim[1], Saleh Okhovat[1]
[1]*Queen Elizabeth University Hospital Glasgow*

Poster Session | Rhinoplasty | 22 June – 25 June, 2025, All day

Aims: to present the Lateral Nasal Wall Cantilever Graft as an effective technique for complex nasal reconstruction following multimodality treatment for sinonasal malignancies. This method restores structural integrity, supports the internal nasal valve, and improves both function and aesthetics in patients with significant bony and cartilaginous loss.

Methods: The technique involves securing an autologous or cadaveric rib graft to the midvault, creating a cantilever mechanism that reinforces the internal nasal valve. Pyriform aperture support is re-established, restoring nasal airflow and contour. We illustrate this approach through case examples and highlight technical pearls for successful application.

Results: Case examples demonstrate improved nasal structure, stability, and airflow post-reconstruction. The graft effectively prevents internal and external nasal valve collapse, providing long-term functional and aesthetic benefits. Patients report enhanced breathing and satisfaction with nasal contour. No significant complications or graft failures were observed.

Conclusions: The Lateral Nasal Wall Cantilever Graft offers a reliable and reproducible solution for complex nasal reconstruction in post-oncologic patients. By restoring nasal support and airflow, this technique addresses key functional and aesthetic challenges associated with sinonasal malignancy treatment. This technique provides a novel, structured approach to nasal reconstruction in challenging cases where conventional methods may be insufficient. By utilizing a cantilever mechanism, it enhances nasal stability and function, offering an effective solution for patients with extensive structural loss following cancer treatment.



Septal and turbinate surgery

3710

Optimizing Intranasal Packing and Splints Following Septoplasty: Weighing Clinical Outcomes and Patient Comfort

Georgi Iliev[1], **Polina Ivanova**[2]

[1]*Transport Hospital Varna*, [2]*Medical University of Varna*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Background: Intranasal packing and splints are commonly used after septoplasty to optimize outcomes, but their impact on patient comfort and necessity for routine use remain debated. This study evaluated the clinical efficacy and patient comfort associated with various packing and splint strategies.

Material and methods: A prospective, randomized study included 98 patients divided into four groups based on postoperative interventions: gauze packing, PVA packing, silicone splints, and transmucosal sutures. Outcomes were assessed through patient questionnaires, clinical follow-up, and statistical analysis of complications, pain, and comfort scores.

Results: Postoperative complications were minimal (3%), with two cases of septal hematoma and one synechiae. Patients treated solely with splints reported lower discomfort (mean score: 2.16 ± 0.77) and pain (mean score: 1.34 ± 0.61) compared to those with packing (discomfort: 3.62 ± 1.04; pain: 2.87 ± 0.90, $p < 0.001$). Silicone splints with air channels enhanced patient comfort and reduced bleeding. Packing removal caused more discomfort and higher bleeding rates, especially with gauze.

Conclusions: Silicone splints with air channels offer a superior balance of efficacy and comfort, reducing the need for routine packing. A selective approach to postoperative care is recommended for improved patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3712

Postoperative Recovery of Mucociliary Clearance: Evaluating the Role of Gauze, PVA Packing, and Splints After Septoplasty

Polina Ivanova[1], Georgi Iliev[2]

[1]Medical University of Varna, [2]Transport Hospital Varna

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Mucociliary clearance (MCC) is a key mechanism in nasal physiology, essential for maintaining respiratory health. Postoperative interventions, such as packing and splints, can influence MCC following rhinological surgeries. This study evaluates the impact of silicone splints, gauze and PVA packings on MCC using the saccharin transit time (STT) test.

Materials and Methods: Ninety-eight patients undergoing (rhino)septoplasty and turbinate surgery were evaluated. MCC was assessed preoperatively and on the 30th postoperative day using the STT test. Patients were grouped in 4 groups by intervention type, including gauze packing, PVA packing, and splints with or without air channels. Smoking status and type of surgery were also analyzed for their influence on MCC.

Results: The average STT improved significantly after surgery, decreasing from 16.3 ± 7.6 minutes to 14.3 ± 6.9 minutes ($p < 0.05$). The greatest improvement was noted in patients treated with transmucosal sutures, splints without air channels, and PVA packing, where STT decreased from 15.6 minutes to 11.76 minutes ($p < 0.05$). Smokers showed prolonged MCC times preoperatively but experienced greater postoperative improvement compared to non-smokers ($p < 0.01$). Patients treated with packing demonstrated shorter MCC times compared to those treated with splints alone, both before and after surgery.

Conclusion: Septoplasty and turbinate surgery significantly improves MCC, with all postoperative interventions supporting this recovery. Patients treated with PVA packing and splints without air channels achieved the best outcomes. Smoking influences MCC preoperatively but does not hinder postoperative improvements. These findings emphasize the role of tailored postoperative care in optimizing surgical outcomes and restoring nasal function.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3728

Nasal drops: risk factor for cartilage defect with intact mucosa bilaterally? A rare case report.

Aikaterini Lianou[1], Dimitra Simou[2], Evangelos Giotakis[3]

[1]Department of Otorhinolaryngology, Primary National Health Network of Ioannina, Ioannina, Greece, *[2]Department of Otorhinolaryngology, Head and Neck Surgery, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece*, *[3]1st Department of Otolaryngology, School of Medicine, National & Kapodistrian University of Athens, "Ippokratio" General Hospital, Athens, Greece.*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Background & Aim: Perforation of the nasal septum is detected incidentally during clinical or radiological examinations. A wide range of possible causes has been documented. We present a rare case of septal cartilage defect with intact mucosa bilaterally, after nasal decongestant abuse.

Case Study: A 74-year-old man presented to our outpatient clinic with difficulty in nasal breathing. Anterior rhinoscopy revealed a scoliosis of the nasal septum to the right. According to his personal history, there were no risk factors such as allergy, smoking, prior nasal injuries, previous nasal surgery, excessive nose-picking behavior or repeated cauterization for epistaxis, except for chronic nasal spray abuse (tramazoline and dexamethasone). He underwent septoplasty under general anesthesia. The septal mucosa was intact. However, upon preparation of muco-perichondrial-periosteal flaps, we identified a defect in the septal cartilage (Fig. 1, 2, 3).

Results: Perforations of the nasal septum associated with misuse of decongestant or steroid sprays, particularly those containing dexamethasone, are frequently reported in the literature. The mechanism may involve vasoconstriction, mucosal atrophy, or persistent inflammation due to overuse, resulting in cartilage deterioration independent of direct injury. Perforation generally occurs after long-term use, accompanied by symptoms such as crusting, epistaxis, or hemorrhage, with inflammation often preceding cartilage destruction. Cases of initially intact mucosa that subsequently develop a septal defect are uncommon and may indicate delayed reporting or early-stage perforations.

Conclusions: Nasal septal perforation is a diagnostic challenge for clinicians due to the wide range of possible causes. Prognosis is primarily influenced by the underlying condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3734

Surgical Experiences: Nasal Foreign Bodies Following Surgery Over 60 Years Ago

Catarina Martins Pinto[1], Maurizio Bignami[2]

[1]Hospital Senhora da Oliveira Guimarães, [2]Ospedale di Circolo e Fondazione Macchi di Varese

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Case Report: A 79-year-old female patient with a history of chronic rhinosinusitis, presenting with complaints of nasal obstruction and headache. The patient has a significant medical history, including chronic obstructive pulmonary disease (COPD), obstructive sleep apnea (OSA) and a previous nasal surgery performed in Italy in 1963. On clinical examination, a neoformation was observed on the lateral wall of the right nasal cavity. A CT scan revealed calcification and thickening in the right nasal cavity. An MRI was subsequently requested, which demonstrated the presence of linear foreign bodies bilaterally. The patient was then scheduled for surgery to remove the foreign bodies. The material removed during surgery was identified as plexiglass (polymethylmethacrylate, PMMA).

Discussion: In the 1960s, many surgical practices were still evolving, with significant experimentation in the use of synthetic materials. The decision to use materials such as PMMA in nasal surgeries was likely driven by the desire to find effective, long-lasting solutions for chronic nasal obstruction and hypertrophy of the turbinates. While PMMA was widely used in various medical fields for implants and prosthetics, its use in nasal surgeries was relatively uncharted territory. At the time, there was limited understanding of the potential for long-term complications, such as chronic inflammation, fibrosis, and nasal obstruction due to retained foreign bodies. This patient experienced progressive symptoms likely exacerbated by the persistent foreign material. Modern rhinology now uses more biocompatible materials and less invasive techniques for turbinectomy and turbinoplasty, reducing the risk of complications. This case illustrates how surgical innovation can lead to unforeseen outcomes and emphasizes the importance of long-term monitoring for experimental procedures. Understanding the historical context helps us appreciate medical advancements and

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3754

Psychiatric Status as a Determinant of Postoperative Sleep Outcomes in Empty Nose Syndrome

Hsiang-An Hsueh[1], Ta-Jen Lee[1], Li-Pang Chuang[2], Chi-Che Huang[1], Yi-Wei Chen[1], Po-Huang Chang[1], Chia-Chen Wu[1], Ya-Cheng Tang[1], Chia-Hsiang Fu[1]

[1]Department of Otolaryngology-Head and Neck Surgery, Linkou Chang Gung Memorial Hospital, Taoyuan, Taiwan, *[2]Sleep Center, Department of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, Taoyuan, Taiwan*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Background: Empty Nose Syndrome (ENS) is characterized by paradoxical nasal obstruction and significant impairments in mental status and sleep function. Reconstructive surgery aims to improve the symptoms and overall well-being of patients with ENS. In this study, we investigated the effects of reconstructive surgery on sleep outcomes in patients with ENS, emphasizing clinically meaningful improvements beyond questionnaire score changes.

Methods: We prospectively enrolled patients with ENS undergoing surgical reconstruction. We assessed patients preoperatively and at 6 months postoperatively, including polysomnography (PSG) and using subjective questionnaires, including the Empty Nose Syndrome 6-item Questionnaire (ENS6Q), Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (EpSS), Beck Depression Inventory-II (BDI-II), and Beck Anxiety Inventory (BAI).

Results: This study enrolled 39 patients undergoing surgical reconstruction. Postoperative ENS6Q, PSQI, EpSS, BDI-II, and BAI scores improved significantly. Patients without postoperative depression were 13 times more likely to achieve clinically meaningful improvements in PSQI scores. The snore index significantly decreased in patients without postoperative anxiety, while other PSG parameters did not show significant changes post-surgery.

Conclusions: Reconstructive surgery significantly alleviates subjective symptoms in ENS patients, while psychiatric status plays a pivotal role in determining sleep outcomes. These findings highlight the importance of a comprehensive treatment approach that integrates both nasal function restoration and psychiatric care for optimizing surgical outcomes in ENS patients.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3835

Effectiveness of reducing inferior turbinate hypertrophy using radiofrequency alone or a combination of radiofrequency and out-fracture in patients with inferior turbinate hypertrophy.

Nafsika Ziavra[1], Polyniki Kastanioudaki[2]

[1]Department of Speech and Language Therapy, School of Helath Sciences, University of Ioannina, Greece, *[2]Department of Medicine, School of Health Sciences, University of Ioannina, Greece*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction (Background & Aim): The purpose of the present study was to compare the effectiveness of reducing inferior turbinate hypertrophy using radiofrequency alone or a combination of radiofrequency and out-fracture in patients with inferior turbinate hypertrophy.

Material & Methods: 46 patients with nasal obstruction due to inferior turbinate hypertrophy and thirty healthy controls were included in the study. The patients were divided into two groups: group 1 included 23 subjects who underwent inferior turbinate reduction with radiofrequency and group 2, also 23 patients who underwent inferior turbinate reduction with combination of radiofrequency and out-fracture. All participants completed validated questionnaires (NOSE and SNOT-22) for assessing nasal obstruction symptom severity and its impact on their quality of life preoperatively and six months postoperatively.

Results: A statistically significant difference was found in the score of the NOSE and SNOT-22 questionnaires between patients and controls ($p < 0.05$). A statistically significant difference was also found in the score of the NOSE and SNOT-22 questionnaires before and 6 months after inferior turbinate reduction. Patients in the second group recorded better improvement of nasal obstruction symptoms and therefore better quality of life.

Conclusion: The combination of radiofrequency and out-fracture for surgical treatment of patients with inferior turbinate hypertrophy better improves the symptom of nasal obstruction postoperatively and should be preferred to the use of radiofrequency only.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3878

A rare clinical case of Septal Perforation in a pediatric patient

Asen Asenov[1], Mila Asenova[2], Ivan Delchev[1], Atanas Tarpov[2]

[1]Medical University of Plovdiv, [2]UMHAT Plovdiv

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Septal perforations are a relatively common pathology in adult patients, but occur rarely in the pediatric population. They can appear asymptomatic or present with nasal obstruction, epistaxis, crusting or whistling. The main clinical and therapeutic aspects of the problem will be discussed and a clinical case of a pediatric patient with a septal perforation will be presented.

Materials and methods: A 14 y patient, who was treated at UMHAT "Plovdiv", complained of difficult nasal breathing, crusting and recurrent episodes of epistaxis. The septal perforation was closed using a flap from the lateral nasal wall with an additional "doughnut technique"- partially effective. A second closure of the perforation was performed using a posterolateral anterior ethmoidal artery flap successfully.

Results: No recurrence on follow-up visits and absence of complains.

Conclusion: Septal perforations are a rare pathology in pediatric patients. It is very important to establish the causative factors of the problem. The surgical approach is similar to those in adults but has to be tailored to the age of the patient.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4170

Particularities of endoscopic approach to septoplasty

Alina Anghel[1], Codrut Sarafoleanu[1]

[1]1. "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania 2. ENT&HNS Department, "Sf. Maria" Clinical Hospital, Bucharest, Romania

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Septal deformities have been implicated as a contributing factor in the development of rhinosinusitis and contact point headaches.

Material and method: A total of 2055 patients were included in a comparative study of endoscopic and conventional septoplasty. The endoscopic technique showed significantly lower risks of surgical complications and induced fewer complications—hemorrhage, mucosal tear, synechiae, persistent deviation, and septal perforation. There was no difference found in surgical length. Postoperative nasal obstruction was lower in endoscopic surgery but varies with the follow-up periods. Functional assessment scores using NOSE and quality of life were similar between the two approaches.

Results: Endoscopic septoplasty is associated with a better outcome in terms of nasal obstruction relief compared to conventional septoplasty. Duration of surgery in minutes shows significantly better results for endoscopic septoplasty with an average duration of 28.08 minutes. Postoperative improvement in the nose score doesn't show a significant difference between endoscopic and conventional septoplasty.

Conclusions: Septal deformity is a common clinical finding in patients reporting nasal obstruction. Septoplasty remains one of the most common rhinologic surgical procedures. Endoscopic septoplasty is a valuable technique in selected cases and offers an alternative to traditional headlight technique, with superior visualization, a lower complication rate, and better outcomes for selected cases.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4229

Middle turbinate retrograde laminectomy for transethmoidal superior meatus accesess: The Daedalus window

Octavio Garaycochea[1], Isam Alobid[3], Camilo Rodriguez Van Strahlen[4], Mauricio Lopez[3], Carlos Prieto[5]

[1]Clínica Universidad de Navarra , [2]Clínica Universidad de Navarra, [3]Hospital Clinic de Barcelona , [4]Hospital Clinic de Barcelona, [5]Clinica Universidad de Navarra

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Within the ethmoid labyrinth, the posterior ethmoid (PE) cell-group is situated posterior to the basal lamella (BL) of the middle turbinate (MT) and communicates with the superior nasal meatus (SM). During FESS, anatomical landmarks in the PE are scarce and difficult to identify given the variability in the number of cells, which may be organized in two or three layers and range from one to eight. The free edge of the superior turbinate (ST) serves as a crucial anatomical landmark within the PE, as it provides the surgeon with orientation concerning the height of the skull base (superior limit) and the position of the sphenoid sinus (medial limit) and its ostium. However, this structure is not always easily identifiable during surgery, and trying to find it sometimes destabilize the MT. Consequently, it is typically sought after most of the PE has been opened and after reaching its most posterior portion. Through a cadaveric and radiological study, along with observations in eight patients who underwent surgery at two different centers, this study presents a surgical maneuver that facilitates the identification of the SM and ST. This technique involves creating a small window (Dedadlos`window) in the sagittal portion of the MT following a specific opening of the BL, while maintaining the integrity of the surrounding PE cells and ensuring stability of the MT.We considered that identifying the SM and ST from the anterior ethmoid, before fully accessing the PE and sphenoid, can be extremely beneficial during FESS within the PE labyrinth

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4242

Nasal Septal Perforation Repair Using the Anterior Ethmoidal Artery Flap: A Revised Endoscopic/Open Approach

Michele Demaria[1], Domenica Giunta[1], Bogdan Iulian Nacu[1], Sveva Introini[1], Roberto Sannasardo[1], Anna Ferrauto[1], Nicolo De Faveri[1], Andrea Zerilli[1], Paolo Carena[2], Fabio Pagella[1]

[1]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, University of Pavia, Pavia, Italy, *[2]Department of Otorhinolaryngology, Fondazione IRCCS Policlinico San Matteo, Pavia, Italy*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Endoscopic surgical repair of nasal septal perforations can be technically challenging, particularly depending on the size, location, and complexity of the perforation, as well as the surgeon's experience. In cases of anterior symptomatic nasal perforations, the use of the anterior ethmoidal artery (AEA) flap has been established as a reliable and effective technique, yielding excellent outcomes. However, the suturing of the AEA flap, particularly anteriorly and superiorly to the perforation, remains a complex task. In this report, we propose a revised approach to the AEA flap, incorporating a hybrid endoscopic and open surgical technique to overcome these challenges.

Materials and Methods: This technique involves the creation of a mucoperichondrial flap, vascularized by the anterior ethmoidal artery, which is extended to the inferior meatus The flap is then advanced anteriorly and translocated through a transcolumellar incision. After the columella is incised, the flap is positioned between the medial crura of the lower lateral cartilages, where it is sutured in place to cover the septal perforation. This hybrid approach, which combines both endoscopic and open surgical techniques, facilitates optimal flap positioning and secure fixation.

Results: All patients who underwent this procedure demonstrated successful closure of the nasal septal perforation, with significant symptomatic improvement and no major complications.

Conclusions: Preliminary results indicate that the proposed hybrid endoscopic/open technique is both simple and highly effective for the repair of anterior nasal septal perforations. This approach offers an advantageous solution for complex cases, with excellent outcomes in terms of perforation closure and symptom control.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4373

Septoplasty waiting list validation using the nasal obstruction symptom evaluation score (NOSE) score: a quality improvement project

Rabii Aboulhosn[1], Fergus Cooper[1], Vamsidhar Vallamkondu[1]
[1]*Department of ENT, Aberdeen Royal Infirmary, Scotland, UK*

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Septoplasty is amongst the most commonly performed ENT procedures in the United Kingdom. However, the coronavirus 2019 pandemic led to a significant reduction in elective operating, resulting in a substantial increase in institutional waiting lists. The Nasal Obstruction Symptom Evaluation (NOSE), a validated patient reported outcome tool, has been recognised as an effective tool in evaluating patients following septoplasty. The objective of this study was to design and implement a septoplasty waiting list validation process incorporating the NOSE score to help triage patients appropriately.

Methods: A structured questionnaire incorporating the NOSE score was designed to validate the local septoplasty waiting list. NOSE scores were collected pre- and postoperatively. Descriptive and correlation statistical testing were used to analyse the data.

Results: A total of 124 patients on the septoplasty waiting list met the inclusion criteria. 34 (27%) patients were removed from the waiting list on initial consultation, of whom majority had a NOSE score ≤30 or had not trialled maximal medical management. 48-month follow-up revealed that 4 patients (18%) required re-listing for septoplasty. The mean NOSE scores improved between pre-operative and post-operative evaluations (56.3, standard deviation [SD] 17.5 vs 23.9, SD 19.9). Higher pre-operative NOSE scores were strongly correlated with an improvement in NOSE scores post-operatively (Spearman's correlation coefficient = 0.755).

Conclusion: The NOSE score is an effective way to validate septoplasty waiting lists. Our study also suggests that higher preoperative disease burden is correlated with a greater improvement in postoperative patient-reported outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4474

The Use of Silastic Septal Buttons for Treating Nasal Septum Perforations; A Five-year Experience.

Alicia Wong[1], Mostafa Mehana[1], Yazan Kannan[1], Marios Stavrakas, Hisham Khalil[2]

[1]University Hospital Plymouth, [2]University Hospital Plymouth

Poster Session | Septal and turbinate surgery | 22 June – 25 June, 2025, All day

Introduction: Symptomatic nasal septal perforations can be managed conservatively, with surgical closure or placement of a septal button. The choice of treatment depends on the size and site of the perforation and patient preference. In our institution, we tend not to recommend surgical closure with perforations in excess of 2 cm in their widest diameter or if the nasal mucosa is unhealthy despite medical treatment.

Methods: This is a retrospective audit of patients fitted with a prefabricated silastic septal button between January 2018 and October 2024. This included a detailed clinical records review and data extraction using a Microsoft Excell spreadsheet.

Results: A total of 77 patients had a septal button inserted over the year period of the audit. (37. Females and 40 males). The average age was 46.82 years (Median = 48 years), The presenting symptoms included crusting, whistling, epistaxis, nasal obstruction, nasal discharge and facial pain/headaches, postnasal drip and abnormal smell. No further Intervention was required in 39 patients (50.64 %) The button was replaced once in 20 patients ((25.97%), replaced multiple times in 4 patients (5.19%), removed in 12 patients (15.58%) and just adjusted in 2 patients (2.59%).

Conclusion: Nasal septal button insertion is an acceptable management option in patients with septal perforation and reasonably-well. Patient counselling is important regarding the possible need for replacement.



Sinonasal malignancy

3615

Case of nasopharyngeal carcinoma with sphenoid sinus extension presenting as severe unilateral headache

Sirinkarn Sookdee[1]

[1]*Department of Otorhinolaryngology, Faculty of Medicine, Burapha University, Chonburi, Thailand*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Nasopharyngeal carcinoma is one of the most challenging cancers to diagnose at the initial presentation. Headache is a rare and misleading symptom in diagnosis. This symptom often indicates sphenoid sinus, skull base lesion or intracranial tumor invasion and is therefore a hallmark of advanced disease and a poor prognosis. In our case, a 62-year-old male came with a severe left-sided headache for 4 days. He had vomiting but no weakness or vision problems. After taking analgesics, he still had a severe headache. An endoscopic examination showed a submucosal lesion at the nasopharynx. CT revealed the enhancing mass over left nasopharynx, across midline to contralateral side, posterior extension to sphenoid sinus and clivus to intracranium including pituitary fossa, bilateral cavernous sinuses, and prepontine cistern. The left cervical node area IIa, V were noted. A nasopharyngeal biopsy was performed and shown as atypical cell infiltration. The immunohistochemical staining analyses are positive for CK5/6, AE1/AE3 and negative for CD45, Synaptophysin, Chromogranin A. The findings indicated nonkeratinizing undifferentiated nasopharyngeal carcinoma T4N2M0. Chemoradiotherapy was performed. The radiation dose is 70 Gy in 33 fractions and chemotherapy is 6 cycles. At 2-year follow-up, the patient showed decreased size of enhancing mass showing heterogeneous hyperSI on T2WI. He had a decreased headache after treatment.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3629

Clinical, Histological and Prognostic Data of Maxillary Ameloblastoma: A Review of the literature

Athina Zarachi[1], Eleni Litsou[3], Angelos Liontos[4], Georgia Karpathiou[7]

[1]Otorhinolaryngologist, head and neck surgeon, private doctor, [2]Private ENT Doctor, [3]Assistant Consaltant of Otorhinolaryngology, [4]Assistant Consultant of Internal Medicine University Hospital of Ioannina, Department of Internal Medicine, 1st Division of Internal Medicine, Ioannina, Greece, [5]Private Doctor, Otorhinolaryngologist, Head and Neck Surgeon, [6]Assistant Consultant of Otorhinolaryngology, [7]Departement of Pathology, University Hospital of Saint- Etienne, Saint- Etienne, France

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Backround: The aim of this report is to thoroughly review the available literature to present the characteristics of maxillary ameloblastoma.

Methods: An extended review of the literature was performed to select information about the clinical, histological and prognostic data of maxillary ameloblastoma.

Results: Maxillary ameloblastoma are rare compared to those arising in the mandible, accounting the 15% of all ameloblastomas. A wide range of ages starting from early childhood has been proposed for these tumors. They have aggressive clinical courses, partially explained by the lack of early symptoms. Symptoms include face deformity, intraoral ulceration, toothache, headache, nasal obstruction, nasal epistaxis, and visual disturbances. The follicular and plexiform are the most frequent histological patterns, followed by the acanthomatous. Immunochemistry helps diagnosis, as the markers CK19, CK13, CK14, CD56, play an important role to this. They show SMO, RAS, and a few BRAF and FGFR2 mutations. Malignant ameloblastoma can have a high proliferation rate of almost 20%. Regarding treatment and prognosis, simple curettage has up to 100% local recurrence. En block resection with the possibility of 10-15mm thickness of normal bone as margin, have shown lower percentages of recurrence.

Conclusion: Maxillary ameloblastomas are rare and not easy to be suspected.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3692

Leptomeningeal Metastasis from Sinonasal Malignancies: Insights from Our Clinical Experience and Management Implications

Heng-Yu Lin[1], Ming-Ying Lan[1]
[1]*Department of Otolaryngology – Head and Neck Surgery, Taipei Veterans General Hospital, Taipei, Taiwan*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Advancements in cancer treatments have improved survival rates for sinonasal malignancies, historically associated with poor prognosis. However, this has led to an increased occurrence of distant metastases, including leptomeningeal metastases (LM), which present complex therapeutic challenges. Despite their clinical significance, studies on LM arising from sinonasal malignancies are limited.

Materials and Methods: We conducted a retrospective case series, analyzing medical records of patients diagnosed with sinonasal malignancies who developed LM at a single tertiary medical center from 2014 to 2022. Clinical data were reviewed, focusing on the interval from initial diagnosis to LM onset, metastatic sites, treatment modalities, and outcomes.

Results: Eight patients were identified, including one pediatric case diagnosed at age 7. Diagnoses included three olfactory neuroblastomas, two sarcomas, and three carcinoma subtypes (INI-1-deficient carcinoma, NUT carcinoma, and sinonasal undifferentiated carcinoma). The mean interval from diagnosis to LM onset was 25 months. Two patients had spinal cord involvement, while six had cerebral and cerebellar metastases. Seven patients received multimodal salvage therapies, including surgery, concurrent chemoradiotherapy, and immunotherapy, while one opted for palliative care due to extensive metastases. Six patients died during follow-up, with an average survival of 17 months following LM diagnosis.

Conclusions: Leptomeningeal metastases from sinonasal malignancies remain a formidable treatment challenge, with a poor prognosis despite aggressive interventions. Further research is needed to improve early diagnosis and develop more effective therapies for this rare yet devastating condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3732

A case report of rare sinonasal haemangioendothelioma

Cherie Seah[1], Jereme Gan[3], Jian Li Tan[4], Jin Keat Siow[3], Bundele Manish[4]

[1]National Healthcare Group Singapore , [2]National Healthcare Group Singapore, [3]Tan Tock Seng Hospital Singapore, [4]Tan Tock Seng Hospital Singapore

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Haemangioendotheliomas are complex vascular neoplasms which have intermediate malignant features with a broad range of subtypes. Composite haemangioendothelioma (CHE) uniquely is diagnosed by the presence of the amalgamation of at least two vascular histological subtypes – retiform, spindle, epithelioid etc., with or without features resembling angiosarcoma. These tumours are locally aggressive but often carry a low risk of metastasis. So far, there have been only 59 published case reports of CHE, most of which involve the subcutaneous layer of distal extremities. In this case report, we discuss an extremely rare occurrence of locally invasive head and neck CHE within the nasal cavity who presented with progressively worsening complete right nasal obstruction. Imaging studies revealed complete opacification of the right nasal cavity by the tumour with invasion the ipsilateral pterygopalatine fossa and ethmoidal air cells, initially thought to resemble a solitary fibrous lesion. Intra-operatively, the tumour stalk was identified at the lateral nasal wall for which complete excision was performed endoscopically. The final histology returned as a vascular lesion with areas resembling angiomatosis and retiform formations, focal spindle and focal epithelioid cells, with borderline malignant transformation to angiosarcoma, consistent with CHE. We aim to discuss the clinical features, relevant investigations and treatment considerations of such a rare tumour.



3764

Down-Regulation of Carcinoembryonic Antigen Cellular Adhesion Molecules Inhibits Migration of Nasopharyngeal Carcinoma Cell via JAK2/STAT3/BST2 Signaling Pathway

ChungHan Hsin[1], Shun-Fa Yang[2]

[1]Department of Otolaryngology, Chung Shan Medical University Hospital, Taichung, Taiwan, [2]Institute of Medicine, Chung Shan Medical University, Taichung, Taiwan

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: nasopharyngeal carcinoma (NPC) is a distinct entity of head and neck malignancy and remains common in some Asian ethnicities. Regional and distant metastases are the main causes of treatment failure in NPC patients following definitive chemo-irradiation.

Material and Methods: Carcinoembryonic antigen cellular adhesion molecules (CEACAMs) are known to participate in various physiological and pathophysiological processes. The role of CEACAM7 in NPC pathogenesis, however, remains unclear. In this study, we investigated the effect of CEACAM7 on NPC progression.

Results: By using tissue array study, we found CEACAM7 was abundantly expressed in human NPC tissues, especially in higher grade malignant tissues. Treatment of higher amount CEACAM7 could inhibit tumor cell migration and invasion, but did not affect cell growth in human NPC cells. We further identified that CEACAM7 positively regulates cell movement by activating the JAK2/STAT3/BST2 signaling pathway. Moreover, co-treated with WP1066 (JAK2/STAT3 Inhibitor) inhibited the CEACAM7-induced cell migratory ability and BST2 expression of NPC cells.

Conclusions: These findings suggest that the CEACAM7/JAK2/STAT3/BST2 axis plays a crucial role in NPC cell migration, highlighting its potential as a therapeutic target for inhibiting NPC metastasis.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3769

Multiple myeloma in ENT region

Mirjana Stracenski- Perge[1]
[1]*General Hospital Sremska Mitrovica, Serbia*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Plasmocytomas are malignant tumors which are characterized by abnormal monoclonal proliferation originating from a single clone. They occur 1.5 times more often in men in the 6-7th decade of life.

The Aim: Case report of a patient who complained of nasal obstruction.

Method: Use of data from medical records.

Result: A 74-year-old male patient was referred for examination by a neurologist. Clinical examination reveals polypoid masses in the right common nasal passage. A nasal endoscopy was performed, followed by a biopsy of the tumor of the right common nasal passage. Pathochistological findings correspond to plasmacytoma. Then a CT of the sinuses was performed. Due to the suspicion of multiple myeloma, the patient was further examined by an internist-oncologist. Secondary diagnostic procedures were performed to rule out or prove systemic disease.

Discussion: After establishing diagnosis of plasmacytoma, CT scan of the sinuses was performed, on which many osteolytic skull bone lesions were seen. In laboratory findings, easily elevated glycemic values, nitrogen substances without calcemia, anemic syndrome of moderate degree, values of hemostasis parameters within normal limits. Bone marrow biopsy- myeloid tissue with regular and uneven cellularity was obtained. Electrophoresis of serum proteins- discrete homogenous band in the gamma fraction. Immunofixation of serum proteins- M component IgG kappa. Immunofixation in 24 hour urin- there is no M component**.**

Conclusion: Due to patohystological findings of plasmacytoma and osteolytic scull bone lesions, according to the criteria of S Vincent Rajkumar, the conditions for establishing a diagnosis of multiple myeloma are met.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3846

Adenoid Cystic Carcinoma of Maxillary Sinus

Karina Rapsa[1]

[1]*Lipex Aesthetic Surgery clinic, Riga, Latvia*

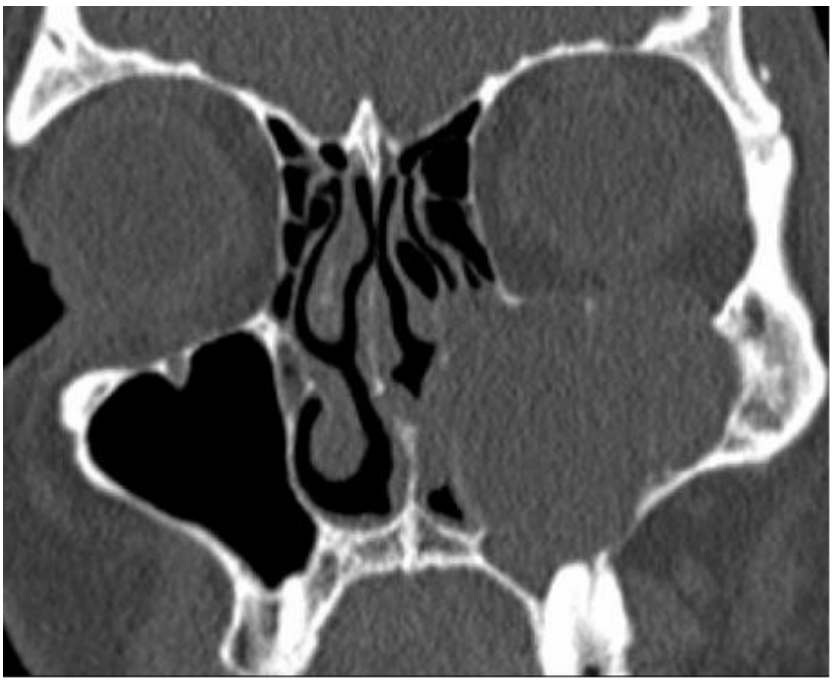
Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Adenoid cystic cartinoma (ACC) is rare epithelial malignancy. ACC localization in paranasal sinuses is rare, with maxillary sinus involved more frequently. Diagnosis is usually delayed due to absence of symptoms, or unspecific nasal symptoms on early stages.

Case description: A 41-year-old man presented to ENT clinic complaining on pressure and pain in his left cheek, pressure sensation in left eye. He also mentioned partial obstruction of the left nasal pathway. In outpatient setting, before visiting our ENT clinic, he had several ENT consultations, sinus X-ray, repeated courses of antibacterial therapy and puncture of left maxillary sinus. On nasal endoscopy medial wall of the maxillary sinus protruded into nasal cavity. On computed tomography (CT) left maxillary sinus was filled with heterogenous mass. Bone defects in lower orbital wall and anterior maxillary sinus wall were visualized. No pathological changes on chest and neck CT. Based on clinical and radiological features diagnosis of invertet papilloma was suspected. Combined approach surgery was performed, including endoscopic sunis surgery and Caldwell-Luc antrostomy. All removed tissue were sent for histopathological examination.

Results: On histopathological examination diagnosis of ACC was confirmed. The patient was referred to oncology department. Adjuvant radiotherapy and chemotherapy based on cisplatin was indicated. On magnetic resonance (MR) 2, 6, and 12 months after the therapy course no pathologic tissue in left maxillary sinus were seen. On ENT follow up visits only mucosal hyperplasia was seen in maxillary sinus.

Conclusion: Tumors of paranasl sinuses have indolent presentation and a delayed diagnosis as consequence. Unilateral process without signs of inflammation should rise suspicion for potential malignancy. X-ray is low informative diagnostic tool for paranasal sinus pathologies. Maxillary sinus puncture should be avoided, besides cases with strong indication to it.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3890

Partial rhinectomy: reconstructing the lower third of the nose

Joana Guincho[1], Ana Martins[2], Luís Baptista[1], Carlota Sousa[1], Francisco Melo[1], Rúben Nogueira[2], Tiago Colaço[1], Beatriz Lança[1], Rui Cabral[1], Pedro Escada[1]

[1]NOVA Medical School, *[2]Unidade Local de Saúde Lisboa Ocidental - Hospital Egas Moniz*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Reconstruction of complex facial defects, particularly in the nose, poses a significant challenge for surgeons and can significantly impact esthetic appearance. For extensive nasal defects, the paramedian forehead flap (PMFF) is considered the best option.

Aim: To describe a new technique for nasal pyramid reconstruction after partial rhinectomy.

Material and Methods: 80-year-old female, with a vegetative lesion in the right nasal vestibule. Histology revealed a moderately differentiated non-keratinizing squamous cell carcinoma. CT scan revealed an infiltrative neoplastic lesion in the right nasal vestibule, measuring 25x20 mm, with medial infiltration of the septal cartilage, collumela and nose tip. Partial rhinectomy with reconstruction using a PMFF was proposed.

Results: Partial rhinectomy was done with tumor excision. Intraoperative pathology confirmed negative margins. We harvested septal cartilage, preserving the L-struct, and used it as a septal extension graft. The columella was covered with bilateral perforator flap of the inferiorly based labial artery and bilateral inferiorly based nasogenian flap (nasogenian artery included). The technique involves an elliptical incision in the superior part of the upper lip, nasofacial sulcus and alar crease. The flap was raised and pulled through the nasal sill into the columellar defect. The donor area of the upper lip was closed above the flap with a lip lift and the nasolabial donor area by bilateral sliding plasties.

Conclusion: Compared to the PMFF, this flap offers a hidden scar in subunit transitions, minimal nasal contour changes, high survival due to its short length and use of a perforator artery, and single-stage procedure.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3893

Malignant tumors of the nasal cavity and paranasal sinuses treated at the Department of Otorhinolaryngology Military University Hospital Prague for the period from 2013 to 2023

Kristyna Maminak[1], Tomas Filipovsky[2], Daniel Kovar[2], Jaromir Astl[2]

[1]Department of otorhinolaryngology and maxillofacial surgery 3rd Faculty of Medicine and Military University Hospital Praguer, [2]3rd Faculty of Medicine, Charles University in Prague

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Malignant tumors of the nasal cavity and paranasal sinuses are a rare and heterogeneous group of malignant tumors, accounting for approximately 3–5 % of malignant tumors in the head and neck region.

Material & Methods: The aim of the study was to retrospectively evaluate a group of patients with malignant tumors of the nasal cavity and paranasal sinuses treated at the Department of Otorhinolaryngology and Maxillofacial Surgery Military University Hospital Prague for the period from 2013 to 2023. We evaluated the histological type of tumor, location, type of treatment, number of recurrences and 5-year survival.

Results: We obtained a set of 29 patients with malignant tumors of the nasal cavity and paranasal sinuses. The most common histological type of malignant tumors was carcinoma, accounting for 72 % of all tumors. Most patients were diagnosed with stage IV (41 %). The most common location of these tumors was the maxillary sinus in 56 %. Surgery was chosen as the primary treatment modality in 72 % of patients. We described recurrence of malignant tumors in 39 % of treated patients. The expected 5-year survival in patients diagnosed between 2013 and 2018 was 50 %.

Conclusion: The average age at diagnosis, gender, recurrence rate, and expected 5-year survival in patients with malignant tumors of the nasal cavity and paransal sinuses are similar in available studies to those in our cohort. However, the percentage of undifferentiated sinonasal carcinomas in our cohort was significantly higher than in the available literature.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3909

Sinonasal Malignant Inverted Papilloma with Extension into the Nasopharynx and Preoperative CSF Fistula: A Case Study

Daniela Vrinceanu[1], Rares Oanca[2], Lorena Adriana Paun[2], Adrian Costache[1], Oana Maria Patrascu[3], Mihai Dumitru[2]

[1]Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, *[2]ENT Department, Emergency University Hospital Bucharest, Romania*, *[3]Pathology Department, Emergency University Hospital Bucharest, Romania*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Sinonasal inverted papilloma has a rapid extension with the destruction of neighboring structures, increased risk of recurrence and potential for malignant transformation.

Materials and method: We present a case of a 49-year-old patient with nasal obstruction syndrome and watery left rhinorrhea, for almost 15 years along with heavy smoking.

Results: The nasal endoscopy revealed a proliferative tumor that occupies the entire left nasal fossa, with a papilloma appearance, extended posterior, with the presence of papilloma lesions on the superior and posterior wall of the nasopharynx. Also, the CT scan revealed at the posterosuperior angle of the nasopharynx a lytic lesion with a CSF fistula. The biopsy revealed an inverted papilloma, with foci of malignancy (squamous carcinoma). The surgical treatment consisted of a combined trans antral and nasal endoscopic approach, with ablation of the mesostructure and partially of the left suprastructure. Conservative treatment was decided for the CSF fistula, with postoperative decompressive lumbar puncture with cessation of rhinoliquorrhea in 11 days postoperatively. Immunohistochemistry revealed p16 marker was negative for epithelial cells, disproving the association with HPV, and Ki67 was positive in 10% of the tumor cells. The patient underwent adjuvant chemoradiotherapy, with tumor remission for 6 months postoperatively.

Conclusions: The particularity of the presented case consists of 15 years of evolution with the extension of the papilloma lesions to the upper and posterior wall of the nasopharynx, as well as the lytic lesions at the base of the skull, with preoperative CSF fistula. Keywords: inverted papilloma, malignant, sinonasal, surgery, CSF fistula

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3986

Chondrosarcoma of the nasal septum

Vladimir Vranjes[1]

[1]*University Clinical Center of the Republic of Srpska Banja Luka*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Chondrosarcomas are non-epithelial malignant, rare, slow-growing tumors, which usually involve the pelvis, ribs and long bones of the extremities, scapula, sternum, and extremely rarely the nasal septum. Etiopathogenesis of chondrosarcoma remains unknown. Early diagnosis of septal chondrosarcoma is difficult due to non-specific sinonasal complaints. CT, MRI and biopsy are standard in diagnosis. The treatment of choice is surgical excision in its entirety, with radiotherapy and chemotherapy having a limited role, reserved for residual or recurrent disease and palliation. Surgical treatment can be the classic, open approach or the more common endoscopic approach today. This case report describes a 61-year-old woman who had progressive nasal obstruction on the left side and blocked lacrimal duct on the same side. Nasal endoscopy showed a nasal mass obstructing both nasal cavities, more to the left, and which could not be separated from the nasal septum. The tumor was completely removed by endoscopic approach. Histopathology indicated moderately differentiated chondrosarcoma. Postoperative radiotherapy and chemotherapy were not performed. The patient is under regular follow-up and there is no evidence of recurrence or distant metastases. Chondrosarcoma of the nasal septum is a extremely rare tumor, often with an asymptomatic course, the treatment of choice is surgical, with a transnasal endoscopic approach that offers the option for complete resection, with regular postoperative radiological and endoscopic monitoring.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4010

Malignant Melanoma of Nasal Cavity: Case Report and Review of the Literature

Mariana Neto[1], Leonor Oliveira[1], Silvia Alves[1], Carla André[1], Luís Antunes[1]
[1]Otorhinolaryngology Service at Hospital Garcia de Orta- Almada, Portugal, [2]Hospital Garcia de Orta

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: The head and neck region presents 55% of mucosal melanomas and of these, 55% are found in the sinonasal region. Sinonasal melanoma represents around 1% of all melanomas and 4-8% of sinonasal malignant tumors. Due to its rarity, the existing literature is scarce.

Materials and methods: Clinical case description using the computerized clinical process. Review of literature using research on PubMed, UpToDate and specific bibliography.

Results: A 72-year-old male patient sought an emergency otorhinolaryngology consultation due to the onset of epistaxis from the left nostril. Upon observation, there was an irregular and bleeding mass on the floor of the left nasal cavity and inferior meatus. A left submandibular mass was palpated, fixed to the deep planes. A biopsy of the nasal mass was performed under local anesthesia which confirmed the diagnosis of malignant melanoma. A computed tomography, magnetic resonance imaging and positron emission tomography were requested for staging. An excision of the nasal fossa lesion and selective left lymph node dissection were performed, as well as adjuvant radiotherapy. According to the literature review, mucosal melanomas generally occur in patients aged between 60 and 80 years. The most frequently reported symptoms are nasal obstruction and epistaxis. The most common locations for nasosinusal mucosal melanomas are the nasal septum and turbinates. The nodal metastasis rate varies between 10 and 50%.

Conclusion: The objective of this work is to recall this infrequent diagnosis of nasal melanoma as a possible cause of epistaxis and to do a review of present bibliography.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4020

Minimally Invasive Endoscopic Resection Of Anterior Skull Base Malignant Neoplasm (MIER)

Sevki Elmoursi[1]

[1]*Al-Mansoura University*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

The development of endoscopic sinus surgery has lead the rhinosurgeon to address sinonasal pathologies in an endoscopic fashion, extending the indications of a purely endoscopic approach to include malignant tumours, Proponents advocate better visualization of the tumour and margins with magnification by the endoscope, improved control of bleeding, with early identification and ligation of the anterior and posterior ethmoidal and sphenopalatine arteries intranasally, and the ability to look “around the corner” using angled scopes, However, there are no universal guidelines on the indications and surgical approaches that, depending on the tumour histology, location, size, and extent of spread the endoscopic skill and knowledge of the surgeon, the entire ventral skull base is accessible using an endonasal approach. This is termed the “expanded endonasal approach (EEA)” and provides access to the anterior, middle, and posterior cranial fossae , The EEA consists of multiple modules that are oriented in sagittal and coronal planes. Sagittal plane modules extend from the frontal sinus to the second cervical vertebra. Coronal plane are divided into anterior, middle, and posterior31 patients with mean age of 54 years underwent MIER. Malignant tumors were managed endoscopically in all cases. Most common histopathologies were squamous cell carcinoma (ten), esthesioneuroblastoma (five), mucosal melanoma (three), and sinonasal undifferentiated carcinoma (eight). Surgical resection with curative intent was performed in all cases, Successful separation of the intracranial and sinonasal compartments and elimination of potential cross contamination are critical components to the success of MIER with low complication rate. Multilayer skull base reconstruction was employed in a majority of the cases, ENDOSCOPIC SURGERY FOR MALIGNANT SINONASAL TUMORS NOT A PIECEMEAL RESECTION BUT TUMOR DISASSEMBLING (P. Nicolai 2012) and Need for a multi-institutional database

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4123

Extracranial meningioma: presentation of a rare case

Vaia Ntrigiou[1], Konstantina Tzima[1], Alexandros Ladias[1], Theognosia Chimona[1], Eleni Tsakiraki[1], Angeliki Pediaditaki[1], Chariton Papadakis[1]

[1]*Chania General Hospital, Chania, Greece*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Meningioma is the most common tumor of the central nervous system. It is formed by arachnoid cells and in the majority of cases, has benign characteristics. However, meningiomasmay, rarely, presentextracranial extension, seriously worsening the prognosis.

Purpose of the Study: Presentation of a rare case of extracranial meningioma with extension to the visceral skull.

Materials and Methods: A male - 54 years old - patient was referred to ENT outpatient clinic, due to a swelling of the right cheek starting from 20 days. Clinically, he presented with a large-sized lesion of the right temporal, zygomatic and buccal region with extension to the buccal mucosa respectively. Imaging study with CT scan, documented the presence of the mentioned lesion, with central fusion and extension to the subtemporal and pterygoid fossa, as well as to the corresponding maxillary sinus.

Results: Tissue samples were taken for histology,the pathological examination of which revealed a malignant neoplasm with features compatible with atypical extracranial meningioma, WHO grade 2.

Conclusion: Atypical (WHO grade II) and anaplastic (WHO grade III) meningiomas account for less than 5% of cases, while extracranial extension is even rarer with an incidence of 0.1%. The histological classification is of great importance in terms of prognosis, the risk of recurrence and the assessment of the necessity for adjuvant radiotherapy or chemotherapy.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4128

DRAF III and Excision of Frontal Tumour

Karamveer Narang[1], Navdeep Bhamra[2], Karan Jolly[1]

[1]University Hospitals Birmingham NHS Trust, [2]Birmingham Women's and Children's NHS Foundation Trust

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Background and Aim: We present an interesting and complex case of a patient with a rapidly fungating sinonasal tumour, requiring a combined external approach and endonasal DRAF III procedure for excision. This case underscores the surgical and oncological challenges associated with aggressive sinonasal malignancies, particularly those involving the frontal sinus and dura.

Case Study: A 53-year-old male presented in September 2023 with a rapidly progressing forehead swelling, later identified as a fungating tumour originating from both the ethmoid and frontal sinuses. An incisional biopsy confirmed an undifferentiated carcinoma. Due to excessive bleeding, an emergency external debulking was performed. The patient then underwent induction chemoradiotherapy, leading to a significant reduction in tumour burden. This was followed by complete surgical resection of residual tumour and postoperative radiotherapy.

Results: Despite gross total macroscopic resection, the patient developed a recurrence in the right lateral recess of the frontal sinus. A second resection was performed, involving the excision of the lesion and a superficial layer of dura. While the supraorbital region was confirmed negative for malignancy, deep dural margins remained positive. The case was re-discussed in the multidisciplinary team (MDT) meeting, and the patient was planned for further dural resection with reconstruction to optimize disease control and improve prognosis.

Conclusions: This case highlights the benefits of neoadjuvant chemotherapy in certain sinonasal malignancies. It underscores the importance of multidisciplinary collaboration, multimodal intervention, and highlights the challenges faced with sinonasal malignancies in anatomically sensitive areas.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4147

The Role of the Riedel-Mosher Procedure in Modern Sinonasal Tumor Management

Catarina Martins Pinto[1], Maurizio Bignami[2]

[1]Hospital Senhora da Oliveira Guimarães, [2]Ospedale di Circolo e Fondazione Macchi di Varese

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Malignant sinonasal tumors are rare and often diagnosed late due to nonspecific symptoms. Sinonasal biphenotypic sarcoma is an uncommon entity expressing both epithelial and mesenchymal markers. Given its infiltrative nature, wide surgical resection is the primary treatment. The Riedel-Mosher procedure, or frontal sinus ablation, involves removing the anterior, posterior, and floor of the frontal sinus, along with anterior ethmoid cells. Though less common today, it remains an option for extensive frontal sinus involvement.

Case Report: A 45-year-old woman presented with nasal obstruction, recurrent epistaxis, and frontal headache. CT imaging showed an expansive mass involving the frontal and ethmoid sinuses, with erosion of the anterior frontal wall. Biopsy confirmed sinonasal biphenotypic sarcoma. Due to the lesion's extent, complete resection via the Riedel-Mosher procedure was performed. Surgical Technique Under general anesthesia, a coronal incision was made, and a pericranial flap was elevated. The anterior, posterior, and floor of the frontal sinus were removed, exposing the dura mater and anterior ethmoid cells. The tumor was fully resected. A second-stage cranioplasty was planned after radiotherapy.

Discussion: The Riedel-Mosher procedure, developed in the early 20th century, is now rarely used due to advancements in minimally invasive surgery. However, in extensive cases, it remains a viable option. Key complications include facial deformity, infections, and cerebrospinal fluid fistulas, requiring careful reconstructive planning.

Conclusion: This case underscores the ongoing relevance of the Riedel-Mosher procedure for disease control. Surgical decisions should consider tumor extent, risks, surgeon expertise, and the feasibility of functional and aesthetic reconstruction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4161

SMARCB1(INI-1)-Deficient Sinonasal Carcinoma: unveiling a rare and aggressive malignancy

Mónica Teixeira[1], Joana Freitas Rebelo[1], Elisabete Torres Branco[1], Leandro Ribeiro[1], Sandra Alves[1], Pedro Oliveira[1]

[1]Unidade Local de Saúde Gaia/Espinho, [2]Department of Otolaryngology, Unidade Local de Saúde Gaia/Espinho, Portugal

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

INTRODUCTIONS: MARCB1 (INI-1)-deficient sinonasal carcinoma (SDSNC) is a rare malignancy first described in 2014. It was recently classified as a distinct entity in the 5th edition of the WHO Classification of Head and Neck Tumors (2022), having previously been categorized under sinonasal undifferentiated carcinoma. Characterized by SMARCB1 gene loss, SDSNC leads to tumorigenesis through dysregulated chromatin remodeling. Most patients present with locally advanced disease, with a propensity for extensive invasion into adjacent structures, particularly the orbits and anterior skull base. SDSNC is associated with high recurrence rates, distant metastasis and poor prognosis, with a median survival of approximately 39 months.

CASE STUDY: A 63-year-old man presented with a three-week history of worsening apathy, psychomotor slowing and hetero-aggressiveness. Computed tomography and magnetic resonance imaging revealed a large expansive anterior skull base lesion extending into the frontal sinuses, ethmoidal cells and entire right nasal cavity, with erosion of the nasal septum, middle and inferior turbinates. Nasal endoscopy biopsy showed sinonasal mucosal infiltration by a solid-pattern tumor. Immunohistochemistry latter confirmed complete SMARCB1 (INI-1) loss, leading to the diagnosis of SDSNC. PET scan found no distant metastasis. The patient passed away one month after admission.

CONCLUSION: SDSNC remains a diagnostic and therapeutic challenge due to its rarity, histopathological overlap with other malignancies and aggressive nature. This case highlights the importance of recognizing this rare entity to ensure an accurate and timely histopathological diagnosis, enabling the prompt initiation of a multimodal treatment approach for improved patient outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4169

Multimodal management of sinonasal carcinosarcoma with intracranial extension: a novel approach.

Victoria Evans[1], Huw Davies[1], Laura Burton[2], Pranter Brahmabhatt[1], Benjamin Stew[1]

[1]University Hospital of Wales, *[2]Princess of Wales Hospital*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Sinonasal carcinosarcomas are rare malignant neoplasms with dual epithelial and mesenchymal histology. Due to their non-specific symptoms, they often present late with poor prognosis; 5 year disease-specific survival is less than 50%. No best practice guidance exists for their management, with only 2 small case series and a handful of case reports in the literature, but they are typically treated surgically with post-operative radiotherapy, as they are often chemoresistant.

Case Study: We present a unique case of a T4bN0M0 nasoethmoid carcinosarcoma with intracranial extension and parenchymal indentation, considered to be highly vascular on imaging. It was treated with pre-operative embolization, followed by 2-stage endoscopic surgical excision including central skull base resection and adjuvant proton beam therapy (PBT). A thorough literature review suggests this is the first documented approach of its kind.

Results: There were no post-operative complications, and following adjuvant PTB there is no evidence of residual or recurrent disease clinically or radiologically. His most significant side effects include weight loss and nausea (grade 3) and radiation dermatitis without desquamation (grade 2). Vision is intact.

Conclusions: Management of this rare malignant tumour depends on a robust MDT approach. In our detailed surgical technique we demonstrate the value of pre-operative embolization, as well as lack of morbidity with an endoscopic resection and multi-layered skull base reconstruction. The use of PTB limits radiation damage to orbital contents and brain parenchyma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4200

Luck is a factor, epistaxis in one side of the nose, in other side carcinoma

Vladimir Ljubic[1], Darja Ljubic[2], Predrag Kavaric[3], Slavica Djurovic[4]

[1]Endoscopic sinus surgery, [2]pediatric, [3]maxillofacial surgery, [4]general ENT, phoniatrics

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Case report: The patient, 65 years old, cardiology patient with a record of three epistaxis in the past year, was admitted to our clinic due to severe epistaxis after being treated in a private clinic. Upon admission, the front retamponade was performed, then the back tamponade. Retamponade was performed on the third day of hospitalization due to bleeding, also she get transfusion (lab findings: Er 2.46, Hgb 77, Hct 0.238). During tamponade, part of the tissue found in the epipharynx was sent to histopathology and the result obtained: Inverted papilloma. A previously performed biopsy in a private clinic resulted in histopathology findings: Sinonasal papilloma (no differentiation, small sample).After the agreement with the attending ENT, it was decided that the patient should undergo FESS to identify the bleeding site and hemostasis. After preparation, under general anesthesia, detamponade was performed, it was found that the lower concha was destroyed and that part was missing, from which active bleeding of medium intensity was found. After removing the remnants of the destroyed conch, cauterization was performed, i.e. hemostasis, and thus the bleeding was stopped. When inspecting the right side, I find that the concha's are hemangiotic, edematous (due to previous tamponade). In the front third, on the lower pole of the middle concha, a smaller field of leukoplakia, about 1 cm long (picture 1). That part of the conch is resected and sent for a PH examination. Obtained PH finding: Carcinoma squamosum conchae medialis. After the preparation, a reoperation was performed in which the resection of the middle concha was performed using the FESS technique. The obtained PH report confirmed that the neoplasm was completely removed in the first act.

Conclusions: This case highlights the importance of thorough investigation and timely surgical intervention in managing severe epistaxis and identifying underlying malignancies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4204

Recurrent epistaxis caused by nasal mucosal melanoma – case report

Katarzyna Męczkowska[1], Magdalena Pilarska[1], Wojeciech Kłos[1], Michalina Bącal[1], Adrianna Cichosz[1]
[1]Department of Otolaryngology, Bielany Hospital Jerzy Popiełuszko, Warsaw, Poland

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introductions: Mucosal melanoma of the nasal cavity and paranasal sinuses is a very rare but aggressive cancer. The most common symptoms of this disease are unilateral nasal blockage and nosebleed.

Case Study: A 74-years-old male came to our department with nosebleed. In the previous two months he had visited the ENT emergency room several times for the same reason, where he had a nasal packing performed. Nasal endoscopy showed a bleeding mass in the left nasal cavity. He had a sinus CT scan which showed an extensive tumor in the left nasal cavity which enhanced heterogeneously after injection of contrast agent and destroyed left inferior and middle turbinates, the nasal septum and medial wall of the left maxillary sinus. An endonasal incisional biopsy was performed and pathology showed malignant melanoma. The patient was referred to Cancer Center where unilateral maxillectomy was performed and adjuvant radiation therapy was offered

Conclusions: Epistaxis can have many causes and one of them are malignant tumors. It's very important to perform detailed diagnostic process including nasal endoscopy and imaging tests in patients with recurrent nosebleeds.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4221

Rare But Relentless: Single-Center Retrospective Series on Mucosal Melanoma of the Nasal Cavity and Paranasal Sinuses

Pedro Barros[1], Ricardo Vaz[2], Patrícia Silva Sousa[3], Carla Pinto Moura[4]

[1]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; Department of Surgery and Physiology, Faculty of Medicine of University of Porto, Porto, Portugal, *[2]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; Unit of Anatomy, Department of Biomedicine, Faculty of Medicine of University of Porto, Porto, Portugal; CINTESIS - Centro de Investigação em Tecnologias e Serviços de Saúde, University of Porto, Porto, Portugal*, *[3]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; Department of Surgery and Physiology, Faculty of Medicine of University of Porto, Porto, Portugal; Department of Otorhinolaryngology, Unidade Local Saúde de Trás-os-Montes e Alto Douro, Vila-Real, Portugal*, *[4]Department of Otorhinolaryngology, Unidade Local Saúde de São João, Porto, Portugal; CINTESIS - Centro de Investigação em Tecnologias e Serviços de Saúde, University of Porto, Porto, Portugal; Department of Genetics, Unidade Local Saúde de São João, Porto, Portugal; Department of Genetics, Faculty of Medicine of University of Porto, Porto, Portugal*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Nasal cavity (NC) and paranasal sinuses (PS) mucosal melanoma is a rare yet aggressive tumor, comprising approximately 1% of all melanomas. Its anatomical location and biological behavior pose significant diagnostic and therapeutic challenges. This malignancy is characterized by high rates of local recurrence and distant metastasis, with 5-year survival rates reported from 20–35%.This study aims to present a case series of patients diagnosed and treated for sinonasal melanoma at a tertiary care center.

Methods: A retrospective review of patients diagnosed with sinonasal melanoma from January 2000 to December 2024 was conducted. Demographics, clinical presentation, histopathology, staging, treatment approaches and outcomes were analyzed.

Results: Eleven cases of primary sinonasal melanoma were reviewed (8 male, 3 female patients; median age at diagnosis: 76 years). Common presenting symptoms included nasal obstruction (87%) and epistaxis (87%), with one patient reporting diplopia. All patients had disease localized to the NC, with two cases extending to the PS. 64% were staged as T3, 27% as T4a and one as T3N1, with cervical lymph node metastases. During follow-up, distant metastases were identified in 6 patients. All patients underwent primary surgical treatment, 45% received adjuvant radiotherapy, 18% immunotherapy. Mean survival was 13.2 months. Only one patient survived beyond five years.

Conclusions: Mucosal sinonasal melanoma carries a poor prognosis and high recurrence rates, underscoring the need for heightened clinical awareness and timely intervention. Further research is needed to better understand its biopathology and improve therapeutic strategies.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4240

Extended endoscopic resection of skull base in case of olfactory neuroblastoma

Aleksandrina Topalova- Shishmanova[1], Karen Dzhambazov[2]

[1]Department of Otorhinolaryngology, Medical University of Plovdiv, Bulgaria, *[2]Department of Otorhinolaryingology, Medical University of Plovdiv, Bulgaria*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Olfactory neuroblastoma, also known as esthesioneuroblastoma is malignant tumour arising from the olfactory epithelium in the superior recess of the nasal cavity. They usually present as a soft tissue mass in the superior olfactory recess involving the anterior and middle ethmoid air cells on one side and extending through the cribriform plate into the anterior cranial fossa. The treatment includes total surgical resection of the tumour, followed by radiation therapy for primary lesion and the addition of chemotherapy for advanced, recurrent, or metastatic stage.

Clinical presentation: We report the case of a 64 years old woman who presented with a 2 years history of progressive nasal obstruction, occasional epistaxis and decreased olfaction. We performed CT, MRT and PET-CT for full imaging diagnosis of extension of tumour mass. The surgical treatment was endoscopic endonasal resection of tumour, cribriform plate and frontal dura. We perform reconstruction of dural defect with fascia. The diagnosis of esthesioneuroblastoma was established by histopathology and confirmed by immunohistochemistry. On staging the mass was classified as a Kadish stage B tumour.

Conclusion: Esthesioneuroblastoma is a rare tumour with unpredictable malignant potential. Its local extension, possibility to advance, recur, and metastasize require a multidisciplinary consideration of clinical behavior and surgical treatment. In our clinical case, we present a non-advanced esthesioneuroblastoma requiring locally extended resection and reconstruction of life- treating structures - the olfactory fossa, anterior skull base, and frontal dura.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4298

Treatment of extranodal nk/t-cell nasal type lymphoma: a systematic review.

Maria Korodima[1], Georgios Grivas[1], Efthimios Kirodimos[2], Spyridon Lygeros[3]

[1]ENT department of "Pammakaristos" Hospital, Athens, Greece, *[2]Department of Otolaryngology-Head and Neck Surgery, Hippokration General Hospital, University of Athens, Athens, Greece*, *[3]Department of Otorhinolaryngology, University Hospital of Patras, Patras, Greece*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: The Extra Nodal Natural Killer/T-cell lymphoma nasal type is a rare condition in western world representing Non Hodgkin Lymphomas at a percentage below 1%. The aim of this review is to present the latest data in literature regarding treatment methods of the disease.

Material and Method: A systematic review of literature was conducted using PubMed/Medline database regarding the treatment modalities of NK/T-cell lymphoma nasal type. Publications and studies of the last five years have been included.

Results: During the last decade, technological advances have resulted in the development of new therapies that led to the improvement of patient's survival rates. The application of radiotherapy and especially the combined modality of radiotherapy and chemotherapy has enhanced the therapeutic outcome at early stage disease. On the other hand, the use of non anthracycline based chemotherapy regimens has improved the survival rates of advanced stage disease patients. Novel treatments such as immunotherapy and targeted therapy seem to be promising.

Conclusion: The last decade, advances have been made regarding the therapeutic options of the disease. Combined radiotherapy and chemotherapy and non anthracycline based chemotherapy regimens are the most significant treatment changes but a lot of research need to be done in order to achieve further improvement of the patient's survival rates especially in advanced disease.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4455

Oncologic rehabilitation after treatment for singnasal cancer

Gregor Bachmann[1]
[1]Parksanatorium Aulendorf

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

In rehabilitation, the aim of the treatment is different as in curative medicine. The process of rehabilitation is not about a disease, which has to be removed. In oncologic rehabilitation for patients with singnasal malignancies, the focus is on learning, on coping, on accepting the new functional prerequisites and on physical training for the re-establishment of well-being. The aim ist to help the patient to find a way back to society, to help for reintegration at work after a long period of sick leave. Rehabilitation does not ask for causal - effect principals, but looks for associations and relations between social life and individual life and vice versa. Classical evidence-based methods are therefore less suitable for the evaluation of oncologic rehabilitation. The presentation on oncologic rehabilitation in rhinology gives an introductions in the field and the current literature accordingly.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4462

Maxillary Sinus Inverted Papilloma with Squamous Cell Carcinoma Transformation – Case Study

Tomás Manteigas Rodrigues[1], Joana Gonilho[1], Tiago Velada[1], Jorge Mexia[1], José Pinto Sousa[1], Herédio Sousa[1]
[1]Department of Otorhinolaryngology - Unidade Local de Saúde São José, EPE

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Inverted Papilloma (IP) is the most common type of Schneiderian or sinonasal papilloma, a unique group of benign lesions arising from the mucosal surfaces of the sinonasal tract. IP originate most commonly in the lateral nasal wall or paranasal sinuses. These lesions have a high rate of local recurrence, potential for local tissue destruction and up to 15% risk of malignant transformation.

Case Study: We report the case of a 54-year-old female patient, smoker, who presented to the emergency department with complaints of left facial swelling for the last 2 weeks, as well as left facial pain and nasal obstruction for the past 2 months. Results: CT and MRI scans revealed a large infiltrating lesion originating from the left maxillary sinus, with extension into the left nasal cavity, orbital floor, erosion of the anterior maxilla wall and invasion of the subcutaneous tissue. Transnasal biopsy of the lesion revealed IP. Surgery was performed via a combined endoscopic and lateral rhinotomy extended by an infra-orbital incision approach. The procedure was completed with no relevant complications. Post-operatively, the patient presented slight ectropion of the left lower eyelid and hypoesthesia of the left malar region. Pathology revealed squamous cell carcinoma (SCC) foci within surgical specimen. The patient was subsequently referred to an oncology centre for adjuvant therapy.

Conclusion: IP with SCC transformation are rare nasal neoplasms in which surgery and adjuvant therapy are the cornerstone of treatment. However, there is no consensus regarding the extent or type of intervention required.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4469

Reconstructive surgery of the nasal pyramid on a patient with sinonasal osteosarcoma

Anda Selma Cretu[1], Irina Gabriela Ionita[2], Andreea Rusescu[2], Catalina Voiosu[2], Viorel Zainea[2], Mara Andra Rebosapca[2], Maria Laura Burlacu[2], Augustina Iurkovski[3], Razvan Hainarosie[2], Oana Ruxandra Alius[2], Andreea Udrea[2], Raluca Pulpa[2]

[1]Institute of Phonoaudiology and Functional ENT Surgery Prof. „Dorin Hociota,Bucharest, Romania, [2]University of Medicine and Pharmacy„Carol Davila" Bucharest, Romania, [3]Carol Davila University of Medicine and Pharmacy Bucharest, Romania

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Osteosarcoma accounts for less than 0,5% of all malignant tumors in the craniofacial region, most commonly affecting the mandible and maxilla, with rare involvement of the ethmoid or sphenoid bone. When these tumors occur in the sinonasal cavity we may have anatomic constraints including close proximity to the skull base and orbits which make obtaining widely clear surgical margins difficult. With a significant proportion of this cases consisting of young people, the prospect of highly morbid or disfiguring surgery may be daunting.

Methods: We present the case of a 33 year old patient diagnosed with nasal osteosarcoma that underwent surgical excision followed by radiotherapy. This case report is intended to present the preoperative and postoperative aspects, as well as the surgical technique used in nasal pyramid reconstruction following treatment of nasal osteosarcoma. We decided on using autologous grafts as they are the most stable choice with the maximum biocompatibility, while the risk of infection or rejection is minimal. In the presented case, costal autograft was elected due to the minimal risk of resorption.

Results: A reconstructive procedure of the nasal pyramid using costal autograft was performed with favorable postoperative results.

Conclusions: The reconstructive techniques must be elected on a case-to-case basis, and focused on achieving best esthetic results without impairing oncological surveillance or the respiratory function. In our presented case, the elected reconstructive procedure was made taking into account two clinicopathological factors: the absence of recurrence and the total excision of the nasal pyramid.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4481

Organ preservation in naso-antral neoplasia

Ranjan Raychowdhury[1], Suman Das[1], Shaoni Sanyal[2]

[1]Ramakrishna Mission Seva Pratishthan Vivekananda Institute of Medical Sciences, [2]HCG Cancer Centre, Newtown, Kolkata

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

INTRODUCTION: Sino-nasal neoplasia account for less than 3% of all head and neck cancers. They tend to present late (T3 or T4) and surgery - either maxillectomy or cranio-facial resection - with adjuvant radiotherapy is the usual management. Knegt et al (2001) reported improved clinical outcomes and survival when less aggressive surgery was combined with topical applications of 5 fluorouracil (5FU). Revercomb et al (2024) recently reviewed the literature and found several groups who published improved outcomes with a similar approach. We present our experience of a modified Knegt protocol in selected cases over the past decade.

METHODS: Following gross removal of tumour by a lateral rhinotomy or an endoscopic approach, the antrum and adjacent surgical field is filled with 5FU cream and packed with 5FU impregnated ribbon gauze.The cavity is debrided every fortnight, with replacement of the gauze, for 12 weeks. Persistent disease is treated with adjuvant radiotherapy

RESULT: Three (adenocarcinoma and inverted papilloma) of our five cases remain well on follow-up. The other two (undifferentiated carcinoma) were lost to follow-up.

CONCLUSION: A randomized controlled trial of any management of sino-nasal neoplasms is unlikely as they are so rare. Surgical debridement with application of topical 5 FU may offer an acceptable treatment in properly selected cases. Such an organ preservation approach avoids the significant morbidity of maxillectomy and radiotherapy

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4488

Surgical Management of Adenoid Cystic Carcinoma of the Sinonasal Tract

Mara-Andra Rebosapca[1], Irina-Gabriela Ionita[3], Catalina Voiosu[3], Oana Raluca Pulpa[3], Andreea Rusescu[3], Ruxandra Oana Alius[3], Viorel Zainea[4], Razvan Hainarosie[3], Anda Selma Cretu[3], Andreea Udrea[3], Augustina Iurkovski[3], Laura Maria Burlacu[3], Andreea Teofana Carazanu[1], Carina Russescu[1]

[1]Institute of Phonoaudiology and Functional ENT Surgery Prof. ,,Dorin Hociota,Bucharest, Romania, [2]University of Medicine and Pharmacy ,, Carol Davila" Bucharest, Romania, [3]University of Medicine and Pharmacy ,,Carol Davila" Bucharest, Romania, [4]University of Medicine and Pharmacy ,,Carol Davila" Bucharest

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: The adenoid cystic carcinoma accounts for approximately 1% of all malignancies of the head and neck region. Due to its rare occurrence in the sinonasal area, limited data on managing patients with advanced disease is available.

Materials and Methods: A 64-year-old female patient with a history of paranasal sinus adenoid cystic carcinoma (ACC) surgically removed and subsequent proton therapy 9 years prior to the current examination presented progressive chronic nasal obstruction, mild left exophthalmia, and intermittent ipsilateral retro-orbital pain. A contrast MRI revealed a tumoral mass in the middle meatus associating sphenoid-ethmoidal and orbital extension. The first biopsy confirmed the ACC. Subsequently, extensive endoscopic resection of the tumor was performed with no signs of late recurrence for the past 9 years up to the present moment when a new biopsy revealed a late relapse with ipsilateral orbital extension.

Results: Surgical treatment included an orbital exenteration and an eyelidplasty to correct the defect. Due to previous radiation, local dehiscence was identified. Consequently, a medio-frontal flap was later used to repair the subsequent defect. Favorable evolution and complete integration were reported.

Conclusion: The ACC is an uncommon pathology with limited associated data, especially in the sinonasal area. Characterized by an insidious growth pattern and a tendency for perineural spread along major and minor nerves, many patients present with advanced disease with involvement of critical structures, making treatment difficult and potentially morbid. Keywords: adenoid cystic carcinoma, orbital exenteration, late recurrence carcinoma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4510

Atypical Metastatic Spread of Sinonasal Adenocarcinoma: Sudden Sensorineural Hearing Loss as the First Manifestation of Leptomeningeal Carcinomatosis and Internal Auditory Canal Metastasis

Joana Dias[1], Rafael Pires[1], Filipa Ferreira[1], Leonor Oliveira[1], Ana Miguel Couto[1], Filipa Castelão[2], Lisete Santos[1], Carla André[1], Helena Rosa[1], Henrique Teixeira[1], Luís Antunes[1]

[1]Otorhinolaryngology Department, Hospital Garcia de Orta, Unidade Local de Saúde Almada-Seixal, 2805-267 Almada, Portugal., *[2]Neuroradiology Department, Hospital Garcia de Orta, Unidade Local de Saúde Almada-Seixal, 2805-267 Almada, Portugal*, *[3]Otorhinolaryngology Department, Hospital Garcia de Orta, Unidade Local de Saúde Almada-Seixal, 2805-267 Almada, Portugal*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Sinonasal adenocarcinoma is a rare malignancy with a tendency for local invasion and a low incidence of distant metastasis. When metastasis occur, they commonly affect the lungs, bones, or brain. Internal auditory canal (IAC) involvement in the context of leptomeningeal carcinomatosis (LMC) is extremely rare and may initially present with sudden sensorineural hearing loss (SSNHL), posing a diagnostic challenge. Herein, we report a rare case of SSNHL as the initial manifestation of IAC metastasis of sinonasal adenocarcinoma.

Case Study: Data from the patient clinical registries was collected, and a literature research in PubMed was conducted.

Results: A 59-year-old male with a history of intestinal-type sinonasal adenocarcinoma (diagnosed in 2015, recurrence in 2020: cT4bN0M0) presented with acute left-sided hearing loss, vertigo, nausea, and holocranial headache. He had undergone surgical resection, chemotherapy, and radiotherapy. Otoscopy was unremarkable, and audiometry confirmed moderate-to-severe left-sided SSNHL. Spontaneous horizontal right nystagmus and a bilaterally positive head impulse test were observed. MRI revealed leptomeningeal enhancement in the left superior cerebellar hemisphere and IAC gadolinium enhancement, consistent with metastatic disease. A full-body CT scan showed no additional metastasis. The patient was referred for palliative treatment and died six weeks later.

Conclusions: IAC metastasis from sinonasal malignancies is extremely rare but should be considered in oncology patients presenting with SSNHL. MRI is crucial for early diagnosis, as intracranial involvement presents a poor prognosis despite available treatment options. Overall, this case highlights the importance of recognizing atypical metastatic spread in sinonasal adenocarcinoma, particularly to the IAC due to LMC.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4525

HPV-related multiphenotypic sinonasal carcinoma with orbital involvement: a case report

Cláudia Rosa[1], Mariana Caetano[1], Mariana Correia[1], Bernardo Baptista[1], Ana Rita Santos[1], César Silva[1], Mariana Calha[1], Vitor Oliveira[1], Tiago Eça[1], Leonel Luís[1]
[1]Unidade Local de Saúde Santa Maria

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: HPV-related multiphenotypic sinonasal carcinoma (HMSC) is a rare malignant neoplasm exclusively affecting the sinonasal region, strongly linked to high-risk HPV, particularly type 33. While local progression is slow, the risk of local recurrence is high (36%). Although uncommon, lacrimal or orbital involvement has been documented. Surgical resection with clear margins is the recommended primary treatment.

Methods: Review of the clinical records and iconography of a case of HMSC with orbital involvement.

Results: We present the case of a 43-year-old female patient with 1-month nasal obstruction and recurrent epistaxis. Nasal endoscopy revealed an extensive exophytic lesion centered in the middle meatus. Imaging showed a 46x34 mm expansile lesion with remodeling of the medial orbital wall, without nodal or distant disease. The biopsy revealed a non-keratinizing squamous cell carcinoma associated with HPV, staged as cT3N0M0. Due to its histological features, endonasal endoscopic surgery included lesion excision with periorbital resection. Histopathological analysis confirmed HMSC with HPV 33 genotyping. The patient was referred for adjuvant radiotherapy.

Conclusion: This case highlights the rare association of HMSC with extensive orbital invasion. Given the potential for multidirectional differentiation, complete en bloc excision may impact the final diagnosis. Larger case series are needed to refine prognostic assessment and optimize treatment strategies for these tumors.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4541

Primary tumours of the sphenoid sinus: A case series

Rim Braham[1], Skander Kedous[1], Mohamed Daha[1], Youssef Makhlouf[1], Alia Methnani[1], Souheil Jbali[1], Sawssen Dhambri[1], Mohamed Wjeden Trabelsi

[1]Head and neck surgery department of Salah Azaeiz Oncology Institute-Tunis

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: The sphenoidal location of nasosinus tumors is rare and feared. Objective: Describe the clinical presentation, radiological and histopathological features of sphenoid sinuses tumors (SST).

Methods: Medical records of patients diagnosed with SST between 01/2020 and 10/2024 were retrospectively reviewed. All biopsies were performed by endonasale approach. Pathological examinations were performed in the pathology department of our institution.

Results: Ten patients met the inclusion criteria (sex-ratio=1.5), median age= 49 years [28-69]). Presenting manifestations were mainly neurological (facial nevralgia in 1 patients, diplopia in 1 and headaches in 7), nasal obstruction and bleeding in 3 patients, otological symptoms (repeated otitis media) in 1 patient. The median consultation delay was 7 months [1-24]. Imaging showed a tumor centered on clivus in 3 patients, Pterygoïd process and greater wing in 1 and the body of the sphenoid bone in 2 patients. Images of osseous lysis were observed in 6 and intracranial extensions in 2 patients. Histopathological examination concluded: chordoma (1 patient), undiffereciated sinonasal carcinoma (2 patients), low grade papillary nasopharyngeal adenocarcinoma (1 patient) , chondrosarcoma (2 patients), intestinal adenocarcinoma (2 patients) and meningioma (1 patient) . Distant metastases were ruled out. Two patients with adenocarcinoma were operated. In the remaining cases the tumor was managed by chemoradiation therapy in 4 patients and exclusive radiation therapy in patients 3. Abstinance was opted for one patient.

Conclusion: Due to the misleading clinical presentation, TSS are usually diagnosed at a locally advanced stage. Management is difficult due to the anatomic complexity of the sphenoid bone.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4287

Risk Factors for Cervical Lymph Node Involvement in Sinonasal Cancer

Konstantinos Choulakis[1], Bronagh Lang[1], Chee Samuel Leong[1], Owais Khattak[1]
[1]*Aintree University Hospital*

Poster Session | Sinonasal malignancy | 22 June – 25 June, 2025, All day

Introduction: Sinonasal cancer (SNC) comprises 2–5% of all upper respiratory tract malignancies. According to current UK guidelines, neck dissection is recommended only for clinically positive cervical lymph nodes, though some institutions advocate for elective neck dissection in select cases. This study aims to identify tumour characteristics associated with cervical lymph node involvement.

Materials and Methods: A retrospective analysis was conducted on 181 patients with SNC treated at the Liverpool Head and Neck Centre, between 1 January , 2014, and 31 December, 2023. Data on tumour staging, histological subtype, primary site, and cervical lymph node involvement were collected. Patients with recurrent disease treated at external institutions were excluded. Fisher's exact test and odds ratios were employed to evaluate associations between tumour characteristics and cervical lymph node involvement.

Results: A trend toward increased cervical lymph node involvement was observed with advancing T stage; however, this association did not reach statistical significance. Similarly, histological subtype did not demonstrate a significant correlation with lymphatic spread. Notably, maxillary sinus tumours exhibited a statistically significant odds ratio of 2.63 for cervical lymph node involvement compared to other SNC sites.

Conclusion: Maxillary sinus malignancies are significantly associated with cervical lymph node involvement. Although, no statistically significant correlation was identified between T staging and nodal metastasis, it is clinically significant that T4a staged cancer presents higher probability of lymph node involvement. Therefore, considering the inevitability of neck access for appropriate surgical reconstruction, elective unilateral neck dissection should be considered in all cases with T4a maxillary sinus cancer.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Skull base surgery

3627

Where Skull Base Osteoradionecrosis and Hemophagocytic lymphohistiocytosis meet – all but a mere coincidence?

Cheng Yit Zachary Kok[1], Jian Li Tan[2], Yijin Jereme Gan[2]

[1]Ministry Of Health Holdings, Singapore, *[2]National Healthcare Group, Singapore*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: This case discusses a 59 years Chinese Male diagnosed with skull base osteoradionecrosis (ORN) complicated by skull base osteomyelitis (SBOM).

Case: This patient was diagnosed with nasopharyngeal carcinoma in 2014 and underwent radiotherapy for 5 days in 2014 and another 32 cycles of radiotherapy with another 2 cycles of chemotherapy with in 2016-2017. He subsequently presented to Otorhinolaryngology in Singapore in 2020 for persistent headaches, right hearing impairment, mucopurulent discharge and right-sided epistaxis twice a year. A magnetic resonance imaging (MRI) scan of the neck and post nasal space revealed focal soft tissue defect at the posterior nasopharyngeal wall with clival erosion and patchy enhancement of the central skull base suggestive of ORN. He was treated conservatively with analgesia, nasal douches and initiated on the PENTOCLO protocol. He then had two episodes of SBOM in 2023 presenting with worsening headaches, fevers and extracranial swellings requiring admission for prolonged intravenous antibiotics. An elective endoscopic debridement of the necrotic bone and nasoseptal flap reconstruction was performed for him due to the persistent symptoms and recurrent presentations of SBOM and was discharged well. However, he was readmitted for persistent fevers and rising serum inflammatory markers in 2024 and was diagnosed with hemophagocytic lymphohistiocytosis likely secondary to sepsis. He developed multi-organ failure and eventually demised.

Discussion: Skull base ORN continues to be a challenge to manage. In the correct setting, a pedicled/free flap can be considered. Early recognition of and treatment initiation for life-threatening conditions such as SBOM and HLH is also crucial.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3880

Giant sphenoidal meningoencephalocele: resection via transpterygoid approach.

Paula Aldaz Bernad[1], Blanca Mateos Serrano[2], Carolina Alfonso Carrillo[1], Coloma Grau-Van Laak[1], Beatriz Arana Fernández[1], Javier Gavilán Bouzas[1]

[1]SEORL, [2]La Paz University Hospital

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: Nasal meningoencephalocele is a rare lesion involving herniation of the meninges and brain into the nasosinusal region through a bony defect in the skull base. The most common symptoms are cerebrospinal fluid (CSF) leakage through the nasal cavity and headaches, but it can also lead to meningitis in cases of superinfection. The primary treatment is surgical repair via endoscopic nasal surgery.

Materials and Methods: We present a case of a 31-year-old male diagnosed with meningoencephalocele 5 years ago, with a history of bacterial meningitis caused by Haemophilus influenzae. The patient reported chronic headaches, right nasal obstruction, and occasional watery rhinorrhea. Imaging studies revealed herniation of brain content through the right sphenoid wing. The lesion extended into the pterygopalatine fossa, infratemporal space, and nasopharynx. The patient underwent endoscopic resection using a right transpterygoid approach, with preoperative intracranial pressure (ICP) measurement of 27 cm H_2O.

Results: Surgery involved sphenoidotomy, resection of the pterygoid process, and closure of the defect with a right nasoseptal flap. Postoperative recovery was uneventful, with the exception of persistent headaches, requiring placement of a ventriculoperitoneal shunt 12 days post-surgery. The patient was discharged without complications, and a follow-up at 2 months showed no CSF leakage.

Conclusions: Nasal meningoencephalocele is a rare condition that can cause significant symptoms, including CSF leakage and meningitis. Early surgical intervention is crucial for successful management. Intracranial pressure control is important to prevent recurrence, and appropriate follow-up ensures favorable outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3917

Tension pneumocephalus on a background of lateral recess encephalocele

Margaret Zhang[1], Khang Wen Pang[2], Sun Ira[3], Low Terese[2]

[1]National University Hospital & Ng Teng Fong General Hospital, [2]National University Hospital/ Ng Teng Fong General Hospital, [3]Ng Teng Fong General Hospital

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Background: Lateral sphenoid recess encephalocele is a rare condition that can present with diverse and severe complications.

Case presentation: We present the case of a 66-year-old female with a background of diabetes mellitus who presented with altered mental status (AMS) and fever. Upon arrival at the emergency department, she developed a generalized seizure, which was aborted with lorazepam. Non-contrast CT brain was unremarkable, prompting an unsuccessful lumbar puncture. Following the procedure, significant pneumocephalus was identified on imaging, along with a focal dehiscence of the left lateral recess bony roof and herniation of brain tissue. Due to ongoing cerebrospinal fluid (CSF) rhinorrhea and recurrent pneumocephalus, the patient underwent transpterygoid endonasal repair of the skull base defect using a nasoseptal flap and duragen-muscle graft. The patient's neurological status gradually improved and there was no further CSF leak.

Discussion: This case highlights the importance of recognizing skull base defects as a potential source of recurrent CSF rhinorrhea and pneumocephalus, particularly in the context of prior invasive procedures. Ohkawa et al published a similar report in their 2010 paper. The pathophysiology of both theirs and our case is postulated to be that the bony defect in the lateral recess likely created a direct pathway for air entry into the lateral ventricles. The patient's prior ventriculoperitoneal shunt may have contributed by lowering intracranial pressure, promoting the ingress of air and leading to intraventricular tension pneumocephalus.

Conclusion: Multidisciplinary management and timely surgical intervention are critical for optimal outcomes. A lumbar puncture could potentially exacerbate the condition.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4037

Multilayer Endoscopic Skull Base Reconstruction Using Temporal Fascia and Nasoseptal Flap: A Retrospective Analysis

Marcel Marjanovic Kavanagh[1], Vjerislav Peterković[2], Katarina Đurić Vuković[1], Hrvoje Barić[2], Goran Mrak[2]

[1]Department of ENT, Head nad Neck Surgery, KBC Zagreb, *[2]Department of Neurosurgery, KBC Zagreb*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: Endoscopic endonasal approaches have become the gold standard for accessing skull base lesions, necessitating effective multilayered reconstruction techniques to prevent complications, particularly cerebrospinal fluid (CSF) leaks. Standard practice involves using fascia lata as the primary graft beneath the nasoseptal flap. However, in our study, temporal fascia was utilized instead of fascia lata as the deep layer in reconstruction. This study evaluates postoperative CSF leak rates, operative duration, and graft dimensions following this approach.

Material & Methods: A retrospective analysis was conducted on 30 patients (18 males, 12 females, age range 19–75 years) who underwent endoscopic endonasal skull base surgery between 2018 and 2024. Diagnoses included pituitary adenomas, craniopharyngiomas, chordomas, and arachnoid cysts. In all cases, nasoseptal flap was used as the outermost layer of reconstruction, while temporal fascia was placed as the deep reinforcement layer, replacing the more commonly used fascia lata. The temporal fascia graft size ranged from 4x5 cm to 7.5x7.5 cm. Data collected included operative duration, postoperative complications, and CSF leak rates.

Results: Among the 30 patients, no cases of postoperative CSF leaks were observed, suggesting that temporal fascia may be a viable alternative to fascia lata in multilayer reconstruction. The mean operative time ranged from 90 to 540 minutes, depending on pathology complexity. Two patients developed permanent paresis of the frontal branch of the facial nerve, while one experienced transient paresis that resolved over time. No donor site infections or significant morbidity were recorded.

Conclusions: Our experience demonstrates that temporal fascia can be effectively used instead of fascia lata as the deep layer in multilayered skull base reconstruction, in combination with the nasoseptal flap. This approach yielded a 0% postoperative CSF leak rate, suggesting

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4095

Petrous Apex Cholesterol Granuloma: an endoscopic transsphenoidal approach

Carlota Sousa[1], Joana Guincho[1], Tiago Colaço[1], Luís Castelhano[1], Mariana Donato[1], Pedro Escada[1]
[1]ENT department Unidade de Saude Local Lisboa Ocidental

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Cholesterol granulomas (CG) are rare, benign cysts, primarily located in the petrous apex. Because of their expanding nature with risk of vital structure compromise, surgical removal might be indicated. We present a literature review and clinical case (with video) of a 27-year-old woman who visited the emergency department for right conductive hearing loss and self-limited episodes of intense right frontal and periorbital headache, accompanied by blurred vision and diplopia. Imaging showed a 29 mm well-defined, round expansive lesion adjacent to the carotid artery molding the right clivus side and the posterior wall of the right sphenoid sinus. After a multidisciplinary assessment (Neurosurgery, ENT and Neuroradiology) surgical treatment was preferred due to the lesion's location, size and associated symptoms. Endoscopic endonasal transsphenoidal and partial transclival approach was performed with intraoperatory neuronavigation and a doppler probe for vascular monitoring. Drillage along the sphenoidal rostrum and the intersphenoidal septum revealed a bulging area with yellowish mucosal discoloration, in the posterior wall of the right sphenoidal sinus, consistent with CG. The CG was drained and the capsule dissected. Excision required drillage of the basisphenoid, part of the clivus and part of the right pterygoid process. 13 months post-op the patient is asymptomatic with a patent cavity and no signs of recurrence. Lesions of petrous apex are difficult to reach, deep in the skull base and surrounded by vital structures, causing debilitating symptoms. Imaging does not always give a conclusive diagnose. Therefore, it's of vital importance to handle these cases with a multidisciplinary team to ensure better outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4143

Spontaneous Cerebrospinal Fluid (CSF) Leak: A Single-Center Retrospective Analysis at Zagreb University Hospital Centre

Marcel Marjanović Kavanagh[1]

[1]*Department of ENT, Head and Neck Surgery, KBC Zagreb, Croatia*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction (Background & Aim): Spontaneous cerebrospinal fluid (CSF) leak occurs when CSF escapes through a skull base defect without an obvious cause, often leading to misdiagnosis and posing significant risks. It also has the highest recurrence rate among CSF leaks.

Material & Methods: A retrospective analysis was conducted on spontaneous CSF leak cases treated at the Department of ENT and Head and Neck Surgery, Zagreb University Hospital Centre between 2014 and 2024. Data included patient demographics, symptoms, diagnostic modalities, surgical techniques, and postoperative outcomes.

Results: Six female patients met the inclusion criteria. Four presented with unilateral clear nasal discharge, two with no additional symptoms. Three patients reported headaches, and one had meningitis without prior nasal discharge. The mean time to diagnosis was 5.5 months, with one case taking 12 months. All patients tested positive for β-2 transferrin. Imaging identified leakage in 83% of cases. Intrathecal fluorescein was used in 50%. All underwent endonasal repair: four defects were on the cribriform plate, two in the sphenoid sinus. Reconstruction involved autologous tissue (abdominal fat, nasoseptal flap, fascia lata, medial turbinate) and artificial materials (oxidized regenerated cellulose, fibrin sealant patch, gelatin sponge). Postoperatively, 83% had no recurrence, while one had asymptomatic dehiscence.

Conclusions: Spontaneous CSF leak predominantly affects females and presents diagnostic challenges. Endonasal repair using autologous and artificial materials is effective, with a high success rate and minimal recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4145

Post-operative sinonasal functional outcomes in 60 patients undergoing transnasal endoscopic surgery for skull base pathology in a referral center.

Alessia Giorli[1], Giorgia Giunta[2], Giacomo Sollini[1], Matteo Zoli[3], Diego Mazzatenta[3], Ernesto Pasquini[1]

[1]Otolaryngology and Head and Neck Surgery Unit, Bellaria Hospital, Department of Specialist Surgery, AUSL Bologna, 40139, Bologna, Italy, *[2]UOC Otorinolaringoiatria – AOU Policlinico "G. Rodolico – S. Marco" – Università degli Studi di Catania - Catania (Italy)*, *[3]Department of Bio-Medical and Neuromotor Sciences (DIBINEM), University of Bologna, 40138, Bologna, Italy; IRCCS Istituto delle Scienze Neurologiche di Bologna, Programma Neurochirurgia Ipofisi-Pituitary Unit, 40139, Bologna, Italy*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

RATIONALE: Over the last 20 years, transnasal endoscopic surgery has increasingly replaced traditional transcranial and craniofacial techniques for anterior skull base and pituitary pathologies, through collaboration between otolaryngologists and neurosurgeons. This approach provides a direct access, reducing postoperative morbidity and mortality. However, concerns remain regarding its impact on post-operative sinonasal functional outcomes. Our main aim is to assess sinonasal outcomes of transnasal endoscopic surgery. Secondary objectives include evaluating relationships between functional outcomes, pathology type, and skull base reconstruction.

MATERIALS AND METHODS: This prospective study included 60 adults undergoing transnasal endoscopic surgery for skull base disease. Only 14 patients had sinonasal inflammatory burden before surgery. Patients were evaluated preoperatively (T0) and at 1-2 months (T1) and 6–9 months (T2). Nasal function was measured using Lund-Kennedy score, VAS (nasal obstruction, rhinorrhea, facial pain, sleep, olfaction), SNOT-22, Sniffin' Sticks, and PNIF.

RESULTS: At T1, nasal obstruction improved significantly ($p<0.005$), with no change in olfaction ($p=0.483$), reduced facial pain ($p=0.013$), and slight improvement in sleep ($p=0.119$). These improvements were maintained and SNOT-22 improved at T2. No worsening of nasal functioning was observed. No long-term impairment of sinonasal function was noted even in extended approaches and/or major reconstructions (e.g. transturberculum-transplanum approaches; nasoseptal flap).

CONCLUSIONS: Transnasal endoscopic surgery for skull base pathologies not only offers excellent results in terms of healing and disease control, but also allows a positive or neutral impact on sinonasal patency and quality of life, depending on the preoperative sinonasal conditions, confirming the importance of ENT-neurosurgeons cooperation in endoscopic skull base surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4235

Case study: Skull Base Osteoma with Orbital Extension

Antoinette Yeung[1], Anat Wengier[1], Shahzada Ahmed[1], Reena Kumari[1]
[1]*Queen Elizabeth Hospital Birmingham*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: Osteomas are benign, commonly incidental tumours, but their anatomical location and size can present significant surgical challenges.

Case Study: A 25-year-old female presented with right-sided proptosis, medial eye swelling, and progressive visual loss. CT imaging identified an osteoma originating from the orbital plate of the right ethmoid sinus, extending into the superior orbit and ethmoid air cells. The case was reviewed at a skull base multidisciplinary team meeting and a combined endonasal and transorbital approach under image guidance was recommended, involving both ENT and ophthalmology specialists. This novel technique required careful consideration of the resection extent to balance complete tumour removal with the risk of iatrogenic cerebrospinal fluid (CSF) leak.

Results: The patient developed a CSF leak on post operative day (POD) 1 and this resolved spontaneously by POD 3 with conservative management. Visual symptoms improved, and the patient was discharged without further complications.

Conclusion: The orbital extension of the osteoma necessitated a combined external and endonasal approach for complete resection, minimizing the risk of regrowth. While the risk of CSF leak remains a serious concern, prompt management can prevent major complications. This case highlights the challenges in managing orbital osteomas with complex anatomical involvement.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4288

Surgical Corridor in Endoscopic Endonasal Skull Base Surgery: The Utility of the Superior Nasal Meatus Approach

Mami Matsunaga[1], Kengo Oe[1], Yuji Kitada[1], Masahiro Kikuchi[2], Takayuki Nakagawa[1]

[1]Department of Otolaryngology, Head and Neck Surgery Kyoto University, [2]Department of Otolaryngology, Head and Neck Surgery, Kobe City Medical Center General Hospital.

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: With advancements in surgical equipment, endoscopic endonasal skull base surgery has significantly expanded. Since the establishment of our Skull Base Tumor Center in 2015, we have collaborated with neurosurgeons and otolaryngologists to perform these procedures. Otolaryngologists play a key role in creating a surgical corridor while preserving nasal function. While the middle nasal meatus approach is widely recognized for ethmoid sinus opening, we adopt the superior nasal meatus approach, selectively opening only the posterior ethmoid sinus, and in combination with a wide sphenoidotomy, constructing an optimal surgical corridor.

Methods: We describe the surgical technique of the superior nasal meatus approach using intraoperative video documentation and assess the potential operative field achievable through this approach by analyzing CT images. Additionally, we evaluate its utility: 1. Olfactory preservation – Comparison of pre- and postoperative mean recognition thresholds of T&T olfactory test. 2. Iatrogenic sinusitis – Evaluation of the incidence of iatrogenic sinusitis using pre- and postoperative imaging.

Results: A total of 65 cases were analyzed, including pituitary neuroendocrine tumor (43), craniopharyngioma (9), Rathke's cyst (5), chordoma (3), hypophysitis (3), meningioma (1), and cyst of the anterior clinoid process (1). Olfactory function of 20 patients was well preserved postoperatively (T&T mean recognition thresholds: preoperative right 1.33/left 1.45 → postoperative right 1.55/left 1.65 (right p=0.32, left p=0.48). Postoperative sinusitis occurred in only one case (1.53%).

Conclusions: The superior nasal meatus approach effectively secures the surgical field while preserving nasal function, making it a valuable technique in endoscopic endonasal skull base surgery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4335

Transethmoidal Meningoencephalocele: A Case Report

Catarina Martins Pinto[1], Francisco M Silva[1], Rui Fonseca[1]
[1]*Hospital Senhora da Oliveira Guimarães*

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Background: Meningoencephalocele is a rare condition characterized by the herniation of brain tissue and meninges through a skull base defect. The transethmoidal subtype is particularly uncommon and often presents with cerebrospinal fluid (CSF) leakage, predisposing patients to recurrent meningitis.

Case Report: We report the case of a 22-year-old woman with a history of meningitis and persistent unilateral rhinorrhea. The patient had no history of nasal trauma or previous nasal surgery. Anterior rhinoscopy revealed a lesion originating from the olfactory fissure, with anterior projection and significant adhesion to the nasal septum. Imaging studies, including computed tomography (CT) and magnetic resonance imaging (MRI), demonstrated a skull base discontinuity and an intranasal lesion suggestive of a meningoencephalocele. The patient underwent surgical treatment via an endoscopic approach. The procedure included anterior and posterior ethmoidectomy with skull base exposure. The lesion was dissected, isolated, and resected at its pedicle. Meningeal detachment and isolation of bony margins was performed, and the skull base defect was reconstructed using an multilayer graft (middle turbinate, Surgical, and fibrin glue). Postoperative MRI showed no evidence of recurrence, and the patient remains asymptomatic.

Conclusion: Transethmoidal meningoencephalocele, though rare, should be considered in patients with recurrent meningitis and unexplained CSF rhinorrhea, even in the absence of prior trauma or surgery. Early diagnosis through clinical evaluation and imaging is essential for appropriate management. The endoscopic endonasal approach provides a minimally invasive and effective technique for skull base defect repair, ensuring good surgical outcomes and reducing the risk of recurrence.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4416

Our Experience of the Expanded Endoscopic Endonasal Approach to Suprasellar Tumours and Pathology

Paris Bruno[1], Salma Mohamed[1], Sofia Anastasiadou[1], Kumar Abhinav[2], Warren Bennett[3]

[1]University Hospitals Bristol and Weston, [2]North Bristol NHS Trust, [3]University Hospitals Bristol and Weston / North Bristol Trust

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction Surgical resection remains the principal treatment for Suprasellar tumors. Due to their intricate location, the transcranial approach carries significant challenges. Minimally invasive Endoscopic Endonasal approaches (EEA) have been developed and provide advantages, however, pose the risk of nasal morbidity and post-operative CSF leak.In Bristol, we have developed an endoscopic skull base service where such procedures are performed jointly between neurosurgeons and ENT surgeons. We share our case series and data focusing on CSF leak rates and SNOT-22 scores for our EEA suprasellar tumor resections. Methods Data was collected between September 2020 and February 2024. All patients who underwent an EEA for suprasellar tumour resections were identified and included. Clinical notes were reviewed to record pre-operative and post-operative SNOT-22 scores, CSF leaks and patient demographics.Results34 patients were identified who underwent suprasellar surgery, with 4 paediatric patients. The mean age of adult patients was 53 and the average BMI was 29. Our overall CSF leak rate was 2.94%, relating to one adult patient. 19 patients had pre- and post-operative SNOT-22 scores completed, of which 58% had at least a return to baseline, if not improvement, in their score. Conclusions Our case series demonstrates the successful implementation of our joint endoscopic skull base team's approach to endonasal endoscopic resections. Careful choice of surgical and reconstructive technique achieved a low CSF leak rate, irrespective of primary pathology. Over 50% of patients had a return or improvement in their SNOT-22 scores post-operatively suggesting an adequate recovery in nasal symptoms.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4484

A Unique Case Study of a Frontal Sinus Dermoid Cyst with Intradural Extension in an Adult

Tomás Manteigas Rodrigues[1], Joana Gonilho[2], Tiago Velada[2], Jorge Mexia[2], José Pinto Sousa[2], Herédio Sousa[2]

[1]Department of Otorhinolaryngology - Unidade Local de Saúde São José, EPE, [2]ULS São José

Poster Session | Skull base surgery | 22 June – 25 June, 2025, All day

Introduction: Dermoid cysts are benign congenital lesions arising from the entrapment of ectodermal and mesodermal elements along embryonic suture lines. Nasal Dermoid Sinus Cysts (NDSCs) account for 1% of dermoid cysts, occurring in 1:20,000 to 1:40,000 births. These midline lesions may extend intracranially and are usually diagnosed in early childhood.

Case-Study: We report the case of a 34-year-old male patient with history of a cystic growth on the glabella since birth, characterized by recurrent periods of inflammation and purulent drainage via a punctum at the nasion. He had no relevant medical history.

Results: CT and MRI scans revealed a small subcutaneous cyst on the glabella, with a likely obliterated fistulous tract traversing the anterior table of the frontal sinus, connecting to a 17 mm lesion in the interfrontal sinus septum, extending to the frontal lobes and cerebral falx. The subcutaneous lesion was excised through an elliptical incision around the punctum, exposing a bony depression without an active fistulous tract. To access the intracranial lesion, an endoscopic frontal sinusotomy (Draf III procedure) was performed. The dermoid cyst exhibited intradural extension and was completely dissected with no apparent CSF leak.

Conclusion: To our knowledge, this is the first reported case of a frontal sinus NDSC with intradural extension in an adult, as well as the only documented instance of an NDSC with both subcutaneous and intracranial components and a previously existing, now obliterated, fistulous tract. This case underscores the complexity of NDSCs and the importance of careful operative planning and multidisciplinary approach.



Smell and taste

3632

Is there an association between clinical symptoms and olfactory/ gustatory dysfunction during SARS-CoV-2 infection? Data collected from Hospitalized and Self-Quarantined Patients in Northwestern Greece

Athina Zarachi[1], Vasileios Pezoulas[3], Dimitrios Fotiadis[3], Charalampos Milionis[4], Angelos Liontos[4]

[1]Otorhinolaryngologist, head and neck surgeon, private practice doctor, [2]Otorhinolaryngologist, head and neck surgeon, private practice, [3]Unit of Medical Technology and Intelligent Information Systems, Department of Materials Science and Engineering, University of Ioannina, Ioannina, Greece, [4]Faculty of Medicine, Department of Internal Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: We aimed to assess the relation between chemosensory dysfunction and reported symptoms in two subgroups of patients in Northwestern Greece: the first one included patients with moderate to severe symptomatology who needed hospitalisation and the second one, patients with mild symptoms who recovered at home.

Methods: We used a questionnaire to select information about patient demographics, medical history and reported symptoms during infection. Three hundred COVID-19-positive patients who were identified via RT-PCR test in the University Hospital of Ioannina, Greece, were included in the present study, of which 150 recovered at home and the remaining 150 needed hospitalisation. Statistical analysis was based on IBM-SPSS Statistics 26.0.

Results: Most patients had fever during infection, while a minor percentage of those who needed hospitalisation 12.67%) suffered from sore throat. There was a statistically significant difference between the loss of smell and clinical symptoms, including fatigue, nose congestion, body aches and headaches, and loss of taste and reported symptoms including fatigue, body aches, runny nose, headache and sore throat.

Conclusion: Via all reported clinical symptoms, fever was the symptom with the highest percentage rate, while sore throat was the symptom with the lowest percentage rate.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3706

Intranasal pH measurements and olfactory function among healthy adults

Anna Kristina Hernandez[1], Sero Biguerdi[2], Karoline Lantzsch[1], Katharina Schindowski[3], Nadine Gunder[1], Rumi Sekine[4], Eri Mori[4], Thomas Hummel[1]

[1]Smell and Taste Clinic, Department of Otorhinolaryngology, Faculty of Medicine Carl Gustav Carus, TU Dresden, Germany, [2]Smell and Taste Clinic, Department of Otorhinolaryngology, Faculty of Medicine Carl Gustav Carus, TU Dresden, Dresden, Germany, [3]Department of Applied Biotechnology, Biberach University of Applied Science, Biberach an der Riß, Germany, [4]Department of Otorhinolaryngology, Jikei University School of Medicine, Tokyo, Japan

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: The intranasal environment has been proposed to influence olfactory function; however, few studies have explored this using pH and olfactory testing. This study aimed to investigate whether the location of measurement (over respiratory mucosa (RM) or within the olfactory cleft [OC]), olfactory testing, or repeated pH testing affects pH measurements and whether OC pH affects olfactory function.

Materials & Methods: The study included healthy adults who underwent the following measurements: intranasal pH (Restech Dx-pH;Respiratory Technology Corp., Houston, USA), & olfaction (Sniffin" Sticks Odor Identification Test [OdorId];Burghart, Holm, DE). Participants were divided based on: sites of testing (RM [n=27] vs OC [n=35]); order of testing (olfactory testing [OdorId] between two pH tests [pH-OdorId-pH, n=17] vs. two pH tests separated by a 20-minute interval followed by olfactory testing [pH-pH-OdorId; n=18]); and repeated pH testing (first vs second pH test).

Results: Sixty-two participants were included (38 women, 24 men; Median[IQR] = 24[22.75-26]). OC pH measurements were significantly lower than RM pH. Repeated pH testing resulted in more alkaline second pH measurements, while olfactory testing had no effect. Odor identification scores correlated with OC, but not RM, pH. In an exploratory linear regression model, OC pH predicted 18% of the variance in OdorId scores and was a significant negative predictor of OdorId performance (as pH increases, OdorId decreases).

Conclusion: The OC pH is more acidic compared to that over the respiratory mucosa. Increased acidity in the OC was related to better olfactory function, warranting further investigation in olfactory dysfunction.



3866

Altered expression of olfactory receptors and olfactory epithelium in cystic fibrosis: Insights from humans and pigs.

Susanne Weise[1], Ignacio Caballero[3], Yvon Mbouamboua[4], Raquel López-Gálvez[5], Marie Couralet[4], Isabelle Fleurot[3], Nicolas Pons[4], Marta Barrera-Conde[6], Nayima Quílez-Playán[7], Matthieu Keller[7], Nikolai Klymiuk[8], Patricia Robledo[9], Thomas Hummel[10], Pascal Barbry[4], Pablo Chamero[7]

[1]Department of Otorhinolaryngology, Smell & Taste Clinic, Carl Gustav Carus University Hospital, Technische Universität Dresden, 01307 Dresden, Germany, *[2]Smell & Taste Clinic, Department of Otorhinolaryngology, University Hospital Carl Gustav Carus, Technische Universität Dresden, Dresden, Germany.*, *[3]Infectiologie et Santé Publique, UMR1282, INRAE, University of Tours, 37380, Nouzilly, France* , *[4]Université Côte d'Azur, CNRS, Institut de Pharmacologie Moléculaire et Cellulaire, 06560 Sophia Antipolis, France* , *[5]Infectiologie et Santé Publique, UMR1282, INRAE, University of Tours, 37380, Nouzilly, France; Laboratoire de Physiologie de la Reproduction et des Comportements, CNRS, INRAE, University of Tours, 37380, Nouzilly, France*, *[6]Integrative Pharmacology and Systems Neuroscience, Neuroscience Research Program, IMIM-Hospital del Mar Research Institute, 08003 Barcelona, Spain; Department of Medicine and Life Sciences, Universitat Pompeu Fabra, 08003 Barcelona, Spain.*, *[7]Laboratoire de Physiologie de la Reproduction et des Comportements, CNRS, INRAE, University of Tours, 37380, Nouzilly, France*, *[8]Center for Innovative Medical Models, Ludwig Maximilian University of Munich, 81377 Munich, Germany*, *[9]Integrative Pharmacology and Systems Neuroscience, Neuroscience Research Program, IMIM-Hospital del Mar Research Institute, 08003 Barcelona, Spain; Department of Medicine and Life Sciences, Universitat Pompeu Fabra, 08003 Barcelona, Spain*, *[10]Department of Otorhinolaryngology, Smell & Taste Clinic, Carl Gustav Carus University Hospital, Technische Universität Dresden, 01307 Dresden, Germany.*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Cystic fibrosis (CF) is frequently associated with a reduced sense of smell, significantly impacting patients' quality of life. While olfactory loss in CF is often attributed to nasal mucosal inflammation, its underlying mechanisms remain elusive.

Methods: Using single-nuclei RNA sequencing, we analyzed gene expression in olfactory epithelium swabs from CF patients and in an inflammation-free samples from a CF pig model.

Results: In CF patients altered expression of olfactory receptors (ORs) and genes involved in progenitor cell proliferation was observed. These findings were corroborated in inflammation-free samples from a CF pig model, where we also identified ultrastructural abnormalities in the olfactory epithelium and bulbs. Functional analyses revealed that CFTR, the chloride channel whose dysfunction underlies CF, is not essential for odor-evoked signalling in sensory neurons. Nonetheless, CF animals exhibited impaired odor-guided behaviours, aligning with the observed molecular and structural changes.

Discussion: Our results underscore CF's significant impact on epithelial architecture and OR expression, offering new insights into the pathophysiology of CF-related olfactory loss and pointing to novel therapeutic avenues.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3876

Persistent Olfactory and Taste Dysfunction after COVID-19

Malgorzata Buksinska[1], Piotr Skarzynski[1], Danuta Raj-Koziak[2], Elzbieta Gos[3]

[1]Otorhinolaryngosurgery Clinic, World Hearing Center, Institute of Physiology and Pathology of Hearing, 05-830 Kajetany, Polandhysiology and Pathology of Hearing, 05-830 Kajetany, Poland, [2]Tinnitus Department, World Hearing Center, Institute of Physiology and Pathology of Hearing, 05-830 Kajetany, Poland, [3]Department of Teleaudiology and Screening, World Hearing Center, Institute of Physiology and Pathology of Hearing, 05-830 Kajetany, Poland

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: One of the possible symptoms of COVID-19 is a sudden loss of smell and taste. The main aim of the study was to evaluate the severity of post-COVID-19 olfactory dysfunction (OD). A secondary aim was to assess the relationship between OD and gustatory (taste) dysfunction (GD).

Methods: The study group consisted of 81 subjects (16 men and 65 women) aged between 12 and 73 years. All of the patients presented to a center for subjective OD associated with COVID-19. They were tested with a Sniffin' Sticks test (SST) for OD and a Taste Strip test (TS) for GD.

Results: Anosmia was present in 18 participants (22%), hyposmia in 52 (64%), and normosmia in 11 (14%). Some 36% of the patients reported imaginary smells (phantosmia), but it did not correlate with olfactory sensitivity. Comparing the different parts of the SST showed that subjects scored lowest on the threshold part of the test. The results of the discrimination and identification parts of the test were better, implying that if the stimulus is intense enough, incorrect discrimination and identification of odors is less frequent. A sweet taste was the easiest to recognize (78% could do so), while the most difficult to recognize was salty (68%). There were weak and statistically non-significant correlations between olfactory and taste dysfunction.

Conclusions: The results suggest that post-COVID-19 olfactory dysfunction was more peripheral than central. Testing patients for the severity of post-COVID-19 OD may help clinicians treat the condition. Because there is no fully effective treatment, research on post-COVID-19 OD is needed.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3921

The Impact of Asthma Complications on Taste Receptors and Type 2 Cytokines in Patients with ECRS

Ryota Morozumi[1], Keisuke Ishitani[1], Seiichiro Kamimura[1], Yoshiaki Kitamura[1], Kokoro Itami[2], Kazuhiro Nomura[2], Hiroshi Sakaue[2]

[1]Department of Otolaryngology, Institute of Biomedical Sciences, *[2]Department of Nutrition and Metabolism, Institute of Biomedical Sciences*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: Taste receptor families 1 (T1R) and 2 (T2R) are types of taste receptors classified as G protein-coupled receptors (GPCRs). While T1Rs detect umami and sweetness through different configurations, T2Rs are responsible for detecting bitterness. In particular, T2R38 was reported to be associated with the development of upper respiratory tract infections and chronic sinusitis (CRS). Eosinophilic CRS (ECRS) is a subtype of CRS with nasal polyps (CRSwNP) and is known to be more severe in cases complicated by asthma. In this study, we examined the expression of taste receptors in nasal polyps of patients with ECRS and investigated their relationship with asthma and associated cytokines.

Methods: Nasal polyp tissues were collected from 27 patients with ECRS, including 15 with asthma and 12 without asthma. The expression levels of taste receptors and cytokines were compared using real-time PCR between patients with asthma and without asthma.

Results: The expression levels of T2Rs (T2R38, T2R4, T2R10) were significantly higher in cases with asthma than without asthma. On the other hand, only T1R2 was found to be significantly higher, although there was an overall trend towards an increase in T1Rs. In terms of cytokines, IL-4, IL-5 and IL-13 were significantly higher in cases with asthma.

Conclusion: The results of this study showed that the expression of the bitter taste receptor T2Rs and type 2 cytokines is elevated in chronic sinusitis with polyps accompanied by asthma. It is suggested that T2Rs play an important role in the development of severe ECRS with asthma.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3955

Smell testing in a non-clinical environment. A pilot study.

Jure Urbančič[1], Marie Elisabeth Martina Förster[2], Domen Vozel[1]

[1]Faculty of medicine, University of Ljubljana, Slovenia, *[2]Rheinische Friedrich-Wilhelms-Universität Bonn*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Smelling plays a key role in human perception, influencing how we assess and categorize our surroundings. Testing the impact of the olfactory environment is relevant when individuals interact with objects of intangible cultural heritage in museums, where smell perception may vary. Using the Sniffin' Sticks Screening 12 Test, a validated tool for evaluating olfactory function in clinical settings, this study explores its application in non-clinical environments to determine if the test yields consistent results even if the settings differ.

Methods: Volunteer students were evaluated using the Sniffin' Sticks Screening 12 test (Burghart) in a non-clinical environment. Coexisting factors such as residual smell in the room, age, sex, acute respiratory infection, and nasal congestion were assessed. Results were compared to two control groups of younger and older volunteers who had previously been tested in clinical environments.

Results: 15 subjects (Group A) were tested in the non-clinical environment and 21 in a clinical environment (Group B: n=9, Group C: n=12). The mean Sniffin'Sticks Screening 12 test results were Group A: 9.6 (SD 1.64), Group B: 10.6 (SD 0.84), and Group C: 11.1 (SD 0.72). Group comparison was done using the multiple unpaired t-tests: A vs. B p=0.061, A vs. C p=0.005.

Conclusion: Our study shows similar results between the non-clinically tested group and Group B while revealing a difference in comparison to Group C, which was more age-matched. However, further research with larger, more similar-matched groups and varied environments is needed to better assess olfactory function outside clinical contexts.



3957

The Application of MRI in a Tertiary Center for Olfactory and Gustatory Disorders: Insights Gained from a Retrospective Analysis

Jin Kook Kim[1], EunHye Seo[2]

[1]Konkuk University, College of Medicine/ Konkuk University Medical Center, Department of Otorhinolaryngology-Head and Neck Surgery, Konkuk University Medical Center,, Seoul, Republic of Korea , [2]2Gachon University, Korea mRNA Vaccine Initiative, Seongnam, Republic of Korea

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background & Aim: MRI plays a crucial role in diagnosing and assessing the prognosis of olfactory dysfunction (OD), particularly when investigating intracranial structures and pathology. However, its diagnostic utility and cost-effectiveness remain debated, leading to restrictive use. This study aims to evaluate the value of MRI in managing different types of OD.

Design/Method: We enrolled 197 patients with OD from October 2019 to June 2023. Patients were categorized based on OD etiology. After clinical assessment, all underwent endoscopy and olfactory function testing using the Korean version of Sniffin' Stick (KVSS) II. MRI was performed on 85 patients, including those with anosmia after trauma, congenital anosmia, persistent post-infectious OD (PIOD) unresponsive to olfactory training, and OD unrelated to sinusitis or acute respiratory infections. A neuroradiologist reviewed MRI scans twice, assessing olfactory bulb morphology, primary and secondary olfactory network structures, olfactory sulcus depth, olfactory cleft patency, and sinonasal anatomy.

Results: MRI abnormalities were detected in: 86.7% (39/45) of post-traumatic OD (PTOD) cases 85.7% (6/7) of PIOD cases 87% (20/23) of idiopathic OD (IOD) cases 100% of congenital OD (7/7) and conductive OD (2/2) cases Among PTOD patients, 66.7% had abnormalities in primary and secondary olfactory network structures, 24.4% had hypoplastic or aplastic olfactory bulbs, and 6.7% had short/absent olfactory sulcus depth.

Conclusion: MRI provides valuable diagnostic and prognostic information beyond tumor detection in OD patients. It is particularly recommended for patients with a history of head trauma, those aged 20 or younger, PIOD cases unresponsive to olfactory training, and IOD cases, as they have a higher likelihood of MRI-detectable abnormalities

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3973

Results of olfactometry using BAST-24 in patients with chronic rhinosinusitis with nasal polyps (CRScPN) treated with biologics

Miriam del Carmen Marrero Ramos[1], María Sandra Domínguez Sosa[1], María Soledad Cabrera Ramírez[1], Brian Hernández Martin[1], Jesús Javier Benítez del Rosario[1]

[1]*Hospital Universitario de Gran Canaria Doctor Negrín*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Chronic rhinosinusis (CRS) affects 4-12% of the population in Western countries and is the cause of olfactory dysfunction (OD) present in 60-80% of patients with CRS. This deterioration of smell correlates with severity of the disease, significant impact on the patient's quality of life, and may be the first sign of recurrence of CRSwPN.

Materials and methods: A prospective descriptive observational study was carried out between January 2023 and October 2024 in 35 patients with CRSwPN being treated with monoclonal antibodies, repeating the olfactometry using the BAST-24 at the beginning, at 3 months, at 6, at 9 and at 12 months, in addition to different variables.

Results: The analyzed results reflect 21 men (60%) and 14 women (40%), with an average age of 51.86. The mean VAS for smell was 5.20 at the beginning and 3.57 at 9 months. There were statistically significant differences in the BAST-24 results at baseline and at 9 months in the patient's olfactory memory, identification and correct answers (p>0.001).

Conclusions: Impairment of smell is one of the key factors in determining the severity of the disease and the severity of olfactory loss parallels the severity of inflammation in patients with CRSwPN. Biological treatments are a therapeutic alternative for patients with severe CRSwPN type 2.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3998

A case report of Fibrous dysplasia presenting with progressive olfactory dysfunction

Misaki Saeki[1], Eri Mori[1], Yuji Kishimoto[1], Rinko Sakurai[1], Teru Ebihara[1], Shun Kikuchi[1], Monami Nagai[1], Rumi Sekine[1], Masayoshi Tei[1], Kazuhiro Omura[1], Nobuyoshi Otori[1]

[1]*The department of Otorhinolaryngology, Jikei university school of medicine*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

We report a case of fibrous dysplasia in a 23-year-old male with no significant medical history, who presented with gradually worsening olfactory dysfunction. At the initial consultation, a retro-nasal olfactory test showed 20 seconds for detection and 29 seconds for duration. T&T olfactometry indicated severe disorder with detection/recognition scores of 5.4/5.6 on the right side and 5.6/5.8 on the left. Imaging findings revealed fibrous dysplasia extending across both sides of the ethmoid bone, causing significant olfactory cleft stenosis. Conservative treatment did not yield improvement, and surgical intervention was planned. Draf type 2B including partial resection of the left fibrous dysplasia and septoplasty was performed. A silicone plate was placed in the olfactory cleft for one month to prevent postoperative adhesions. Two months post-surgery, T&T olfactometry demonstrated improved olfaction, with detection/recognition scores of 5.4/5.8 on the right side and 3.0 /4.2 on the left. More than six months have now passed since surgery, with no further decline in olfactory function, and the patient remains under regular observation. This case underscores the importance of considering fibrous dysplasia as a potential cause of olfactory dysfunction when imaging demonstrates ethmoid bone involvement. Surgical management with partial resection and prevention of postoperative adhesions may lead to significant olfactory recovery.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4084

The effect of olfactory training in post-COVID-19 olfactory dysfunction – A randomized placebo-controlled trial

Ditte Mogensen[1], Kasper Aanaes[2], Ida Andersen[2], Mary Jarden[3], Vibeke Backer[1]

[1]Department of Otorhinolaryngology, Head and Neck Surgery & Audiology, *[2]Department of Otorhinolaryngology, Head and Neck Surgery & Audiology, Copenhagen University Hospital, Rigshospitalet, Denmark*, *[3]Department of Hematology*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Olfactory training is a recommended treatment for patients with post-COVID-19 olfactory dysfunction. While its effectiveness has been studied, few trials have included a placebo group to compare the effects of traditional olfactory training from odor-free olfactory training. In this randomized placebo-controlled trial, we compare the effect of olfactory training with essential oils versus placebo oils in patients with post-COVID-19 olfactory dysfunction.

Methods: Sixty-five patients with post-COVID-19 olfactory dysfunction were randomized to either the intervention or control group. The intervention group performed classic olfactory training with four essential oils (orange, lavender, clove, and peppermint) twice daily for 12 weeks, while the control group performed the same olfactory training with odor-free placebo oils. Olfactory function was evaluated using the extended Sniffin' Sticks olfactory test with n-butanol at baseline and after the 12-week intervention.

Results: The intervention group did not show a significant improvement in olfactory function compared to the control group after olfactory training. No associations were found between changes in olfactory function and factors such as age, gender, rhinitis, time since infection, or pre-infection vaccination status. However, regression analysis showed that the presence of parosmia was associated with reduced effectiveness of olfactory training

Conclusions: This study found that 12 weeks of classical olfactory training is not an effective treatment for COVID-19-induced olfactory dysfunction. Additionally, the findings suggest that parosmia reduces the effectiveness of olfactory training.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4089

Neural dissimilarity as a biomarker of functional recovery in smell loss – A protocol presentation

Christian Pedersen[1], **Christian Korsgaard Pedersen**[1], Alexander Ysbæk-Nielsen[3], Katrine Kronberg Jakobsen[4], Elisabeth Arndal[5], Alexander Fjaeldstad[6], Hummel Thomas[7], Gitte Moos Knudsen[3], Jens Volkmar Schwarzbach[9], Christian von Buchwald[2]

[1]1) Department of Otorhinolaryngology, Head & Neck surgery, and Audiology, Rigshospitalet, Copenhagen University Hospital, Copenhagen Denmark, [2]Department of ORL, Head and Neck Surgery & Audiology, Copenhagen University Hospital Rigshospitalet, Copenhagen, Denmark, [3]Neurobiology Research Unit (NRU), University of Copenhagen, Rigshospitalet, Denmark, [4]Department of Otorhinolaryngology, Head & Neck surgery, and Audiology, Rigshospitalet, Copenhagen University Hospital, Copenhagen Denmark, [5]Department of Otorhinolaryngology, North Zealand Hospital, Hilleroed, Denmark, [6]Department of Otorhinolaryngology, Regional Hospital Goedstrup, Denmark, [7]Department of Otorhinolaryngology, TU Dresden, Dresden, Germany 2UCL, [8]Smell & Taste Clinic, Department of Otolaryngology, Technische Universität Dresden, Dresden, Germany, [9]Department of Psychiatry and Psychotherapy, University of Regensburg, Regensburg, Germany

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: Treatment of severe CRSwNP with monoclonal antibodies often improves loss of smell (LoS), thereby offering a unique opportunity to study functional changes in the central olfactory system. Through functional MRI (fMRI), changes in activity patterns in olfactory-related regions of interest can be measured. We propose creating behavioral and neural dissimilarity matrices before and after treatment. To this aim we compute pairwise Euclidian distances between multivariate behavioral data (e.g., from behavioral ratings on different scales) and between regional activity patterns that are associated with presenting a set of odorants (Figure 1). Anosmic patients are expected to present with smaller dissimilarities (i.e. smells are not distinguished) (Fig.1A), but dissimilarities should increase with improved smell function after treatment (Fig. 1B).

Methods: Twenty patients with LoS due to uncontrolled CRSwNP will be recruited before they receive the first injection with mepolizumab or dupilumab, and undergo nasal endoscopy and smell testing (TDI). fMRI imaging will be obtained while the participant is presented with three different odors (peach, fish, and leather) via a digital olfactometer (Burghart, Germany). The odorant presentation will be synchronized with inhalation in a condition-rich quick event-related guided-breathing design. The participants will be matched with twenty age-adjusted, normosmic controls. The examinations will be repeated after 24 weeks.

Results: We expect to show on an individual basis increases in dissimilarities between the two scan sessions, which can be compared between experimental groups.

Implications: If successful, this method represents an exciting marker of olfactory function that addresses both, subjective experience and neural responses.

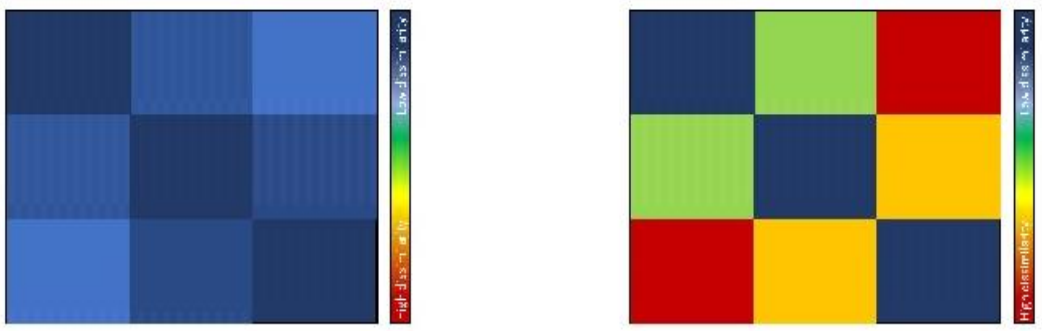


Figure 1) Simulated *representational dissimilarity matrices* (RDM) i.e., matrices of pairwise distances of behavioral or neural data.

A) In patients with LoS the dissimilarities are small, as patients perceive odorants as indistinguishable. B) In normosmic patients or patients that have successfully recovered, such dissimilarities are large as they will perceive odorants as distinct.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4276

Improvement of smell function during biological treatment of CRSwNP- real-world data

Csenge Zsiros[1], Ágnes Szalenko-Tőkés[3], Mária Matuz[4], Zsolt Bella[5], Eszter Erdélyi[6], Anna Bódi[3], László Tóth[7], Andor Hirschberg[7], Vivien Vass[8], Péter Hegyi[9], Lili Lakatos[3], Zsuzsanna Horváth[10], Tünde Orosz[3], Kristóf Ludányi[11], Imre Dóka[12], Tibor Szalóki[12], Gábor Forgács[12], Balázs Liktor[3], Zoltán Fent[13], Helga Kraxner[13], László Lujber[7], Ágnes Kiricsi[6]

[1]Family medicine resident , [2]Family Medicine Resident, [3]ENT Consultant, [4]Pharmacologist, Ph.D. Habil, [5]ENT COnsultant, Ph.D. Med. Habil., [6]ENT Consultant Ph.D., [7]ENT consultant, Ph.D. Med. Habil, [8]register coordinator, [9]Head of Department, [10]Head of Department, ENT Consultant, [11]resident, Ph.D. student, [12]assistant lecturer, [13]assistant professor

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Background: Chronic rhinosinusitis with nasal polyps (CRSwNP) is an inflammatory disease of the nasal and paranasal sinuses, and it is associated with significantly decreased quality of life and productivity. Loss or reduced sense of smell is one of the most stubborn and often difficult-to-treat symptoms of CRSwNP. Measuring olfactory function can be performed with psycho-physical tools and Patient Reported Outcome Measures (PROMS). Loss of Smell Score (LSS 0-3) relies on patient's self-reported ability to smell.

Methods: We present our real-world data of 33 adult CRSwNP patients treated in daily practice with dupilumab or mepolizumab, whose data are registered in the Hungarian Rhinosinusitis Registry Augmenting Healthcare (HURRAH). Nasal endoscopy and smell tests were performed at baseline and control visits. Moreover SNOT22, nasal obstruction visual analogue scale, NOSE questionnaires. and self-reported LSS were registered at the visits. At baseline the avarage SNOT22 was 60,8 (±17,89), NOSE 12,5 (±4,98), VAS 7,4 (±2,59). We analyzed and compared the self-reported LSS data with the psycho-physical quantitative smell test results.

Results: Most patients with severe CRSwNP had anosmia at baseline: LSS 2,79 (±0,48), Sniffin Stick's Score 4,1±2,67, Smell Threshold Test 2,2±0,75. Treatment with dupilumab significantly improved the sense of smell, achieving normosmia in 84 % of patients, in case of mepolizumab treatment no significant improvement in smell ability was observed. Self-reported LSS correlated with the data of psycho-physical smell tests.

Conclusion: Biological therapies have emerged as a promising treatment option for patients with CRSwNP, especially for those who do not respond adequately to conventional treatments. Further data are needed to compare the effect of different biologicals on olfactory dysfunction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4377

Oral somatosensory sensitivity in the clinical assessment of gustatory dysfunction

Xinni Xu[1], Katharina Flemming[2], Mariano Mastinu[2], Antje Haehner[2], Thomas Hummel[2]

[1]Department of Otolaryngology - Head & Neck Surgery, National University Hospital, Singapore, [2]Smell and Taste Clinic, Department of Otorhinolaryngology, Technical University of Dresden, Germany

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Food perception has multimodal contributions by taste, smell and somatosenses. The objective of this study was to investigate oral somatosensory function in patients with gustatory dysfunction.

Materials & Methods: This case-control study was conducted from 1 May 2022 to 30 June 2023 at a tertiary smell and taste clinic. Patients with gustatory complaints and controls were recruited. All participants underwent tests for gustatory function (taste spray, taste strips), oral mechanosensation (letter recognition) and oral irritation (chili powder: 1, 2, 5 and 7mg). Primary outcome measures were Taste Strips scores, size of oral letter recognition and self-rated oral irritation intensity.

Results: There were 43 patients with gustatory dysfunction and 26 controls. Patients with gustatory dysfunction had significantly lower Taste Strips scores compared to controls (8.0 [7.0-12.0] vs. 13.0 [12.0-15.0], p<0.001). Patients with gustatory dysfunction rated significantly lower oral intensities of chili at 2mg (11.4 [4.8-25.2]% vs. 28.6 [23.8-44.8]%, p=0.002), 5mg (26.2 [10.0-42.9]% vs. 48.6 [39.0-69.5]%, p=0.005) and 7 mg (39.5 [24.8-68.1]% vs. 68.6 [50.5-90.5]%, p=0.008) compared to controls. There was no significant difference in size of oral letter recognition between patients and controls. Amongst patients with gustatory complaints, 21 (52.5%) scored ≥9 on Taste Strips (considered a normal score); These patients perceived lower oral intensities with 2mg of chili compared to controls (14.3 [4.8-39.5]% vs. 28.6 [23.8-44.8]%, p=0.066).

Conclusion: Altered gustatory perception may be related to changes in chemesthetic sensitivity. Clinical assessment using lower concentrations of chili could be considered in patients with subtle gustatory dysfunction.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4383

Primary Ciliary Dyskinesia with Olfactory Dysfunction: A Systematic Review with a Case Report

Yihan Chen[1], **Jianfeng Liu**[2], Ziyi Wang[3], Shanshan Zhang[1]

[1]Graduate School, Beijing University of Chinese Medicine, *[2]Department of Otolaryngology-Head and Neck Surgery, China-Japan Friendship Hospital*, *[3]Peking Union Medical College*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: To characterize clinical characteristics, diagnostic approaches of rare primary ciliary dyskinesia (PCD) with olfactory dysfunction (OD).

Methods: A systematic review was conducted to summarize PCD-OD cases. We present a novel case evaluated via sinus CT, olfactory MRI, nasal mucosa immunofluorescence, transmission electron microscopy (TEM), and whole-genome sequencing (WGS). Genetic variants were classified per ACMG/AMP guidelines.

Results: In the systematic review, included seven cases showed universal sinus CT and nasal endoscopy but absent olfactory MRI. Mutations were reported in only two cases (CCDC103, RSPH4A). Our patient exhibited olfactory dysfunction, bronchiectasis, and infertility. Imaging confirmed bilateral olfactory bulb agenesis. TEM revealed partial dynein arm defects and orientation disorder with reduced FOXJ1 expression on immunofluorescence. WGS identified compound heterozygous HYDIN variants: exon 69 c.11712delT (p.Ile3904Phefs*15) and exon 20 c.3052T>C (p.Ter1018Gln),etc. classified as likely pathogenic (PVS1+PM2+PP3). Nasal saline irrigation, topical nasal fluticasone propionate alleviated congestion but not anosmia, considering neuro-anosmia besides sensory anosmia caused by cilia disorder.

Conclusion: HYDIN gene mutations may be responsible for olfactory bulb agenesis and FOXJ1 downregulation, and the above findings have enriched HYDIN gene variation spectrum. Patients with congenital anosmia, recurrent infections, or consanguinity warrant early PCD evaluation. Non-specific TEM findings require genetic confirmation. Gene therapy requires in-depth research.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4540

A Pilot Study Assessing Olfactory and Nasal Airflow Function in South African Adults

Dennis Frank-Ito[1], Christian Quitter[2]

[1]Duke University Medical Center, North Carolina, USA, *[2]University of Pretoria Medical School, South Africa*

Poster Session | Smell and taste | 22 June – 25 June, 2025, All day

Introduction: Olfactory loss is strongly associated with various risk factors. However, the prevalence of olfactory dysfunction across African nations remains largely unknown. This study provides preliminary insights into olfactory acuity and nasal patency in a South African population.

Methods: This investigation was conducted at the University of Pretoria, South Africa, involving 21 adults (13 females, 8 males) aged 23–64 years (median=35 years). Participants underwent both subjective and objective assessments, including the Nasal Obstruction Symptom Evaluation (NOSE) survey, self-reported Mini Olfactory Questionnaire (Self-MOQ), Snap & Sniff Threshold Test (SSTT), anterior rhinomanometry-based nasal resistance measurements, and peak nasal inspiratory flow (PNIF). Sex-based comparisons were analyzed using the Wilcoxon rank-sum test, with effect sizes calculated using rank-biserial correlation. Median and interquartile range (IQR) values were reported, with statistical significance set at α=0.05.

Results: Across all participants, median scores were: NOSE=20 (IQR=10), Self-MOQ=0 (IQR=0), SSTT=-4.875 log vol/vol (IQR=-0.75), nasal resistance=0.416 Pa·s/mL (IQR=0.425), and PNIF=120 L/min (IQR=35). Comparisons by sex showed no significant differences in NOSE (p=0.854, effect size=-0.06) or SSTT (p=0.662, effect size=-0.12). However, females exhibited higher nasal resistance (0.506 Pa·s/mL, IQR=0.843) than males (0.303 Pa·s/mL, IQR=0.237; p=0.0698, effect size=0.5), while males had significantly greater PNIF (135.83 L/min, IQR=40.84) compared to females (96.67 L/min, IQR=28.33; p=0.0137, effect size=-0.66).

Conclusion: Preliminary findings suggest that median SSTT scores in this South African cohort rank below the 40th percentile of normative U.S. data. While olfactory sensitivity was comparable between sexes, females exhibited higher nasal resistance, whereas males demonstrated significantly greater PNIF.



Snoring and OSA

3704

Sleep apnea syndrome and related pathology - such as management

Adriana Neagos[1], Cristian Mircea Neagos[1]
[1]*GEORGE EMIL PALADE University of Medicicne Pharmacy, Science and technology, otorhinologic Departement*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: The global prevalence of obstructive sleep apnea shows that this disease appears in 1 billion people, with the prevalence exceeding 50% in some countries. Treatment is necessary to minimize negative health impacts. Obstructive sleep apnea (OSA) is defined as a cause of daytime sleepiness, as well as a clinical manifestation of sleep-disordered breathing. Sleep apnea has an interdisciplinary connection, being an element to consider.

Material and Methods: Due to a lack of public awareness of sleep-disordered breathing and the risks associated with it, it is estimated that more than 80% of people with obstructive sleep apnea are still undiagnosed. At the same time, the life expectancy of patients with obstructive sleep apnea decreases by 20 years compared to the healthy population, largely due to the association of obstructive sleep breathing pathology with other metabolic and/or cardiovascular comorbidities. Multidisciplinary assessment such as polysomnography, fiberoscopy, upper airway assessment plays an important role in the diagnosis and treatment of sleep apnea syndrome

Results: The evaluation of upper airway obstruction, such as the monitoring and management of cardiovascular comorbidities, the involvement of respiratory function in patients with associated lung diseases and the management of chronic respiratory failure, as well as the management of psychological and cognitive aspects are just a few aspects related to the multidisciplinary aspect of sleep apnea syndrome sleep

Conclusions: Multidisciplinary involvement such as pneumology, sleep medicine, cardiology, otorhinolaryngology, neurology allow the establishment of therapeutic behaviors that have the ultimate goal of increasing the quality of life

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3763

Sleep Quality in Patients with Mild and Severe Obstructive Sleep Apnea

Josip Lesko[1], Čović Filip[1], Marcel Marjanovic Kavanagh[2], Ivana Bulić[3], Miro Leventić[1]

[1]School of Medicine, University of Mostar, Mostar, Bosnia and Herzegovina, [2]University Hospital Centre Zagreb, [3]Department of Neurosurgery, SKBC Mostar

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Obstructive sleep apnea (OSA) is a significant public health issue associated with impaired sleep quality and increased risk of cardiovascular, neurological, and metabolic diseases. This study compares the sleep quality of patients with mild and severe OSA using the Pittsburgh Sleep Quality Index (PSQI).

Objective: To determine whether there are differences in sleep quality between patients with mild and severe OSA. Methods: A cross-sectional study included 130 patients diagnosed with OSA through polysomnography at the ENT Clinic of the University Clinical Hospital Mostar. Patients were divided into groups with mild (n=56) and severe (n=74) OSA. Sleep quality was assessed using the PSQI scale. Statistical analysis included t-tests and $\chi 2$ tests with a significance level of $p<0.05$.

Results: The mean age of patients with mild OSA was 48 years, compared to 57 years in those with severe OSA (p=0.004). OSA was more prevalent in men (ratio 1.76:1). A statistically significant difference was found in the sleep disturbance component of the PSQI scale (p=0.047), while other components did not show significant differences between groups.

Conclusion: Patients with severe OSA are older and more likely to experience sleep disturbances compared to those with mild OSA. However, overall sleep quality did not significantly differ between the two groups.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3783

Analysis of Polysomnography in Patients with Sleep Disorders Accompanied by Tinnitus

Dong Won Jung[1], Woo Yong Bae[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, College of Medicine, Dong-A University*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Background and Objectives: Tinnitus, linked to autonomic dysfunction via limbic and cortical changes, may correlate with sleep disorders. This study examines their relationship using polysomnography (PSG) and the Tinnitus Handicap Inventory (THI).

Subjects and Method: PSG and THI were used to compare tinnitus and non-tinnitus patient groups.

Results: Tinnitus affects sleep metrics like PLM, latency, and SpO2, with THI negatively correlating to REM latency.

Conclusion: Tinnitus, sleep disorders, and depression link to autonomic overactivity. Research can improve understanding and treatments for better patient quality of life.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3916

Obstructive Sleep Apnea According to Positional Dependency: Propensity Score Matching Analysis

Jin Hyeok Jeong[1], Jin Hye Kwak[2], Seon Min Jung[1]

[1]Department of Otolaryngology-Head and Neck Surgery, Hanyang University College of Medicine, Seoul, Korea, *[2]Department of Otolaryngology-Head and Neck Surgery, Hanyang University College of Medicine, Seoul, Korea*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Obstructive sleep apnea (OSA) patients can be classified into two groups based on the relationship between their supine and non-supine apnea-hypopnea index (AHI). This study compared the clinical characteristics of positional and non-positional OSA patients and identified factors influencing OSA severity in each group.

Subjects and Method: The positional OSA group consisted of patients with a supine AHI more than twice the value of the non-supine AHI. Propensity-score matching (PSM) was performed to balance AHI differences between the groups. Demographic data, symptom scores, physical examination results, and polysomnography (PSG) data were analyzed. Compliance data for patients using auto-adjusting positive airway pressure (APAP) were also collected.

Results: Ninty patients in each group were matched through PSM. The non-positional OSA group exhibited significantly higher daytime sleepiness scores (p=0.040). There were no significant differences in sex, age, body mass index (BMI), or physical examination results. On the other hand, the PSG data of positional OSA group showed significantly higher average (p=0.031) and as well as lowest oxygen saturation (p=0.046). BMI was a risk factor for severe OSA in both groups, with age being significant in the positional group and sex and retropalatal obstruction in the non-positional group. Although non-positional patients utilized APAP more frequently than the positional group, there were no significant differences in compliance.

Conclusions: Positional dependency in OSA patients is associated with varying symptom severity, the PSG findings and PAP usage. Factors like BMI, age, sex, and the level of obstruction in severe OSA differed depending on positional dependency.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3920

Positional Obstructive Sleep Apnea: Insights from Drug-Induced Sleep Endoscopy

João Barbosa[1], João Fernandes[1], Constança Oom[1], Filipa Morgado[1], António Cunha[1], Inês Delgado[1], Daniela Serras[1], Alberto Santos[1], Carlos Macor[1]

[1]Otolaringology and Head and Neck Service – Hospital Beatriz Ângelo

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Obstructive Sleep Apnea (OSA) is characterized by repeated collapse of the upper airway during sleep. Patient's position during sleep can influence the severity of OSA, and if there is a ≥ 50% reduction in apnea-hypopnea index (AHI) when changing from supine to lateral position, we classify it as positional OSA (P-OSA). This study aimed to identify differences in upper airway changes in Drug Induced Sleep Endoscopy (DISE) in patients with and without P-OSA, using VOTE classification. It also aimed to identify differences in demographics and sleep study parameters between the groups.

Material and Methods: Retrospective study was performed on patients who underwent DISE between 2022-2024. Inclusion criteria: (1) age> years; (2) sleep study with AHI>. Age, gender, BMI, snoring time, time in supine position and T90 were analyzed in both groups.

Results: 48 patients were included, with a mean age of 51,7 years. 18 (37.5%) of the patients had P-OSA. There were no significant differences in VOTE scores between the groups, but there was a slight improvement in oropharyngeal obstruction in the lateral decubitus position in P-OSA patients in comparison with non-P-OSA patients. P-OSA patients spent less time in supine position ($p<0.001$). There were no significant differences in BMI, T90 and snoring time, but the desaturation index was higher in non-P-OSA patients ($p=0.0173$).

Conclusions: Despite the absence of significant differences in DISE in our study, improvement in oropharyngeal obstruction in P-OSA is described in published literature. Understanding positional mechanisms is essential for optimizing treatments.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4048

Congenital absence of uvula in adult with obstructive breathing disorder: A case report and literature review

Ibrahem Erwe[1]

[1]Otorhinolaryngology, Head and Neck department, Aseer Central Hospital, Aseer region, Abha City. Saudi Arabia

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Congenital absence of the uvula (CAU) is a rare anomaly that can impair these functions and may complicate airway management, particularly in patients with conditions such as obstructive sleep apnea (OSA). The exact cause of CAU remains unclear, but several genetic factors, including syndromes like hyperimmunoglobulin E syndrome, Apert syndrome, and cerebrocostomandibular syndrome, have been implicated.

Case presentation: A 38-year-old woman presented to an ENT clinic with symptoms of snoring, gasping fits during sleep, excessive daytime sleepiness, and recurrent tonsillitis. She had no history of trauma, uvula surgery, or scarring in the soft palate. Physical examination revealed enlarged tonsils (Brodsky grade 3) and an incidental finding of an absent uvula, with no other oral cavity abnormalities (Figure 2).

Result/Discussion: The patient underwent bilateral tonsillectomy to address her OSA symptoms and was discharged the following day without complications. The presented symptoms are improved on follow up with cessation of snoring and gasping fits. Therefore, our case provides a unique contribution to the literature by linking uvular absence to OSA symptoms, a connection that has not yet been established in prior research (Table 1).

Conclusion: Congenital absence of the uvula is a rare anatomical condition that can have significant implications for airway management, particularly in patients with OSA. Treatment strategies may include surgical options like uvulopalatopharyngoplasty or speech therapy for hypernasality. Further research is necessary to understand the genetic basis of CAU and its potential impact on respiratory and speech functions.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4112

Prevalence of Obesity among Adults Visiting Otorhinolaryngology Clinics for Snoring

Khalid Aldilaijan[1], Alhanouf Alhedaithy[1], Abdulmajeed Alnosair[1], Arulanantham Zechariah Jebakumar[2]

[1]Department of Otorhinolaryngology, King Fahd Military medical Complex - Dhahran, [2]Vice Deanship of Postgraduate Studies Research, Prince Sultan Military College of Health Sciences – Dhahran

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: This study aims to assess the prevalence of obesity and to estimate the risk of obstructive sleep apnea (OSA) among adults visiting otorhinolaryngology (ORL) clinics for snoring.

Methods: We conducted a retrospective chart review of adult patients who visited ORL clinics at King Fahd Military Medical Complex for snoring in the period between October 2019 and March 2022. We utilized STOP and STOP-BANG screening tools to stratify OSA risk in the included subjects.

Results: Eighty-five patients were included in this study. Most of the subjects were male (80%). Obesity was detected in 63 (74.1%) of the included subjects. Seventy-seven subjects (90.6%) were independently at risk of OSA based on the STOP-BANG questionnaire and STOP questionnaire.

Conclusion: Obesity is common in adults visiting ORL clinics for snoring. The rate of OSA risk is high among adult patients visiting ORL clinics for snoring. Therefore, it is important for ORL practitioners to utilize OSA risk assessment tools and to have enough knowledge or access to sleep medicine clinics for diagnostic and therapeutic purposes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4263

Gender differences in dise: where do we collapse?

João Rainha Fernandes[1], Daniela Serras[1], António Trigueiros Cunha[1], Filipa Morgado[1], Carlos Macor[1], Bárbara Roque[1]
[1]*Hospital Beatriz Ângelo, Otorhinolaryngology Department, Lisboa, Portugal*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

INTRODUCTION: Obstructive sleep apnea (OSA) is more common in men, but its prevalence increases in women after menopause. Overall, studies showed males had a higher proportion of complete oropharyngeal collapse. Furthermore, postmenopausal women have been shown to have worse VOTE scores compared to men. This study aims to identify and characterise gender differences in collapse patterns on DISE.

MATERIAL/METHODS: A retrospective study was conducted with adult patients diagnosed with OSA by home sleep test and underwent DISE from 2019-2025. The procedure was scored with VOTE score. We compared post-menopausal women to men. Statistical analysis included the Welch's two-sample t-tests, with a statistically significant p-value<0,05.

RESULTS:78 patients were included, 26% (n=20) of whom were post-menopausal females. The mean age was 53±10.2 years, with a mean BMI of 28.4±3.3 kg/m² and a mean apnoea-hypopnea index (AHI) of 20.9±17.5 events/hour. Most patients had moderate OSA (44%,n=36). Males had higher mean cervical perimeter (41.5 vs 38,9 cm, p=0,002). No differences were found between genders on age, OSA severity, BMI, Friedman tongue position score, palatine and lingual tonsil grade. Furthermore, after adjusting for BMI and cervical perimeter, there was no statistically significant difference in any component of the VOTE score between genders.

CONCLUSIONS: In the present sample, males are more prevalent, following the trend in literature. No significant gender differences were found in UA collapse patterns. The absence of significant differences may be due to our sample size, retrospective design, low representation of women and lack of adjustment for hormonal factors.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4347

Obstructive Sleep Apnea Treatment Regulates Monocyte Inflammatory Phenotype and Function

Hong Seung-No[1]

[1]*Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University College of Medicine, Boramae Medical Center*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Background: Monocytes play a crucial role in the pathophysiology of obstructive sleep apnea (OSA) and its associated complications. This study investigates the impact of OSA treatment on monocyte-mediated inflammation by analyzing changes in key pro-inflammatory cytokines, monocyte subset distribution (M1/M2), and lipopolysaccharide (LPS) responsiveness.

Methods: Peripheral blood mononuclear cells (PBMCs) were isolated from OSA patients before and after treatment. TNF-α and IL-1β levels were quantified to assess systemic inflammation. Monocyte subset distribution was analyzed based on surface marker expression. LPS stimulation assays were performed to determine monocyte reactivity. The correlation between these immune parameters and OSA severity, particularly the apnea-hypopnea index (AHI) and oxygen desaturation index (ODI), was analyzed.

Results: Post-treatment, TNF-α and IL-1β levels were significantly reduced, indicating a decrease in systemic inflammation. Monocyte subset distribution exhibited notable changes, with a significant reduction in M2 proportions, particularly in patients with severe OSA. Interestingly, the degree of M2 reduction correlated more strongly with ODI than AHI, with patients showing greater ODI improvement demonstrating the most pronounced decrease in M2 monocytes. Additionally, monocyte responsiveness to LPS stimulation was attenuated following treatment, particularly in patients with severe baseline ODI.

Conclusion: OSA treatment reduces systemic inflammation by decreasing pro-inflammatory cytokines, altering monocyte subset distributions, and attenuating LPS-induced monocyte activation. The findings suggest that ODI is a more relevant marker than AHI in assessing systemic immune dysregulation and treatment response. These results highlight the importance of oxygen desaturation in driving monocyte-mediated inflammation in OSA, warranting further investigation into its long-term implications.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4370

Impact of COVID-19 on Oral Hygiene Practices Among Healthcare Workers in a Tertiary Hospital in Nigeria

Khaled Moghib[1], Adetola Emmanuel Babalola[2]

[1]Faculty of Medicine, Cairo University, Cairo, Egypt, *[2]Faculty of Dentistry, College of Medicine, University of Ibadan, Ibadan, Nigeria*

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Background: The COVID-19 pandemic has affected various aspects of healthcare, including personal health practices. Understanding its influence on oral hygiene among frontline healthcare workers is essential, especially in resource-limited settings. Aim: This study aimed to assess the effect of the COVID-19 pandemic on oral hygiene practices among healthcare workers at the University College Hospital, Ibadan, Nigeria.

Methodology: A cross-sectional study was conducted among 151 healthcare professionals. Data were collected using an anonymous online questionnaire assessing sociodemographic information and oral hygiene habits before and during the pandemic. The questionnaire included questions on brushing frequency and the use of fluoride toothpaste. Ethical approval was obtained (Protocol No. UI/EC/21/0084).

Results: The study included 151 participants (82 females and 69 males), with most being either married (86) or single (61). Brushing frequency improved during the pandemic: 99 participants brushed once daily before COVID-19, compared to 92 during the pandemic, while those brushing twice or more daily increased from 50 to 51. Fluoride toothpaste usage remained stable, with 146 participants using it before the pandemic and 145 during the pandemic.

Conclusion: The findings suggest that the COVID-19 pandemic positively influenced oral hygiene practices, particularly brushing frequency, among healthcare workers. The stable use of fluoride toothpaste reflects consistent oral health habits despite pandemic-related challenges. These results highlight the potential of public health crises to drive improvements in personal health behaviors, underscoring the importance of maintaining such positive changes post-pandemic.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4465

The 3M's approach for a coherent obstructive sleep apnea management

Ruxandra Alius[1], Iringa Gabriela Ionita[1], Catalina Voiosu[1], Viorel Zainea[1], Andreea Rusescu[1], Raluca Oana Pulpa[1], Razvan Hainarosie[1], Irina Gabriela Ionita[1]

[1]1 "Prof. Dr. D. Hociotă" Institute of Phonoaudiology and Functional ENT Surgery Bucharest 2 "Carol Davila" University of Medicine and Pharmacy Bucharest

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Obstructive sleep apnea (OSA) is a common condition affecting a growing percentage of the world's population. This sleep condition is characterized by repeated episodes of airway blockage during sleep, leading to lower oxygen levels and frequent sleep interruptions. Continuous positive airway pressure (CPAP) therapy is the gold standard treatment. However, this therapeutic option is not addressing the underlying causes of OSA, which often can lead to low patient adherence and decreased long-term effectiveness.

Materials and Methods: To optimize both the diagnosis and treatment of OSA, we developed the Three Ms algorithm, a structured approach based on an extensive review of existing treatment methods and collaboration between experts in all the leading medical and surgical specialties involved in treating OSA. This framework is built around three key components: Multistep Diagnostic Approach – incorporates all needed investigations for a comprehensive diagnosis. Multimodal Treatment Strategy – integrates CPAP, oral devices, lifestyle changes, myofunctional therapy, and surgery. Multilevel Approach – addressing all anatomical levels contributing to the cause of OSA.

Results and Discussions: Early clinical applications of the Three Ms approach suggest that it improves patient compliance and provides better symptom control than monotherapy or single specialty management. Focusing on the root causes of OSA reduces dropout rates and enhances long-term health outcomes. However, further randomized controlled trials are necessary to confirm these preliminary findings.

Conclusion:The Three Ms approach offers a structured and personalized method for managing OSA, aiming to alleviate symptoms, address the condition's fundamental causes, and increase positive long-term outcomes.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4494

Obstructive sleep apnea syndrome in children. Our experience so far

Suela Sallavaci[1], Gentian Stroni[2]

[1]University Hospital Centre " Mother Teresa", Tirana, [2]University Of Medicine, Faculty Of Medical Technical Sciences

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: Obstructive sleep apnea (OSA) is a respiratory disorder that is characterized by repeated episodes of prolonged upper airway obstruction during sleep, despite continued or increased respiratory effort, resulting in: complete apnea or partial hypopnea: ≥30% reduction in airflow, accompanied by ≥3% O2 desaturation and/or arousal cessation of airflow at the nose and/or mouth, as well as in disrupted sleep. Obstructive sleep apnea is the most common form of sleep apnea. This form occurs when throat muscles are relaxed intermittently during sleep, resulting in blockage of airways. Snoring, gasping, choking could repeat 5-30 times each hour during all night and impairs one's ability to reach the deep restful phases of sleep.

Aim of the study: There was no information about OSA in children in Albania. Therefore, our aim was to describe a group of children with OSA showing up at our practice during 2021-2024.

Results: All children with signs and symptoms of OSA showing up at our practice during April 2021-November 2024 were included. Objective examination was carried out for every child. Polysomnography was suggested for every child but it costs ~ 550 €, out-of-pocket(it can be realized only in private clinics), requires hospitalization and parents accompanying the child increase costs and the procedure needs to be repeated 3-4 months after treatment. As a result, only 32 children did it. Oximetry was suggested in those cases who couldn't provide polysomnography. The cause of OSA was treated. A total of 209 children participated (66.5% males). Children's age varied between 2 years and 16 years. The remaining 177 children who could not afford polysomnography, had clear signs and symptoms of sleep apnea, psychomotor development distress and deteriorated kindergarten or school performance. Therefore, even though it was not possible to classify and categorize sleep apnea for these children, the classic signs and symptoms of sleep apnea were present. All 208 children with OSA (1 child had central apnea) were treated via Adenotonsillectomy and Adenotonsillotomy (ATT). ATT was the preferred treatment method since these children did not have any pathology of tonsils, therefore their size reduction, instead of removal, was practiced. Research has shown that ATT is not inferior to removal of tonsils, although recurrence of OSA is possible, and the later should guide treating options. Immediate weight reduction was suggested to 4 obese children. Among children undergoing polysomnography, improvement was noticed in 88% of them. No change was observed among 2 obese children (6.3%) and 2 children (6.3%) with mild apnea. Among children not undergoing polysomnography, improvement was noticed in 81% of them. In 3.4% of cases parents were not satisfied with the results, whereas 15.9% did not show up for re-evaluation. Given the Albanian mentality (not showing up when feeling better) I tend to believe that also these children have improved.

Conclusions: Polysomnography might be useful for detecting the right type of sleep apnea. However, objective examination (identification of enlarged tonsils and adenoids) and classic signs and symptoms of sleep apnea might be enough for setting the right diagnosis of OSA among children. Adenotonsillectomy or Adenotonsillotomy is the best solution for OSA in children.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4521

Evaluation of CPAP Treatment Impact on Laryngopharyngeal Reflux Through Salivary Pepsin in Patients with Moderate to Severe Obstructive Sleep Apnea: A Prospective Clinical Study

Joana N. R. Dias[1], Rafael Pires[1], Filipa Ferreira[1], Leonor Oliveira[1], Ana Miguel Couto[1] , Filipa Castelão[2], Jorge Oliveira[3], João Rodrigues Alves[3], Lisete Santos[1], Carla André[1], Helena Rosa[1], Henrique Teixeira[1], Luís Antunes[1]

[1]Otorhinolaryngology Department, Hospital Garcia de Orta, Unidade Local de Saúde Almada-Seixal, 2805-267 Almada, Portugal

Poster Session | Snoring and OSA | 22 June – 25 June, 2025, All day

Introduction: The relationship between obstructive sleep apnea (OSA) and laryngopharyngeal reflux (LPR) has been extensively studied, with a high incidence of LPR reported in OSA patients. However, the correlation between OSA severity and LPR occurrence remains unclear. Salivary pepsin is emerging as a promising, non-invasive diagnostic tool for LPR. Continuous Positive Airway Pressure (CPAP) is the standard treatment for OSA, and some studies suggest its potential role in reducing LPR. This study investigates the association between OSA and LPR using salivary pepsin as a biomarker before and after CPAP initiation, aiming to improve clinical interventions.

Materials and Methods: This prospective study includes adult patients with moderate to severe OSA, confirmed by polysomnography. Exclusion criteria comprise neuromuscular disorders, severe esophagitis, upper gastrointestinal malignancies, pregnancy, and recent medication affecting esophageal function. Baseline assessment includes RSI (Reflux Symptom Index), STOP-Bang questionnaire, fasting salivary pepsin quantification, and nasofibrolaryngoscopy for Reflux Finding Score (RFS) evaluation. The effects of CPAP on LPR will be analyzed by comparing pre and post-treatment clinical parameters and salivary pepsin levels. Statistical analysis will be performed using SPSS, with a significance of 5%.Objectives Preliminary results will show the impact of CPAP therapy on changes in salivary pepsin levels and clinical parameters in patients with moderate to severe OSA.

Discussion: The findings will provide insights into the relationship between CPAP therapy and LPR, assessing its impact on clinical parameters and salivary pepsin levels. This study aims to contribute to a better understanding of OSA-LPR interaction and the optimization of therapeutic approaches.



Technological advances

3716

Image-guided endonasal endoscopic procedures. A time consumption study

Matej Debevec[1], Jure Urbančič[1]
[1]*University Medical Center Ljubljana – Department of Otorhinolaryngology & Cervicofacial Surgery*

Poster Session | Technological advances | 22 June – 25 June, 2025, All day

Introduction: Intraoperative computer-aided surgery allows safer and faster access to these structures. The study aims to provide adequate information regarding the usage times and the possible correlation between IGS use and the duration of the surgery for specific procedures .

Methods: Cases were stratified into subgroups of malignant disease, frontal disease, inverted papilloma (IP), chronic rhinosinusitis with nasal polyps (CRSwNP), group of guided biopsies, and abscess drainage and isolated sphenoid disease and CSF leak repairs, including gliomas or meningoceles. A control group of patients with CRSwNP was randomly selected from the same database.

Results: In 82.4% of the cases, CT of the nose and paranasal sinuses was used as a source of navigational data. The mean procedure time in malignant disease is statistically different from all other procedures ($p<0.001$). In regression analysis, we have also found a linear correlation between the number of separate IGS uses in malignant diseases ($r2=0.60$, $p=0.005$) and the amount of total intra-operative IGS usage and total duration of the procedures (malignant diseases, $r2=0.73$, $p<0.001$ and inverted papilloma, $r2=0.73$, $p=0.03$).

Conclusion: Complex cases will demand more IGS position verifications, prolonging the time of IGS handling during the procedure. Comparing the time used for IGS and the absolute difference in operating times at various endoscopic endonasal procedures implies that the main reason for prolonged surgery is probably extensive surgical work and is not always directly related to IGS use.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4027

Clinician-Led Coding of Rhinological Procedures in the UK National Health Service

Lucy Osborne[1], Gabrielle Thompson[2], Rajeev Advani[3], John De Carpentier[3]

[1]Kingston & Richmond NHS Foundation Trust, [2]North West England ENT Trainees, [3]ENT Royal Preston Hospital

Poster Session | Technological advances | 22 June – 25 June, 2025, All day

Introduction: Surgical procedures performed in the NHS are coded to enable their reimbursement, thereby generating income to afford future clinical activity. Codes are bundled and converted into Healthcare Resource Groups (HRGs). Each HRG has a respective tariff which is reimbursed to the trust.

Aim: This audit aimed to assess clinical coding accuracy of elective rhinology procedures performed at Royal Preston Hospital, enabling evaluation of the effect on the tariffs reimbursed and subsequent funding for clinical activity.

Methods: Retrospective data was collected, using electronic patient records, for 100 elective rhinology procedures performed between 31st July 2023 and 1st January 2024. Each procedure was coded by a medical student and peer reviewed by an ENT registrar, before comparing with the original codes allocated by clinical coders. The differences in tariffs between the allocated codes were analyzed to determine the impact of coding inaccuracies.

Results: The analysis revealed coding inaccuracies in 83/100 cases, of which 33 had a resultant change in HRG. This led to an overall difference in tariff between the revised and original codes of £9,487 over 5 months. Conclusion This audit highlights the importance of accurate clinical coding in rhinology. As a result, a tick list of key surgical steps has been added to the rhinology operation notes to improve clarity for clinical coders. To complete the audit, a further cycle is in progress, including investigation into the effect of comorbidity coding on tariffs. If successful, tick lists will be further rolled out across other ENT subspecialties.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4505

The Application of Artificial Intelligence in Educating Patients About Rhino-Sinusal Pathology

Alexandru Hut[1], Raphael Galant[3], Loredan Miksa[4]

[1]The "Victor Babes" University of Medicine and Pharmacy, Timisoara,, *[2]The "Victor Babes" University of Medicine and Pharmacy, Timisoara*, *[3]European Hospital Georges Pompidou, Paris*, *[4]ENT Clinic of Timisoara*

Poster Session | Technological advances | 22 June – 25 June, 2025, All day

Introduction: Particularly in terms of patient education on rhino-sinusal illness, artificial intelligence (AI) is transforming medical practice. Customized answers to patient questions given by AI-powered solutions increase understanding and accessibility. Still unresolved are questions about accuracy, misleading information, and artificial intelligence's limitations in handling challenging medical conditions. This paper investigates how artificial intelligence may be used to educate patients about common rhino-sinusal problems, weighing advantages and disadvantages.

Materials and methods: Directed to artificial intelligence, a questionnaire including the ten most often requested questions by patients in the otolaryngologist's office about rhino-sinusal pathology was used.

Discussions: Millions of people worldwide suffer from rhinitis and chronic sinusitis, among other rhino-sinual disorders. Many times, patients ask about their symptoms, underlying causes, and potential course of treatment. Medical education is being provided more often using artificial intelligence-driven platforms, including chatbots, virtual assistants, and machine learning-based diagnostic tools. Though its dependability is still debatable, artificial intelligence increases patient autonomy and healthcare efficiency.

Conclusions: Including artificial intelligence in patient education on rhino-sinusal pathology has many advantages, including personalized information distribution, improved accessibility, and the possibility to raise patient participation in self-care procedures. Still, there are limitations, including AI's incapacity to do physical tests, understand difficult clinical subtleties, or substitute the special judgment of medical practitioners.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4554

A comparison of Artificial Intelligence generated information versus local Trust information when consenting patients for rhinological procedures.

Marios Stavrakas, Ra'ed Al - Ashqar[1], Yazan Kanaan[1], Hisham Khalil[2]

[1]Derriford Hospital, University Hospitals Plymouth NHS Trust, UK, *[2]Peninsula Medical School, University of Plymouth, UK*

Poster Session | Technological advances | 22 June – 25 June, 2025, All day

Introduction: Patients are becoming more autonomous in making decisions for their healthcare with readily accessible information. This study is aiming to assess the benefit of using Artificial Intelligence (AI) to provide information for our patients about surgical procedures they are listed for, versus the locally provided patient information leaflets.

Materials and Methods: ChatGPT, an open-source AI software is used to generate answers to basic information on NHS funded rhinological procedures (septoplasty, FESS) and frequently asked questions. The control group of patients is provided with a local hospital leaflet on their procedure, while a group of patients is provided with AI generated answers to the same topics. Understanding is assessed in consent clinic via the subjective scoring of teach-back method where the patients from each group are asked to describe their understanding of the procedure, indications, outcomes and complication in their own words.

Results: We demonstrate examples of AI generated information on common procedures in Rhinology, highlighting the differences between them and the commonly provided leaflets. We also show potential inconsistencies in the generated text based on prompts provided, which can be a potential limitation for further application.

Conclusions: The emergence of AI in healthcare is a useful tool to improve patient engagement and understanding, facilitating informed consent, however must be used in conjunction with clinician led guidance.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4480

A Novel Approach to Diagnosing Nasal Obstruction: Combining Fluid Mechanics Theory and Machine Learning Analysis of Acoustic Rhinometry Data

Ishaan Aggarwal[1], Issa Beegun[1], Hesham Saleh[1]
[1]*Department of Rhinology Imperial Health*

Poster Session | Technological advances | 22 June – 25 June, 2025, All day

Background: Addressing nasal obstruction can be challenging. This research explores how fluid mechanics, computational fluid dynamics (CFD), and machine learning can be applied to acoustic rhinometry (AR) data to better understand the impact of nasal structural abnormalities on airflow and improve diagnostic accuracy**.**

Method: AR data curves were obtained, and key datapoints were identified to calculate essential fluid properties such as total pressure loss and wall shear stress. These were compared to values obtained from a CFD simulation of a non-obstructed nose. A Machine Learning algorithm was developed to classify datasets as either normal or abnormal and to determine the key distinguishing features.

Results: The study shows a good correlation between a large structural abnormality and noticeable effects on total pressure loss and wall shear stresses. The algorithm can identify structurally obstructed noses to a high level of accuracy.

Conclusion: This limited study demonstrates the potential of incorporating the use of AI and fluid mechanics in clinical practice.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



Training

3809

Delivering A Regional Pan-Specialty Mentorship Scheme For Specialty Training Doctors

Rory Houston[1], Toby James[2], Iain McPherson[3], Alyson Williamson[2]

[1]NHS England Education North East / Newcastle upon Tyne Hospitals NHS Trust, [2]NHS England Education North East , [3]NHS England Education North East / South Tees NHS Foundation Trust

Poster Session | Training | 22 June – 25 June, 2025, All day

Introduction: The benefits of mentorship to doctors' professional development and success are well recognised. The General Medical Council, Royal College of Surgeons, and NHS England advocate for mentorship within postgraduate medical education. However, many mentorship schemes lack integration and sustainability, limiting the long-term benefits of mentorship.

Aims: To lead a regional mentorship scheme for specialty training (ST) doctors across all of Surgery, Medicine, Laboratory Medicine, and Paediatrics within the Deanery. Annual evaluation performed to explore benefits to Doctors in Training (DiT), and deliver sustainable process for long-term mentorship.

Methods: ST1 doctors (mentees) at the beginning of training are linked with ST3+ doctors (mentors), who receive mentorship training. Evaluations are completed and presented through a quality assurance process with scheme improvements made based on findings.

Results: In the 2023-2024 cycle, 79 participants formed 33 partnerships, with all mentors trained, and showed increased confidence in their ability to supervise and train others. All mentees benefitted and would recommend involvement to others. In the 2024-2025 cycle, 156 participants formed 61 partnerships, with evaluation planned for Spring 2025. Additional research on the impact of mentoring as a mentor on the development of positive clinical leadership qualities, highlighted newly discovered benefits to mentors.

Conclusion: We are leading a regional pan-specialty mentorship program for ST doctors. The scheme delivers significant benefits for participants and the region, supporting professional growth and developing the future medical education workforce. The evaluation shows the scheme can be sustainably delivered, with planned expansion to all 550 ST doctors in the region.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



3828

Assessing Proficiency: A Fast Audit Evaluation of Endonasal Surgical Skills in Trainee Surgeons

Jure Urbančič[1], Domen Vozel[1]
[1]*Faculty of medicine, University of Ljubljana, Slovenia*

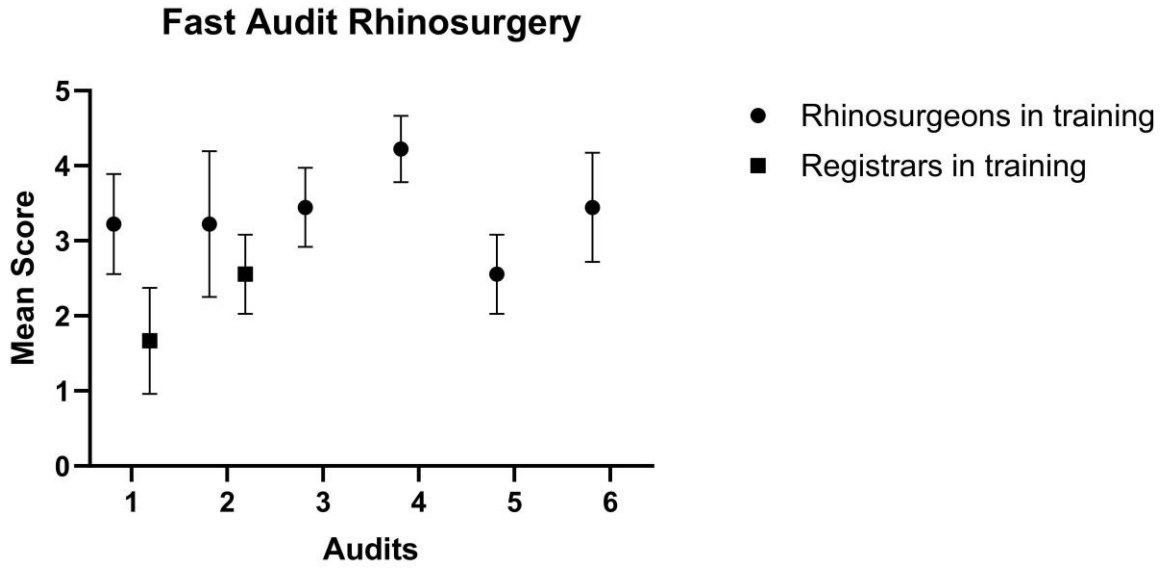
Poster Session | Training | 22 June – 25 June, 2025, All day

Introduction: Surgical training is a comprehensive process of safely transferring acquired techniques in real-life scenarios. The training itself starts way earlier than the first encounter with a patient. However, evaluating the surgical skills should continue from the first surgical procedure to the end of the training. The study used an in-house-developed Fast Audit Rhinosurgery Questionnaire to assess candidates in training.

Methods: Rhinosurgical candidates were evaluated during their endoscopic procedure by a senior and junior rhinosurgical consultant. The questionnaire had 7 domains (clinical knowledge and approach, CT&MR handling, endoscope management, tissue management, orientation, handling of unfavorable events, reporting, and overall audit score) assessed by a Likert scale from 1 (unacceptable),2, 3 (acceptable) to 5 (excellent). The cut-off score for pass/fail was 3 or more for every item. The overall mean score was calculated and compared.

Results: 3 trainee rhinosurgeons and a control subject, a young trainee, were tested. 6 audits were done. Once on one surgeon by two auditors on the same day (different cases), mean value 3.22 (SD 0.67) vs 3.22 (SD 0.972), p>0.999. Comparing the mean values (trainee vs control) 3.22 vs 1.56, the difference is statistically significant (p<0.0001).

Conclusion: The first results of a real-life comparison of the Fast Audit Rhinosurgery Questionnaire are promising. We have gathered some preliminary data in head-to-head comparisons. Nevertheless, more data must be acquired to confirm the tool's validity.



ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4172

SETS: Survey of ENT Trainee's Septo (rhino) plasty Training

Michaella Cameron[1], Edward Balai[2], Guled Jama[3], Vikas Acharya[3], Peter Andrews[3]

[1]Northwick Park Hospital, *[2]Great Ormond Street Hospital*, *[3]University College London Hospital*

Poster Session | Training | 22 June – 25 June, 2025, All day

Objectives: Despite most trainees performing their first septoplasty as junior registrars, only 56.6% felt adequately prepared (Gupta et al., 2014). COVID-19 further reduced training opportunities, particularly for septorhinoplasty (Oremule et al., 2021). This study examines training settings, supervision, and operative techniques to identify barriers and improve rhinology education.

Method: An electronic questionnaire (www.smartsurvey.co.uk) was distributed via Association of Otolaryngologists in Training mailing lists, BRS J social media platforms, ENT registrar WhatsApp groups, ENT UK newsletters and endorsements from Training Programme Directors. A mixed-methods approach assessed training exposure, case volume, supervision, and self-reported confidence levels in nasal airway surgery.

Results: 96 registrars responded: 41% junior (ST3-5) and 56% senior (ST6-8). 16 regions participated. Most (61%) performed their first caudal/septo-collumelloplasty during ST3-ST5 and medical photography was not requested (65%). 62 % utilised selective septal resection and suturing techniques here. 83% performed <0 septorhinoplasties and 63% lacked confidence. Theatre time pressures and sporadic case load were perceived barriers to training.

Conclusion: Most registrars perform caudal/septo-collumelloplasty early in training, but confidence in functional septorhinoplasty remains low. Challenging septal corrections are taught with selective septal resection and suturing techniques, rather than external approaches. Trainees request more structured supervision, anatomical teaching, and exposure to NHS cases during junior years to improve skills and confidence in nasal airway procedures.

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4259

Comparison of Wave V Amplitudes and Latencies in Auditory Brainstem Responses to CE-Chirp Versus Click Stimuli in Infants Under 9 Months Attending Screening at a referral audiology center in a Low-Middle-Income Latin American Country: A cross-sectional stu

José Martes-Fritz[1], Sergio Moreno-López[2], Lucia C. Perez-Herrera[3], Isabela Rodriguez Dussan[1], Daniel Peñaranda[4], Augusto Peñaranda[5]

[1]School of Medicine, Universidad de Los Andes, [2]School of Medicine, Universidad de Los Andes / Researcher, UNIMEQ-ORL, [3]Department Global Public Health, Karolinska Insitutet / Researcher, UNIMEQ-ORL, [4]Department of Otolaryngology, Stanford University, [5]School of Medicine, Universidad de Los Andes / Department of Otolaryngology, Fundación Santa Fe de Bogotá, [6]Universidad de Los Andes

Poster Session | Training | 22 June – 25 June, 2025, All day

Introduction: Hearing loss affects communication and cognitive development. Early neonatal hearing screening is essential to mitigate these effects. Auditory Brainstem Responses (ABR) are used to evaluate auditory function infants. This study compares the amplitude and latency of Wave V in response to Click and CE-Chirp stimuli in infants under nine months at an audiological center in Bogotá, Colombia.

Methods: An observational, cross-sectional study was conducted at UNIMEQ ORL (February 2023 - April 2024). Children under nine months undergoing ABR with Click and CE-Chirp stimuli were included. Sociodemographic and clinical data were extracted from records. ABR were performed using AUDERA and NavigatorPRO at 35 dB, monitoring Wave V for both stimuli. Statistical analysis included the Wilcoxon Signed-Rank test to compare responses and correlation coefficients to assess agreement, with a 5% significance level.

Results: 354 children participated, with a mean age of 8.66 months. Wave V latencies at 35 dB were longer for CE-Chirp stimuli (7.90 ms right ear, 7.81 ms left ear) compared to Click stimuli (7.76 ms right ear, 7.74 ms left ear). The mean differences were 0.13 ms (SD: 0.30 ms) for the right ear, and 0.08 ms (SD: 0.31 ms) for the left ear. Wave V amplitudes were higher for CE-Chirp stimuli (0.13 µV) than Click stimuli (0.10 µV) in both ears. Wilcoxon paired ranks test showed that the differences between latencies and amplitudes between Click and were statistically significant ($p<0.001$)

Conclusions: CE-Chirp stimulus demonstrated slightly longer latencies and higher amplitudes than Click stimulus in both ears. Differences in latency were minimal and probably not clinically significant; they indicate subtle physiological variations when exposed to the stimulus. The increase in amplitude seen with CE-Chirp suggests improved auditory responses. These support the idea that CE-Chirp can enhance neural synchronization at low intensities (35dB). These differences are

ERS2025
30th Congress of European Rhinologic Society
43rd Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN) &
25th Congress of the International Rhinologic Society (IRS)
JUNE 22-25, 2025
HUNGEXPO, Budapest, Hungary



4393

Evaluation of the Rhinology Fellowship in Plymouth, UK; A 10 year update

Marios Stavrakas[1], **Hisham Khalil**[2], Yazan Kanaan[1], Ra'ed Al-Ashqar[1], Samiul Muquit[5]

[1]University Hospitals Plymouth NHS Trust, [2]Consultant ENT Surgeon -University Hospitals Plymouth NHS Trust, [3]University Hospital Plymouth and Peninsula Medical School, Plymouth, [4]Consultant ENT surgeon -University Hospitals Plymouth NHS Trust, [5]Consultant neurosurgeon -University Hospitals Plymouth NHS Trust, [6]Derriford Hospital, University Hospitals Plymouth NHS Trust, UK

Poster Session | Training | 22 June – 25 June, 2025, All day

Introduction: The Rhinology Fellowship in Plymouth was set up in 2007 after approval by the Specialist Advisory Committee. An initial evaluation of the fellowship was completed in 2014 with the experiences of the 5 out of 6 fellows. The fellowship was well-rated with constructive suggestions for improvement. This included the introduction of an anterior skull base operative day and the purchase of a new image guidance system. We aimed to evaluate the Rhinology Fellowship from 2015 to the current time.

Methods: An online survey was sent to fellows, with sections on fellowship design and experience, research, education, networking, careers, and suggestions for improvement. Questions had a scale of 1-5 , or had binary responses with space for comments.

Results: Seven Fellows completed the fellowship between 2015 and 2024 for periods ranging from 12-24 months. All fellows are now in Consultant posts except for the current fellow. Two of the fellows have achieved an Associate Professor title. Training in endoscopic sinus, frontal sinus and skull base surgery were highly rated. Rhinoplasty training was less available in the latter years due to commissioning rules around cosmetic surgery. There were opportunities to teach and train other, be involved in research and publish. Suggestions for improvement included more exposure to rhinoplasty and skull base surgery.

Conclusions: The updated structure of the Rhinology Fellowship in Plymouth has enhanced the training experience of fellows and prepares them well for independent practice.





Authors Abstracts Index

Aanaes	Kasper	3832, 3838, 4097, 3782, 4084, 3843, 4025
Abdelhamid	Amr	3994
Abdool Wahed	Amber	4524
Abdul Baseer	Surraya	4091
Abdulhadi Isa Ali Saeed	Hasan	3667
Abdulla	Hadi	4047
Abels	Christoph	3735
Abergel	Avraham	3807, 4408, 4407, 3948
Abhijeet	Mishra	3862
Abhinav	Kumar	4416
Aboulhosn	Rabii	4373
Abu Suliman	Omar	4305
Acharya	Vikas	4172
Acosta	Hander	4117
Adrianakis	Alexandros	4115, 3858
Advani	Rajeev	4027, 4047, 3994, 3996
Affleck	Karen	4156
Aggarwal	Shruti	3967, 3963, 3968
Aggarwal	Ishaan	4480
Aggarwal	Rohini	3994
Ágnes	Szalenkó-Tőkés	3836
Ágnes	Kiricsi	3836
Agosti	Edoardo	4175
Aguilar Cantador	Juan	4005, 3990, 3918
Aguirre-Peña	Leire	4293
Ahlstrom Emanuelsson	Cecilia	4421
Ahmad	Eman	4220
Ahmed	Shahzada	4537, 4535, 4235, 4265, 4053
Ahmed	Muhammad	3779
Aiko	Oka	3772
Akarapas	Chatdanai	3797
Akbal Çufalı	Şeyda	4468
Akcay	Merve	3911
Akoumianakis	Evangelos	4158
Al - Ashqar	Ra'ed	4554, 4203, 4393
Al Amri	Ali	4014
Al Salloom	Zainab	4202
Alamri	Ali	4014





Alaraifi	Abdulaziz	4185
Al-Ashqar	Ra'ed	4349, 4393, 4350
Albertini	Davide	4214
Albu	Silviu	4063, 3942
Aldaz Bernad	Paula	3880, 4193, 3880
Aldilaijan	Khalid	4112, 4105
Alduhirat	Emad	4065
Alexandru	Mihaela Dana	3781, 4016
Alfonso	Carolina	4051, 3880, 4011, 4250, 4207, 4193
Algazlan	Razan	3820
Alghoj	Ahmad	4514
Alhail	Mashael	4065
Alharbi	Talal	4539
Alharbi	Hussain	4305
Alhedaithy	Riyadh	4185
Alhedaithy	Alhanouf	4112
Ali	Salman	4279, 4280, 4278
Aliakbari	Kamelya	4091
Alim	Bader	3661
Alius	Ruxandra Oana	4485, 4427, 4519, 4490, 4488, 4463, 4465, 4466, 4469, 4486
Aljohani	Mohammad	4041
Alkan	Uri	3766
Alkhashan	Raghad	3950
Almanzo	Santiago	3929, 3856
Almasoud	Mai	4105
Almeida	Diogo	4378
Almeida	Laiana	4281
Almeida	Gustavo	3886
Almomen	Ali	4403
Almqvist	Gun	3848, 3852, 3851, 4082
Alnemer	Abdulaziz	4493
Alnosair	Abdulmajeed	4112
Alobid	Isam	4171, 3894, 3736, 4293, 4229, 3858
Alomari	Omar	3911, 4190
Alotaibi	Naif H.	4088, 3950, 4331
Al-Qudah	Mohannad	4493
Alroqi	Ahmad	4539
Alsaey	Hamad	4065
Alsalamah	Shmokh	4185
Alsaleh	Saad	4331, 3661
Alsayed	Ahmed	4331
Alshareef	Norah	3950





Alsheikh	Abdullah	4331
Alshenaifi	Lama	3950
Alsubaie	Nawaf	4539
Alsudays	Ali	4475
Alsulaiti	Mansour	4065
Althobaiti	Hazem	4305
Althomaly	Danah	4105
Alvarez	Francisco	3646, 3648
Alvarez Alvarez	María	4198, 4144
Alves	Sandra	4168, 4161
Alves	António	3980, 3982
Alves	Silvia	4010
Alves Sousa	Francisco	4134
Amaro	Teresina	4378
Amitai	Nimrod	3768, 3799
Amorim	Hugo	4002
Amri	Ameni	4520
Anagiotos	Andreas	3780, 3752
Anastasiadou	Sofia	4307, 4416
Anda	Gata	4063
Andersen	Steven Arild Wuyts	4180
Andersen	Ida	4084
Andor	Hirschberg	3836
Andorfer	Kornelia	4138
Andrade	Ana Raquel	4002, 4406
Andrade	António	3810, 4052
Andrade De Sousa	Carlota	4094
André	Carla	4010, 4510
André	Pereira	4227
Andrea	Ciofalo	4115
Andreas	Aspris	3752
Andreea	Rusescu	4485
Andrews	Peter	3756, 4172, 3778
Andrianakis	Alexandros	4171
Anghel	Alina	4170
Anibal Cardoso Pinto	Vinicius	4473
Anselmo-Lima	Wilma	4142, 4146, 3946, 3936, 4122, 3932, 4146
Anteplioğlu	Tuğçe	3685
Antonella	Tosco	4328
Antonio	Castanheira	3645
Antonisamy	Belavendra	3902
Antunes	Luís	4510, 4521, 4199, 4010





Anwar	Bilal	3994
Aparicio Parrado León	Alba	4218
Apaydin	Nihal	4561
Aragona	Teodoro	4328
Arana Fernández	Beatriz	4051, 4250, 4207, 4193, 3880, 4011
Arbabzadeh	Farhad	3991, 3992, 4178
Arcuri	Maria T.	4138
Ardani	Shina	4155
Arede	Carolina	4516
Aretha	Diamanto	3830
Armengot Carceller	Miguel	4530, 3929, 3780
Arnaiz	Nuria	4034
Arndal	Elisabeth	4089
Arnoldner	Tamara	4511
Arosio	Alberto Daniele	4214, 4175
Árpád	Szabó	3774
Arruda	Luiza	4142
Asenov	Asen	3878, 3825
Asenova	Mila	3878, 3825
Ashkanani	Sara	4065
Ashutosh Vishwasrao	Patil	4568
Asimakopoulou	Panagiota	4119
Astl	Jaromir	3893
Astray Gómez	Saúl	3856
Au	Joy Xin Yi	4080
Augusto	Sandra	4380
Ausin	Pilar	4113
Awan	Ali Hasham	3626
Azevedo	Luísa	4380
Babaei	Amirhossein	4262, 4274
Babalola	Adetola Emmanuel	4370
Bącal	Michalina	4204
Bachert	Claus	3735, 4171, 4115, 3858
Bachmann	Gregor	4455
Backer	Vibeke	4097, 3843, 4025, 4084, 3838, 3782
Bader	Ahmad	3619
Badsberg Samuelsen	Grethe	3782
Bae	Woo Yong	3783
Bahadori	Lila	3852, 3851, 4082
Bahra	Parmjit	4156
Bakakos	Petros	4194
Balai	Edward	3855, 3811, 3683, 3756, 4172, 4186





Balaji	Rishab	4165
Balakrishnan	Abhilash	3903
Balakumar	Ramkishan	4309
Balatková	Zuzana	3943, 3827
Balázs	Liktor	3836
Balermpas	Panagiotis	4400
Bálint	Liktor	3836
Ballas	Konstantinos	4358
Balzi	Daniel	4214
Bangert	Christine	4511
Bansberg	Stephen	3934, 3933
Baptista	Luís	4094, 4224, 3886, 3888, 3889, 3891, 3890, 4515
Baptista	Bernardo	4531, 4525, 4401
Barbosa	João	3757, 4233, 3759, 3920
Barbosa	Andre Luiz Amaral	4122
Barbry	Pascal	3866
Barde	Marta	3882
Barham	Henry	4090
Bärhold	Friederike	4303
Barić	Hrvoje	3970, 4037
Baroni	Silvia	4254
Barrera-Conde	Marta	3866
Barros	Pedro	4221, 3810
Barros Lima	Renan	4473
Bartier	Sophie	4016
Bartosik	Tina	4511, 4081
Basak	Hazan	4467, 4562, 4546, 4561
Basak	Kayhan	4548
Baslund	Bo	3832
Bates	James	4182
Battaglia	Paolo	4175, 3736, 4214, 4033, 3993
Baudoin	Tomislav	3959
Bayer	Karina	4081
Beamer Consortium	Beamer	4436
Beard	David	4301
Beatriz	Rodrigues	4227
Bech	Magne	3832
Becheva	Dilyana	4443
Becker	Sven	4303
Becker	Benjamin	4149
Beckers	Eline	4099
Beech	Thomas	3720





Beegun	Issa	4480, 4365, 4241
Bejzman Piltcher	Otavio	3708
Bella	Zsolt	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836, 3709
Benavent Marín	María Pilar	4118, 4034, 4117
Bengtsson	Sara	4215
Benitez	Andreana	3767
Benitez Del Rosario	Jesús Javier	4032, 3973, 3693
Bennett	Warren	4307, 4416
Bennett	Stephen	4213
Benoudiba	Farida	3781
Bensafi	Moustafa	4560
Benshetrit	Guy	4502
Berber	Veysel	3779
Bergada Pijuan	Judith	4160
Berger	Xenia	4267
Bernal Sprekelsen	Manuel	4293
Bernardo	Teresa	4277
Berry	Sandeep	4181
Bersudsky	Tzuf Karin	3910, 3766
Bertsch	Arnaud	4560
Besharah	Bayan	4305
Besiashvili	Nino	3633
Bessa	Simão	4275
Beton	Suha	4562, 4546, 4561
Bettio	Giulia	4171, 4115, 3858
Betz	Christian	4528, 4209, 4149
Beule	Achim	4424, 4426, 4425, 3854
Beurnier	Antoine	3781
Beutner	Caroline	4303
Bezshapkin	Valentyn	3999
Bhalla	Raj	3994
Bhamra	Navdeep	3919, 4128, 4114
Bhatt	Neel	4438
Bhoombla	Nikita	4244, 4241
Biadsee	Ameen	4067, 4320, 4319
Biagiotti	Andrea B	3946
Bigalgli	Elisabetta	4390
Bignami	Maurizio	4175, 3993, 3734, 4147, 4214
Biguerdi	Sero	3706
Bilać	Jakov	4532, 4150
Bilaus	Ran	4408
Biswas	Kristi	4267





Bittner	Claudia B.	3735
Blanco	Asier	4117
Blanco Goñi	Asier	4118
Blau	Ilan	4067
Blauwblomme	Manon	3736, 4086, 3755
Blomgren	Karin	3822
Bly	Randall A.	4138
Boak	Duncan	3899, 3823
Boardman	James	4215, 4301
Boardman	Jim	3899
Bódi	Anna	4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836, 4223
Boek	Wilbert	3630
Boesveldt	Sanne	3630
Bogdanova	Tatjana	3808, 3758, 3737
Bohr	Christopher	4138
Boldes	Tomer	4319, 4320
Bona-Andrade	Helio	4113
Borgers	Elien	4102
Borodovsky	Yahav	3948
Borsetto	Daniele	4175
Böscke	Robert	4550, 4149
Bostan	Silay	4546
Botera	Guy	4091
Böttcher	Arne	4209
Bozkurt	Gülpembe	4467
Braham	Rim	4520, 4541
Brahmabhatt	Pranter	4169
Branco	Pedro	3886
Brandreth	Benedict	4349
Bresci	Silvia	4133
Bresson	Damien	4175
Breuer	Thomas	4039
Brewin	Mark	4213
Bright	Rakesh	3905, 3902
Brigis	Girts	3730, 3729, 4148
Briner	Hans	3646, 3648, 4543
Briquet	Caroline	3925
Brogiolo	Eduardo	4317
Brookes	Thomas	4389
Brozek-Madry	Eliza	4464, 4471, 4478
Brugger	Silvio D.	4160
Brühlmann	Catrin	4397, 4160, 4555, 4396







Bruno	Paris	4416
Buana	Aditya Wira	4442
Buchheit	Kathleen M.	3845
Budisan	Livia	3942
Bugge Rønnestad	Vitus	3832
Buksinska	Malgorzata	3876
Bulha	Margarida	4380
Bulić	Ivana	3883, 3763
Bullock	Elizabeth	4283, 3683
Burgess	Andrea	4028, 3780
Burlacu	Maria Laura	4486, 4469, 4466, 4488
Burska	Zofia	4471, 4478
Burton	Laura	4169, 4181
Butler	Colin	3811
Butt	Juned Zafar	4138
Byrd	Kenneth	4279, 4280
Caballero	Ignacio	3866
Čábalová	Lenka	4007
Cabernite-Marchetti	Erika	4058
Cabral	Rui	4019, 3939, 3888, 3889, 3891, 3890
Cabrera Guijo	Javier	4530
Cabrera López	Carlos	4032, 3693
Cabrera Ramírez	María Soledad	4032, 3973, 3693
Caçador	Maria	4057, 4056
Caers	Jo	3853
Caetano	Mariana	4517, 4399, 4401, 4525, 4366, 4531, 4516, 4512, 4507
Caetano Oliveira	Gonçalo	3733
Cakmak	Yusuf Ozgur	4079
Calder	Nick	3650
Cales	Sofia	4380
Caliskan	Cagla Sumeyye	4190
Caliskan	Emine	3911
Caljha	Mariana	4399, 4401, 4516, 4507, 4531, 4525, 4366
Calvo	Paula	3944
Calvo Gómez	Jordi	3929
Calvo Henríquez	Christian	3894
Camby	Séverine	3853
Cameron	Michaella	4172, 3684
Camp	Lois	3823
Campbell	Raewyn	3780, 3871, 4062
Campion	Nicholas James	4081, 4511
Campion	Margaux	3781





Campos Junior	Cláudio Penido	4122
Campos Lopes	Miguel	4002, 4406
Cantone	Elena	4328, 4254
Cao	Zhiwei	3787, 3796, 3795, 3793, 3791, 3794
Carazanu	Andreea Teofana	4488, 4486
Cardella	Arianna	3819
Carena	Paolo	4242
Carlier	Mathilde	3780
Carlos Zamora	Román	3990, 4005
Carmel Neiderman	Narin Nard	4408, 4407, 3948
Carney	A.Simon	4091
Caroça	Cristina	, 4043
Carreiro	Inês	3891
Carrillo Díaz	Teresa	4032
Carsuzaa	Florent	3989, 4016, 4420
Carvalho	Tomás	4512
Carvalho	Miguel	4238
Carvalho	Rita	4134
Carvalho	Sofia	4134
Casale	Manuele	4314, 4315
Casasayas Plass	Maria	3721
Cascão	Mariana	4388, 4387, 3645, 3647
Castanheira	António	4388, 4387, 3647, 3645
Castanheira	Maria Beatriz	4043
Castanheira	Beatriz	4057, 4056
Castelão	Filipa	4510
Castelhano	Luís	4094, 3940, 3941, 3944, 4019, 4095, 4230, 4057, 3888, 3889
Castelnuovo	Paolo	4175, 3736, 3930, 4214
Castelo Branco	Miguel	4543
Castro	Bruna R	3666
Catarina	Morais	4227, 4230
Catherine	Rennie	3820
Čaušić	Ema	4532, 4364
Cavaliere	Carlo	4171, 4115, 3858
Caversaccio	Nathalie	3780
Cazorla-Ramos	Oscar-Emilio	4376
Çelebi	Mehmet	4191
Cerezo Arenas	María	3918
Červený	Květoslav	4162
Cetlin	Andrea A	3946
Chadha	Neil K.	3780
Chae	Hee Sung	3974





Chahade	Jadin	4402
Chaidas	Konstantinos	4559, 4344
Chainoglou	Georgia	3805, 4194
Chaiwarith	Romanee	3797
Chaiyasate	Saisawat	3797
Chaker	Adam	4099
Chalkiadaki	Eleni	4004, 4110, 4066
Chamero	Pablo	3866
Chan	Ching Yee	3771
Chan	Jun He	3686
Chang	Po-Hung	3765, 3754
Chang	Hsuan Fu	3953
Chang	Liu	3681
Chang	Michael T	3665
Chao	Yun-Ting	3965, 4282
Charaklias	Napoleon	4496
Charlotte	Arnold	3789
Charn	Tze Choong	3771, 3668, 3912, 3686, 3670
Chataway	Timothy	4091
Chatziavramidis	Angelos	4352
Chatzinikolaou	Aimilios	3805
Chatzisouleiman	Ipek	4559
Chaushu	Hen	4408, 4407
Chee Rui Tzen	Justin	3678
Chegeni	Nusha	4091
Chen	Jianjun	3787, 3796, 3795, 3793, 3791, 3794
Chen	Bo	3787, 3796, 3795, 3793, 3791, 3794
Chen	Claudia	3848, 3852, 3851, 4082
Chen	Jingyuan	3640, 3641
Chen	Wenyi	4414
Chen	Yihan	4383
Chen	Yi-Wei	3754
Chen	Christopher Li-Hsian	3686
Chen	Xiaoxu	3660
Chengjung	Wu	4428
Cherian	Lisa Mary	3906, 4116, 3902
Cherobin	Giancarlo	3708
Cherukupalli	Abhiram	3694
Chiba	Shintaro	4417
Chiboub	Dorra	4545
Chien Yu	Huang	3739





Chikamatsu	Kazuaki	3867
Chimona	Theognosia	4123
Ching-Nung	Wu	4078
Chiong	Thomase Jamilla	3731
Chishty	Faaizah	3898
Chitsuthipakorn	Wirach	3623, 3624, 3622, 3908, 3621
Chiu	Chien-Jen	4126
Cho	Stella	3798
Choi	Ji Yun	3634, 3775, 3776
Choi	Hosung	4076
Choi	Hyunsu	4076
Chorão	Martinha	3944
Chotikawichean	Nutpacha	3621, 3622
Choulakis	Konstantinos	4287, 4479
Chowdhury	Najma	4053
Choy	Christine	3871, 4062
Chrysouli	Konstantina	4410, 4419, 3937, 4322, 3616, 4297, 4321, 4297, 3937
Chu Qin	Phua	4568
Chua	Ryan	3672
Chua Jian Kai	Andy	3670
Chuang	Li-Pang	3754
Chung	Yoo-Sam	4044
Chvatinski	Lev	4067, 3799
Cichosz	Adrianna	4204
Cikojević	Draško	3702
Cincura	Carolina	4281
Ciofalo	Andrea	3858
Claire	Hopkins	4355, 4404
Clari-Comes	Meritxell	3698
Clark	Allan	4215
Clarke	Caroline S	4301
Clemente	Ignacio	3837, 3824
Cohen	Oded	3718
Colaço	Tiago	3888, 3890, 4095
Çolak	Ozan	4191
Colás	Carlos	3894
Çoldur	Meryem	4191
Colella	Alex	4091
Collingwood	Alexander	3844
Comert	Ayhan	4562
Comiglio	Federico	4272
Compagnoni	Inae M	3946





Constantinidis	Jannis	3736
Conti	Carlo	3930
Cook	Jonathan	4301
Cooper	Fergus	4373
Corbett	Mark	3806, 4438, 3841, 3845, 4103
Corbo	Marco	4254, 4131, 4340
Cornet	Marjolein	4154, 3653, 3841, 3845
Correia	Filipe	4231, 4094, 4057, 3941, 4515, 4104, 4019, 4224, 3886, 3888
Correia	Mariana	4516, 4525
Cortes Arciniegas	Alexandra	4530
Cortez Sampaio	Marlos	4473, 4454
Costache	Adrian	3947, 3964, 3909
Costa-Varela	Flavia	3958
Couralet	Marie	3866
Coutinho	Gil	4054, 3810, 4052
Couto	Ana Miguel	4510, 4521
Crabal	Rui	3886
Crestani	Bruno	3781
Cretu	Anda Selma	4486, 4469, 4488, 4466
Cruz Cerón	Nuria	4005, 3918
Cruz Toro	Paula	3837, 3824
Csakanyi	Zsuzsanna	4564
Csenge	Zsiros	3836
Cuco	António	3940
Cuevas	Mandy	4303
Čukman	Mateo	3959
Čulo	Branimir	3959
Cunha	André	4173
Cunha	António	3920
Cunha-Cabral	Diogo	4378, 4049
Czerwaty	Katarzyna	4205
Dabbas	Duaa	4265
Daems	Rembert	4099
D'Agostino	Giuseppe	3914, 4340, 4131
Daha	Mohamed	4541
Dalfino	Gianluca	4214, 3993
Dallan	Iacopo	4175, 3736
Damaso	Ricardo	4388, 4387
Damti Geva	Shiri	3910, 3766, 3619
Daniela	Vrinceanu	3909
Danielides	Vasileios	3639, 3638, 4222, 3830
Daoud	Amani	3910, 3766, 3619





Darbari Kaul	Rhea	3871, 4062
Das	Suman	4481
Daudia	Anu	4496
D'Auria	Leandro Maria	4254, 4131, 3914
Davies	Timothy	3703, 3975, 3722, 3994, 3674
Davies	Huw	4038, 4169
Dávila Quintana	Delia	4032
Dávila-Arango	Marcelo Enmanuel	3635
Davis	Angela M.	4154
De Arriba Sánchez	Álvaro	4250, 4207, 4193
De Benedetto	Luigi	4314, 4315
De Bonnecaze	Guillaume	4016
De Carpentier	John	3996, 3994, 4047, 4027
De Corso	Eugenio	3806, 3914, 4340, 4131, 4103, 4563, 4254, 4154
De Faveri	Nicolò	4124, 4242, 4127, 4106
De Greve	Glynnis	4099
De Kinderen	Joost	4171, 3858
De Maio	Gabriele	3914, 4131
De Ruyck	Natalie	4086, 3755
De Toeuf	Caroline	3925
De Vincentiis	Marco	4171, 4115
De Vita	Carla	4405
De Vos	Geert	3755
Debevec	Matej	3716
Defteraiou	Theodora-Eleftheria	4559, 4344
Degreef	Julien	3925
Dehlholm-Lambertsen	Emilie	4012
Dekeyser	Agnès	4219
Del Piero	Giulia	4008, 4031
Delchev	Ivan	3878, 4138, 3825
Delfin	Liza	4155
Delgado	Inês	3757, 4233, 3759, 3920
Demaria	Michele	4211, 4106, 4124, 4242, 4127
Demeter	Tomas	4160
Demir	Berat	3780
Demirag Evman	Melis	4190, 3911, 4548
Demirel	Emre	4191
Demosthenous	Vasiliki	4004, 4110, 4066
Deng	Yuzhoujia	3796
Dennis	Simon	4213
Dentinho	Jorge	4199
Derovs	Aleksejs	3730, 3729, 4148





Derycke	Lara	4086, 3755
Desrosiers	Martin	3848, 4154, 3852, 3851, 4082, 4163
Devabalan	Yadsan	3786
Devanand	Davangere P.	4153
Deyun	Wang	3695
Dhaha	Mohamed	4520
Dhambri	Sawsen	4520, 4541
Dhariwal	Jaideep	4313
Dheyauldeen	Sinan	4341, 4556, 3780, 3873
Di Bella	Giuseppe Alberto	4340
Di Giovanni	Simone	4314, 4315
Di Pierro	Francesco	4241
Diamant	Zuzana	4099, 4171, 4115, 3858
Dias	Joana	4510, 4521
Dias	Diogo	4380
Díaz Tapia	Gonzalo	4195, 4034, 4318
Dierickx	Carmen	4099
Díez Sebastián	Jesús	4011
Dimitrijevic	Milan	3969
Dinarte	Vanessa	4142
Djuric	Vojislav	3969
Djurovic	Slavica	4200
Dogan	Enes	3979, 3685
Doglietto	Francesco	4175
Dóka	Imre	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836
Dolci	Ricardo L L	3946
Dombrowski	Tobias	4303
Domenech Campos	Encarna	3929
Domínguez Sosa	María Sandra	3894, 4032, 3973, 3693
Domvri	Kalliopi	4194
Donato	Mariana	4094, 4019, 4224, 4095
Douglas	Richard	4267
Doulaptsi	Maria	4158
Drabek	Daniela	4528
Dragioti	Elena	3724
Dreyfus	Laurent	4438
Dritsas	Georgios	4410, 3761, 3985
Dritsas	Yiannis	4216
Dror	Amiel	3619
Drylli	Aikaterini	4419
D'Souza	Alwyn	3779
Duarte	Delfim	4378, 4049





Dumitru	Mihai	3947, 3964, 3909
Duque Holguera	Victoria	4198
Durham	Stephen	4301
Đurić Vuković	Katarina	4532, 4364, 4150, 4037, 4294
Durmus	Betul Ulya	4548
Duzkalir	Hanife Gulden	3911
Dżaman	Karolina	4205, 3897
Dzhambazov	Karen	4240
Earnshaw	James	4182
Ebihara	Teru	3998
Eça	Tiago	4517, 4366, 4531, 4525
Eckert	Mark	3767
Eckl-Dorna	julia	4511, 4115, 4081, 3858, 4171
Edey	Juliet	4121
Edwards	Dawn	4154
Eeckels	Anne-Sophie	3736, 4086, 3755
Ehnhage	anders	4421
Ehret-Kasemo	Totta	3812
El Mograbi	Aiman	3799
Elbosraty	Hussameldin	3691
Elez	Alper	3709, 3923
Elgendy	Ahmed	4538
Elmograbi	Aiman	3768
Elmoursi	Shawki	4024, 4109, 4020, 3978
El-Shirbeny	Hussein A.	4460, 4538
Elzayat	Saad	4538
Elzinga	Hester Beatrice Emilie	3653, 3628
Emily	Hocknell	4355, 4404
Emmanouil	Ioannis	3805
Ennahal	Afaf	4167
Erdélyi	Eszter	4223, 4015, 4018, 4276, 4184, 3863, 4092, 3923, 4552, 3709, 4189
Ernst	Benjamin Philipp	4303
Erodotou	Kallia	3752
Erovic	Boban M.	4175
Errico	Eugenio	4557
Ertan	Sinem Nur	4190
Erwe	Ibrahem	4048, 4045, 3859
Esbensen	Bente Appel	4097
Escada	Pedro	4231, 3940, 3941, 3944, 4104, 4019, 3939, 4230, 3886, 3888, 3889, 3891, 3890, 4094, 4224, 4095
Escudier	Estelle	3781
Espehana	Andreas	4343





Estibeiro	Hugo	4056
Eszter	Erdélyi	3836
Evans	Victoria	4169, 4181, 4038, 4169
Even Tidemandsen	Jens	4025
Evman	Riza Serdar	4190
Eyvazova	Habiba	4190
Fadda	Gianluca	4563
Faliagka	Stavroula	4514, 4522, 4506
Fan	Jiangang	3787, 3796, 3795, 3793, 3791, 3794
Fang	Hongyan	3787, 3796, 3795, 3793, 3791, 3794
Fang	Deyu	4268
Fantucci	Marina Z	3932, 3946
Faria	Francesca M	3932
Farinha	David	4531, 4366, 4507, 4399, 4401, 4517
Fath	Lea	4016
Favier	Valentin	3989, 4420, 4016
Felisati	Giovanni	3993
Fenghong	Chen	3695
Fent	Zoltán	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092
Ferdenzi	Camille	4560
Ferguson	Mark	3683, 3895
Fernandes	José Alberto	4054, 4052
Fernandes	Rafaela	3647, 3645
Fernandes	Ana Luisa	4049
Fernandes	Rosa	4049
Fernandes	João	3920
Fernández Parra	Beatriz	3894
Fernández Rodríguez	Ana	4196
Ferrari	Marco	4175, 3736, 3993, 3930
Ferrauto	Anna	4211, 4106, 4124, 4242, 4127
Ferreira	Joana	4277, 4275
Ferreira	Filipa	4510
Ferreira	Edite	4168
Ferrer Baixauli	Felip	3929
Fieux	Maxime	3665, 3989, 3666, 4016, 4420, 4560
Filip	Čović	3763
Filipovsky	Tomas	3893
Finney-Hayward	Tricia	4156
Fiorillo	Luigi	4340
Fisseler-Eckhoff	Annette	3882
Fito Martorell	Lucas	3929, 3856
Fjaeldstad	Alexander	4089





Flemming	Katharina	4377
Fleurot	Isabelle	3866
Florean	Maria-Delia	3942
Flynn	William	4523, 4502, 4526, 4245
Fokkens	Wytske J.	4171, 4115, 3653, 4103, 3628
Folic	Miljan	4483
Follows	Richard	4154, 4163
Fonseca	Rui	4335
Forgács	Gábor	4223, 4552, 4018, 4276, 4189, 4184, 4092, 3836
Förster	Marie Elisabeth Martina	3955
Förster-Ruhrmann	Ulrike	4303
Fortune-Ely	Mariella	4003
Foster	Andrew	3852, 3851, 4082
Fothiadaki	Ioulia - Rafailia	4158
Fotiadis	Georgios	4559, 4344
Fotiadis	Dimitrios	3632
Franco	Eduardo	4057, 4056, 4043
Franco	Rodrigo	4399, 4401, 4512
Franco	Antonio	4220
Frank-Ito	Dennis	4540, 4412, 4542
Freiberger	Sandra	4398, 4400
Freitas	Sofia	4057
Freitas	Luís	4157
Freitas	Isabella B	3936
Freitas Rebelo	Joana	4161
Frommlet	Florian	4081
Fu	Chia-Hsiang	3754, 3765
Fujieda	Shigeharu	3806, 3841, 4154, 4103
Fujii	Tatsuya	3746, 3977
Fuksa	Jakub	4360
Fyrmpas	Georgios	4559, 4344
G. Campbell	Raewyn	3637
Gago-Torres	Concepcion	4159, 4166, 4487
Galant	Raphael	4505
Galli	Jacopo	3914, 4340, 4254, 4131
Gallia	Gary	4272
Gambôa	Inês	4002, 4406
Gan	Yijin Jereme	3732, 3627
Gandhi	Aakash	4438
Gandolfi	Alberto	4214
Ganesan	Rajiniganth	4070





Gangl	Katharina	4511, 4081
Gani	Kaamil	4231, 3940, 3941, 4515, 3944, 4104, 4019, 4224, 3939, 4230, 3886
Gao	Jaynelle	4220
Gao	Esther Yanxin	3686
Garaycochea Mendozadel Solar	Octavio	4293, 4229
Garcia	Denny M	3932, 3946, 3936
García Chabur	Maria A	4266
Garcia Garcia	Virginia	3990, 3918, 4005
García González	Luis Antonio	4225
García Lerma	Miriam	4011
García Navalón	Carmen	3929, 3864
García Piñero	Alfonso	4530, 3929, 3856
Garcia van Schaik	Carolina	4039
García-Lliberós De Miguel	Ainhoa	3929, 3864
García-Sanz	Angela	4113
Garefis	Konstantinos	4352, 4560, 4351
Garzaro	Massimiliano	4563
Gata	Anda	4063, 3942
Gates	Jessica	4313
Gatsounia	Alkmini	3639, 3638, 4222
Gavilán Bouzas	Javier	3880
Ge	Wentong	3660, 3618, 3658, 3655, 3654
Gehad	Ibrahim	4284
Geneid	Ahmed	4201
Georgalas	Christos	3736
Gera	Ritika	4283
Geraldes	Cláudia	4236, 4234
Gernshbel-Milk	Dafna	4320
Gertz Mogensen	Ditte	3832
Gevaert	Philippe	4154, 3736, 4086, 3755, 4163, 4103
Gezo	Kenan	3883
Ghnem	Emad	3910
Ghosh	Samit	3844
Gilberto	Nelson	3886, 3891, 3940
Giorli	Alessia	4405, 4145
Giotakis	Evangelos	3725, 3728
Giotakis	Aris	3725
Giroudon	Caroline	4420
Giunta	Domenica	4211, 4106, 4124, 4242, 4127
Giunta	Giorgia	4145
Gkoulioni	Vasiliki	4004, 4110, 4066





Gluck	Ofer	3718
Goggin	Anne-Marie	4181
Goh	Xin Lei	3675
Gokani	Shyam	3899, 4186, 3855
Gokmen	Kahilogullari	4562
Goldie	Simon	4036, 4035
Golet Fors	Mireia	3837, 3824
Gomati	Anas	3694
Gomes	Pedro	4378, 4049
Gomes Floriano	Caio	4454
Gomes Pinto	Catarina	4197, 4168, 4192
Gómez	María José	3864, 3929
Gonatidis	Panagiotis	4004, 4110, 4066
Gonçalves	André	3980, 3982, 4238
Gonçalves	Paulo	4002, 4406
Gonçalves	Ilídio	4157
Gonçalves	Débora	4002
Gonilho	Joana	4484, 4462
Gonzalez Compta	Xavier	3837
González Cuello	César Luis	3990, 3918
Gonzalez Lluch	Carlota	3824
González Pérez	Ruperto	4225, 3894
González Sosto	Mariana	4196
Gonzalez-Compta	Xavier	3824, 3858
González-García	Miriam	4159, 3698
Gorbunov	Sergey	3743, 3741, 3742, 3740, 3744
Gorris	Senne	4099
Gos	Elzbieta	3876
Gosepath	Jan	3882, 3854
Gosiewski	Tomasz	3999
Gotti	Sara	4033
Gougousis	Spyridon	4194, 3805
Gounari	Anastasia	4322, 4321
Goutaki	Myrofora	3780
Gouva	Mairi	3724
Gouveris	Haralampos	4353, 3687
Gozlan	Romane	4093
Grafanaki	Katerina	4222
Grajczyk	Alicja	3897
Granell Moreno	Esther	3721
Grant	William	3895
Gras-Cabrerizo	Juan Ramón	3721







Grau Van-Laak	Coloma	4250, 4207, 4011, 3880, 4193
Gravante	Giacomo	3930
Grayson	Jessica	3736
Green	Linda	4313
Green	Richard	3865
Gregoski	Mathew	3767
Grenier	Baptiste	3781
Grgić	Marko Velimir	3915
Grivas	Georgios	4410, 4419, 4004, 3937, 4110, 4297, 4066, 4298
Gröger	Moritz	4303
Grønseth	Torstein	4138
Gudis	David A.	4153
Guincho	Joana	4094, 3886, 3888, 4019, 4224, 3889, 3891, 3890, 4095, 4104
Guldager	Mads	4187, 4180
Guler	Tugba Morali	4562
Gunaydın	Onder	3780
Gunder	Nadine	4303, 3706
Guney	Beyzanur	4190
Guo	Yunxia Sarah	3930
Gupta	Keshav Kumar	3919, 3720
Güzel	Muhammed	4391
Gyula	Marada	3774
H. Chuque Medina	Luiza	4473
Haapaniemi	Aaro	4201
Haase	Christiane	4097
Hackenberg	Stephan	3834, 3812
Hadi	Yaniv	3948
Hadi	Mohamed R.	4354
Hadoulos	Panagiotis	3725
Haehner	Antje	4377
Hafren	Lena	3701, 4085
Hagemann	Jan	4303
Haghighi	Masoud	4062
Hainarosie	Razvan	4485, 4427, 4466, 4463, 4486, 4469, 4488, 4465, 4519, 4490
Hak	Leonard	3631
Håkanson	Kjell Erik Julius	4097
Halewyck	Stijn	4102
Halin	Clement	4438
Haloob	Nora	4155
Hamlett	Katharine	4496
Hammarén-Malmi	Sari	4085
Han	Joseph K	3848, 3852, 3851, 4082, 4154, 4107, 4163





Han	Yang	3660, 3618, 3658, 3655
Hanna	Ehab Y	3930
Hanslik	Pauline	4079, 4560
Haoran	Lin	3695
Harder	Dennis	4424, 4426
Hariga	Ines	4547, 4549, 4545
Haris	Faizan	4313
harries	Philip	4036, 4035, 4028
Harris	Amanda	3780
Harvey	Richard	4090, 3871, 4062, 3736
Hasnaoui	Mehdi	4411
Haukka	Jari	3700
Hayn	Isolde	3780
Heffler	Enrico	3845
Hegyi	Péter	4223, 4552, 4018, 4276, 4189, 4184, 4092,
Heikki	Whittet	3788, 3789
Held	Ulrike	4398, 4400
Helevä	Alma	3701
Hellings	Peter	4099, 4102, 4171
Henshaw	Paul	4091
Herman	Philippe	4175, 3736, 3930
Hernaiz	Juan Carlos	3661
Hernandez	Anna Kristina	3706
Hernández Martin	Brian	3973
Hernandez Uceda	Sandra	4202
Hesaka	Nao	4417
Hewitt	Richard	3811
Hijano	Rafael	4113
Hildenbrand	Tanja	3854
Hill	David	4569
Hilty	Markus	4160
Hiramatsu	Ken	4111
Hirschberg	Andor	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092
Hirtler	Lena	4175
Ho	Shi Yeung	3900
Ho	Owen Tsung Wen	3686
Hoang	Minh	3623, 3624, 4059
Hoch	Stefan	3735
Hoehn	Luca	4006
Hoey	Andrew	3811
Hoffmann	Anna Sophie	4149, 4209
Hoffmann	Rina	3812





Hogan	Christopher	4121
Holbaek Haase	Christiane	3782
Holmegaard Larsen	Bent Ivan	3782
Holmström	Mats	4421
Holtappels	Gabriele	4086, 3755
Holzmann	David	4398, 4400
Holzmeister	Clemens	4171, 4115
Homøe	Anne-Sophie	3838, 4025, 3782, 3843
Hongming	Xu	3803
Honore	Isabelle	3781
Hopkins	Claire	3848, 3852, 4171, 4107, 3851, 4082, 4180, 4301, 4524, 4313
Horváth	Zsuzsanna	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836
Hosokawa	Yu	4075
Hostrup	Morten	3843
House	Trenton	3934
Houston	Rory	3809
Howarth	Peter	4156, 4107, 4163
Hox	Valérie	3925, 4099, 4102, 4171, 4219, 3858
Hsieh	Julien	4001, 4006
Hsin	Chunghan	3764
Hsueh	Hsiang-An	3754
Huang	Po-Kai	4445
Huang	Po-Han	3984
Huang	Wei-Chia	3981
Huang	Chi-Ying	3868
Huang	Chi-Che	3754
Huart	Caroline	3925, 4099, 4219
Huber	Patrick	4303
Hudson	Richard	4438
Hui Lee	Christina Ng	4568
Hulló	Daniella	3863
Hummel	Thomas	4079, 3706, 4333, 4219, 4377, 4215, 3866, 4560, 4089, 3686
Hung	Yu-Hsiang	4126
Hur	Kevin	3760, 4220
Hut	Alexandru	4505
Hwang	Yi Li	3739
Hwang	Peter	3665
Hyman	Max	4137
Hytönen	Maija	3822, 4201
Iafrati	Francesco	4314, 4315
Ickrath	Pascal	3812
Iftikhar	Haissan	3626





Iizasa	Hisashi	4443
Ikedo	Fábio	3884
Ikezono	Tetsuo	4075
Iliev	Georgi	3710, 3712
Imre	Dóka	3836
Inal-Ince	Deniz	3780
İnan	Burak Kaan	4391
Indrawattana	Nitaya	4152
Inomata	Kohei	3817, 3818
Introini	Sveva	4211, 4106, 4124, 4242, 4127
Ionita	Irina Gabriela	4485, 4427, 4519, 4490, 4469, 4465, 4466, 4463, 4488, 4486
Ira	Sun	3917
Irodi	Aparna	3905, 3902
Ishitani	Keisuke	3921, 3977
Ismael	Heizo Nakano	4313
Ismail-Koch	Hasnaa	4028
Itami	Kokoro	3921
Iurkovski	Augustina	4486, 4469, 4488, 4466
Ivanova	Polina	3710, 3712
Izquierdo-Dominguez	Adriana	3858, 4202
Izuhara	Hisae	3817, 3818
J. Harvey	Richard	3637
Jaafar Abdulla Ahmed Rashed	Zahra	3667
Jacinto	Filipe	4157
Jackson	David L	4313, 4156
Jacob-Nara	Juby A.	3845, 4103
Jacobson	Patricia T.	4153
Jae-Ho	Yoo	4060
Jagadeesh	Shankar	3848, 3852, 3851, 4082
Jahshan	Forsan	4451, 4408, 3948
Jaiswal	Archana	3994
Jama	Guled	4381, 3756, 3895, 4172, 4022
James	Toby	3809
Jang	Sophie S.	3666
Janjua	Arif	3720, 3694
János	Kónya	3774
Janssen	Pauline	4086
Jaramillo Ángel	Natalia	4530
Jarden	Mary	4084
Järnstedt	Jorma	4021
Järvekülg	Mario	4201







Javer	Amin	3661
Jbali	Souheil	4520, 4541
Jebakumar	Arulanantham Zechariah	4112, 4105
Jennum	Poul Jørgen	3838
Jeong	Jin Hyeok	3916
Jerin	Claudia	4099
Jermakow	Natalia	4205
Jesion	Marta	4210
Jia	Chao	3618
Jianbo	Shi	4384, 3695
Jiang	Luyun	3787, 3796, 3795, 3793, 3791, 3794
Jiang	Jingyu	3787
Jiao	Xia	4379
Jimeno Picazo	Ana	4005, 3990
Jin	Siyeon	4072
Joana	Silva	3980
Jolly	Karan	4128, 4265, 4114, 3720, 3919, 4165
Jones	Huw	4036, 4028, 4035
Joo Yeon	Kim	3770
Joost	De Kinderen	4115
Jor	Ondřej	3745
Jorge	Rodolfo	4146
Jørgensen	Ole Jakob	3873
Jorissen	Mark	4102, 4099
Joseph	Jonathan	4121
Joshi	Kiran	4258
Jung	Seon Min	3916
Jung	Dong Won	3783
Jura	Numminen	4021
Jurić	Bernardica	3959
Justin	Chee	3678
Kaamil	Gani	4227
Kaimal	Krishna	4496
Kai-Shan	Yang	4078
Kakosimou	Chara	4506
Kalentakis	Zacharias	4410, 3761, 4216, 3985
Kalish	Larry	4090, 3637, 3871, 4062
Kamalski	Digna	3630, 3631
Kamimura	Seiichiro	3746, 3921, 3977
Kampel	Liyona	4408, 3948
Kana	Martin	3943





Kanaan	Yazan	4554, 4371, 4203, 4349, 4393, 4350
Kanai	Kengo	3907, 3772
Kandagaddala	Madhavi	3905, 3902
Kandathil	Sam Agustine	4175
Kandil	Gamal Eldin	4369
Kandil	Gamal Eldin H. Kandil	4368
Kanjanawasee	Dichapong	4152, 3621
Kannan	Yazan	4474
Kao-Tsung	Lin	3679
Kapska	Joanna	4210
Karakasidi	Ifigeneia	4514
Karamitsou	Paraskevi	4194
Karantana	Charoula	4506
Karatzanis	Alexander	4158
Karela	Maria	4004, 4110, 4066
Kariyawasam	Harsha	4381
Karpathiou	Georgia	3629
Karpishchenko	Sergey	4518
Kasaboglu	Julide	3857
Kashani	Fatemeh	4138
Kassem	Firas	4067, 4320, 4319
Kassif	Yanir	3910
Kastanioudaki	Polyniki	3835
Kasuga	Mariko	4111
Katona	Gabor	4564
Katotomichelakis	Michael	4559, 4344
Katsimpris	Petros	4344
Kauppi	Paula	3701, 4085
Kavaric	Predrag	4200
Kawauchi	Hideyuki	4443
Kawecki	Adrian	4464
Kaya	Hatice Tugce	4548
Kedous	Skander	4520, 4541
Keisuke	Ishitani	3746
Keles Turel	Nesil	4154, 4163
Keller	Matthieu	3866
Kemal	Özgür	4191
Kengo	Kanai	3772
Kenji	Kondo	3643
Kenny	Vu	4272
Ketelaere	Ellen	4086, 3755





Khalil	Hisham	4554, 4371, 4349, 4393, 4474, 4350
Khan	Hammaad	4504, 3826, 4489, 4501
Khattak	Owais	4287, 4479
Khong	Grace	3674, 3756
Khorana	Jiraporn	3797
Ki Lee	Ying	3855
Kidane	Fana Alem	4081
Kikuchi	Masahiro	4288
Kikuchi	Shun	3998
Kim	Raymond	4267, 4296
Kim	Ji-Sun	4076
Kim	Dong-Young	4072
Kim	Hyun Seong	4072
Kim	Ji Heui	4044
Kim	Minheon	3974
Kim	Jin Kook	3957
Kim	Helen	3845
Kim	Sang-Wook	3762
Kim	Hyun Jik	3711
Kim	Soo Min	3711
Kimita	Wandia	4267, 4296
Kiong	Kimberley Liqin	3668
Kiricsi	Ágnes	4223, 4552, 4015, 4018, 4276, 4189, 4184, 3863, 4092, 3836, 3923, 3709
Kirkegaard Kiaer	Eva	3838
Kirodimos	Efthimios	4298
Kishimoto	Yuji	3998
Kitada	Yuji	4288
Kitamura	Yoshiaki	3921, 3977
Kivekäs	Ilkka	4021
Kjeldsen	Anetter	4171
Klapan	IVICA	4367
Klein	Lisa	3735
Klimek	Ludger	4303
Kłos	Wojeciech	4204
Klymiuk	Nikolai	3866
Knežević	Mislav	3915
Knotek	Mikulas	4360
Knudsen	Marie	4025
Kobayashi	Rena	4075
Koch	Noam	3799
Koh	Matthew Zheng Yang	3912





Kok	Cheng Yit Zachary	3627
Kokolakis	Georgios	3616, 4321
Kokolodimitraki	Christothea	4158
Koku	Deniz	4523, 4245, 4502, 4526
Kolanczak	Katarzyna	3721
Kolios	Socratis	4506
Komashko	Nataliia	4332
Komínek	Pavel	3745
Kondé	Adéla	3745
Kondratishko	Ekaterina	3730, 3729, 4148
Konstantinidis	Ioannis	4194, 4560, 4352, 3736, 4351
Korhonen	Eetu	3700
Kornilova	Irina	3730, 3729, 4148
Korodima	Maria	4410, 4419, 4297, 4298, 3937
Korrungruang	Potjanee	3621
Korsgaard Pedersen	Christian	4025, 4089
Kościółek	Tomasz	3999
Kosugi	Eduardo	4058
Kosuji	Eduardo	4142
Kosuke	Takabayashi	4363
Kosuke	Shiroto	4111
Kovar	Daniel	3893
Kowatanamongkon	Patlada	3622, 3621
kravtsov	Vladimir	4067
Kraxner	Helga	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4189, 4092
Krings	Sophie	3925
Kristóf	Ludányi	3836
Kronberg Jakobsen	Katrine	4089
Krumina	Angelika	3730
Kruse	Tobias	3735
Kuan	Edward C.	4175, 3668
Kuchai	Romana	4523, 4245, 4502, 4526
Kulbacki	Hannah	4496
Kulju	Harald	3785
Kumar	Arun	3862
Kumari	Reena	4235
Kuo	Yu Chun	3983
Kurian	Thomas	4155
Kurien	Regi	3906, 4116, 3905, 3902
Kusic	Natasa	3969
Kvasha	Olena	4304
Kwak	Jin Hye	3916





Kwiatkowska	Marta	3719, 3723
Kwon	Jaehwan	3770
Kwun	Jin	4296
Kyohei	Horikiri	3643
Kyriakopoulos	George	3639, 3638
La Mantia	Ignazio	4563
Ladias	Alexandros	4123, 4119
Ladriere	Kylian	3925
Lai	Ming	4384, 3695
Lai	Yu-Ru	4395
Lai	Yinyan	4361
Lai	Min	4361
Lai	Wing Kay Katherine	3900
Laidlaw	Tanya M.	3845
Lajos	Bozsányi	3774
Lakatos	Lili	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836
Lakatos	Anna	3863
Lal	Devyani	3933
Lam	Yin Ting	3780
Lambertoni	Alessia	4214
Lamoureux	Ecosse L.	3686
Lan	Ming-Ying	3692, 3868, 4139
Lança	Beatriz	3888, 3890, 4057
Landis	Basile	4333, 4088, 4001, 4006
Lang	Bronagh	4479, 4136, 4287
Langer	Daniel	3925
Lantzsch	Karoline	3706
Lapousis	Ilias	4358
Larsen	Kenneth	4171
László	Lujber	3774, 3836
Lau	Laurie	4036, 4035
Lau	Wing	4121
Laudien	Martin	4303
Laulajainen-Hongisto	Anu	4171, 4085
Lawpoolsri	Saranath	3622
Leal	Manuel Mendes	3810, 4052
LECANU	Jean-Baptiste	4093
Lee	Stella E	3848, 3852, 3851, 4082, 4103
Lee	Yung-Hsuan	4385, 4374
Lee	Liam	3899
Lee	Ta-Jen	3754, 3765
Lee	Caroline	3652, 4080





Lee	Wen Ya	4282
Lee	Ying Ki	4186
Lee	Sheng-Wei	4139
Lee	Vickie	4120
Lee	Dong Chang	4076
Lee	Hanju	4072
Lee	Yeong Ju	4044
Lee	Eun Jung	3974
Lee	Tung-Lin	3951
Lee	So Young	3682
Lee Chun Yun	Caroline	3678
Lefebvre	Philippe	3853
Legendre	Marie	3781
Legre	Margaux	4093
Lehtimäki	Lauri	4021
Leider-Trejo	Leonor	3948
Lemmens	Winde	4099, 4102
Leong	Chee Samuel	4175, 4287, 3722, 4136, 4479, 3748
Leow	Bryan	3670
Lesko	Josip	3883, 3763
Lessa	Marcus	4281
Leszczyńska	Małgorzata	4210
Leucuta	Daniel Corneliu	4063
Leunig	Andreas	3854
Leventić	Miro	3763, 3883
Levh	Lirit	3799
Levi	Amir	3799
Levi	Eric	3780
Levy	Jeremy	4523, 4502, 4526, 4245
Li	Jiping	3787, 3796, 3795, 3793, 3791, 3794
Li	Ting	3848, 3852, 3851, 4082
Li	Lokyeejoyce	4428, 4439
Li	Yu-Ting	3707, 4074
Li	Wenlong	4268
Li	Yifan	3800
Liang	Kate	4062
Liang	Kai-Li	3954
Lianou	Aikaterini	3727, 3726, 3725, 3724, 3690, 3689, 3728
Liao	Pei-Shao	4126
Liao	Yin-Chun	3965
Liao	Jyun Yi	3739
Liapi	Anastasia	4194, 4386





Liaw	Joshua	4182
Licci	Giuseppe	4133
Liktor	Balázs	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092
Lila	Bahadori	3848
Lili	Lakatos	4015
Lilja	Markus	4085, 4201
Lilja	Ylva	3997
Lim	Alison	4504, 3826, 4489, 4501
Lim	Kelvin Yong Jie	3771, 3956
Lim	Alison Emily	3720
Lim	Wan Qi	3620
Lim	Ming Yann	3620
Lima	Nuno	4197, 4192
Lima	Clara	4142, 4281, 4277, 4275
Limjunyawong	Nathachit	4152
Lin	Yi-Tsen	3951, 3981, 3679
Lin	Chia-Hsing	4445, 4446
Lin	Fang-Wei	4385, 4374
Lin	Brian	4219
Lin	Yu-Hsuan	4125
Lin	Heng-Yu	3692
Lindsay	Blake	4090, 3871, 4062
Liokati	Ioanna	4386
Liontos	Angelos	3629, 3632
Lipp	Clementine	4560
Lipworth	Brian J	3848, 4082, 3865
Litsou	Eleni	3629
Little	Paul	4301
Liu	Wen	3787, 3796, 3795, 3793, 3791, 3794
Liu	Shixi	3787, 3796, 3795, 3793, 3791, 3794
Liu	Wendong	4384, 3695
Liu	Jianfeng	3800, 4383
Liu	Linda	4081
Liu	Wenjing	3655
Lixing	Tang	3654
Ljubic	Vladimir	3887, 4200, 4483
Ljubic	Darja	3887, 4200
Llansana Rios	Albert	3837, 3824
Lliberós de Miguel	Ainhoa García	3901
Loeckx	Dirk	4099
Loke	David Kok Teik	3956, 3652
London	Nyall	4272





Lopes	Cristina	4049
Lopez	Juan Felipe	4266
Lopez	Mauricio	4229
López Campos	Daniel	4225
Lopez Fernandez	Trini	3780
López Flórez	Luz	4195, 4117, 4318, 4118
López Valdivia	Cecilia	3929
López-Gálvez	Raquel	3866
Losada Campa	Juan	4151, 4144
Loth	Andreas	4303
Lousan	Nuno	4277, 4275
Low	Christopher	4137
Low	Jie Yuin Daphne	3912
Lu	Yongtian	3787, 3796, 3795, 3793, 3791, 3794
Lu	Mi	3794
Lubbe	Darlene	3736
Lubojacký	Jakub	4007
Luca	Volpi	4175
Lucas	Jane S.	3780
Lucas dos Santos	Maria José	4517, 4366
Luceri	Cristina	4390
Lucidi	Daniela	4563, 4254
Ludányi	Kristóf	4223, 4552, 4015, 4018, 4276, 4189, 4092, 4184
Ludwig	Katharina	4353, 3687
Ludwig	Nils	4205
Luis	Castelhano	4227
Luís	Leonel	4531, 4525, 4366, 4399, 4401, 4517, 4516, 4512, 4507
Lujber	László	4223, 4015, 4018, 4276, 4189, 4184, 4092, 4552
Luke	Louis	4343, 3855, 3901, 3899, 4186
Lund	Valerie	4171, 4301
Lundberg	Marie	3822
Luo	Xin	4346, 4345
Luo	Sheng-Dean	4078
Luria	Alisa	3718
Luzi	Livio	3819
Luz-Matsumoto	Gabriela	4058
Lygeros	Spyridon	3639, 3830, 3638, 4222, 4298
Lyly	Annina	3701
Lyuben	Dimitrov	3773
Macario	Sonja	4333
Machado	Andre	4543, 3648, 4420
MacKay	Jamie	3848





Macor	Carlos	4233, 4263, 3757, 3759, 3920
Mageto	Richard	3694
Maggiore	Giandomenico	4390, 4133, 3927, 3926
Magill	Jennifer	3895
Magkou	Evgenia	4514
Maitre	Bernard	3780, 3781
Makhlouf	Youssef	4541
Mäkitie	Antti	4085
Makoshi	Eko	4417
Makoto	Murakami	3643
Malanda	Juana	4303
Males	Flávia Cardoso	3884
Maliarenko	Yurii	4312
Malliaka	Asimina	4522
Mami	Matsunaga	3815
Maminak	Kristyna	3893
Mancini	Alice	4340
Mandavia	Rishi	3779
Manish	Bundele	3732
Mankad	Vaishali S	3848, 3852, 3851, 4082
Manole	Felicia	4482, 4423
Manso	Nuno	4057
Mantzoukas	Stefanos	3724
Marais	Joseph	3684
Margaritis	Vasilis	4522
Margolis	Mary Kay	3848, 3852, 3851, 4082
María Sandra	Domínguez Sosa	4032
Mariano	Marta	4234
Marie	Yamada	3772
Mariën	Gert	4171, 4115, 3858
Marinescu	Andrees	3947
Marino	Michael	3934
Marinou	Athanasia	4386
Marjanovic Kavanagh	Marcel	3970, 4150, 4037, 4294, 3763, 4143
Markou	Dimitrios	4352
Markou	Konstantinos	4352
Marques	Luís	3941, 3944, 3939
Marques-Silva	Maria	4054
Marrero Ramos	Miriam Del Carmen	4032, 3973, 3693
Marshak	Tal	3910, 3766, 3619
Marshall	Carolynne	4154
Martel Martin	María	3721





Martes-Fritz	José	4259
Marti-Gomar	Laura	3635
Martín Pascual	María Consolación	4196, 4198, 4144
Martín Sanz	Eduardo	3872, 3816
Martinez Expósito	Fernando	3929
Martín-Jiménez	Daniel-Iván	4159, 4166, 4487, 3698
Martins	Ana	3890
Martins Pinto	Catarina	3733, 3734
Marx	Marx	4268
Masafumi	Sawada	3877
Masieri	Simonetta	4171, 4115, 3858
Masood	Ajmal	4023
Maspero	Jorge	4154
Mastinu	Mariano	4377
Mastrapasqua	Rodolfo Francesco	3914, 4131, 4254
Mastronikolis	Nikolaos	3639, 3638, 4222
Mateos-Serrano	Blanca	4193, 4051, 3880, 4011, 4250
Matic	Glavan	3850
Matos	Joana	4247
Matos	Ricardo	3733
Matoušek	Petr	4007, 3745
Matsunaga	Mami	4288
Matsuyama	Toshiyuki	3867
Mattavelli	Davide	4175, 3993, 3930
Matthias	Christoph	4353, 3687
Matúz	Mária	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836, 3923
Maughan	Elizabeth	3811
Mauthe	Tina	4397, 4160, 4555, 4398, 4400, 4396
Mayo Iscar	Agustín	4151
Maza-Solano	Juan	4166, 3698, 4487
Mazzatenta	Diego	4145
Mazzetti	Luca	4390
Mbarek	Chiraz	4547, 4549, 4545
Mbouamboua	Yvon	3866
Mcadoo	Stephen	4502, 4526, 4245, 4523
Mcclelland	Lisha	3720
Mcgraw	Megan	3806, 3650
Mcintyre	Natalie	4489
Mclaren	Julie	3848, 3852, 3851, 4082
Mcmanus	Peter	4489
Mcpherson	Iain	3809
Meco	Cem	4562, 3736, 4561, 4546





Męczkowska	Katarzyna	4204
Medeiros	Nuno	4197
Meerwein	Christian	4397, 4398, 4400, 4396
Mehana	Mostafa	4474
Melchiors	Jacob	4180
Mele	Dario Antonio	3914
Melo	Francisco	3890
Menon Miyake	Marcel	4473, 4454
Meotti	Camila	3708
Mercado	Ariane	3892
Merignac-Lacombe	Jeanne	3834
Metaxa	Myriam	4004, 4110, 4066
Meteran	Howraman	3843
Methnani	Alia	4520, 4541
Mexia	Jorge	4484, 4236, 4462
Michel	Justin	4016
Mielli	Otávio	4142
Miglani	Amar	3934, 3933
Mignot	Coralie	4079, 4560
Miksa	Loredan	4505
Mi-Kyung	Ye	4060
Milea	Alex Iulian	4040
Miličić	Borna	4364
Milionis	Charalampos	3632
Miliori	Eleftheria	4514, 4522
Miller	Daniel	3958
Milliet	Jean-Rene	3972
Mills	Heide	4258
Min	Yan	3695
Ming	Lai	4384
Ming-Sui	Lee	3679
Minovi	Amir	3854
Minzoni	Alberto	4390, 4133
Misirovs	Rasads	3865
Mitri-Frangieh	Rana	3781
Mitriu	Emma Gabriela	4187
Mitsuhiro	Okano	3772
Mittal	Yash	3862, 3988
Mittal	Sagar	3826
Mittal	Pankhuri	3802
Miura	Carolina S	3946
Miyajima	Hiroki	4111





Miyake	Marcel M	3946
Mizrachi	Matti	3910
Mladoňová	Michaela	4007, 3745
Moesgaard	Lukas	3843
Moffa	Antonio	4314, 4315
Moga	Maria	3964
Mogensen	Ditte Vangsbjerg	4084
Mogharbel	Ahmed	4305
Moghib	Khaled	4368, 4369, 4370
Mohamed	Morsy	4536
Mohamed	Salma	4416
Mohanarajah	Tabitha	4535
Mokresh	Muhammed Edib	4190
Molnar	Fiona	3709
Mongkolkul	Kittichai	3622, 3621
Montani	David	3781
Monteiro	Francisco	4197
Montuori	Claudio	4254, 3914, 4340, 4131
Moos Knudsen	Gitte	4089
Morais	Catarina	3940, 4019, 3939, 4227, 4231
Morais	Douglas Costa	3884
Morales Chacchi	Paula	4261
Morales Domínguez	Javier	4118, 4034, 4117
Moreno Luna	Ramon	3688, 4487, 4159, 4166
Moreno-López	Sergio	4266, 4259
Morgado	Filipa	4263, 3757, 3759, 3920
Morgado	Duarte	3733
Morgenstern	Christina	4511, 4081
Mori	Eri	3998, 4417, 3706
Moro	Mihaela	3883
Morozumi	Ryota	3746, 3921, 3977
Morris	Stephen	4301
Morris	Adam	3996
Morris	Simon	3789
Morsy	Mohamed	4533, 4534
Mortuaire	Geoffrey	4171, 4115, 3858
Mosquera Lloreda	Nezly	3929
Moteki	Hideaki	4111, 3815
Mourão	Márcia	4238
Moutinho	Jorge	4247
Moyaert	Mathilde	4171
Mozzanica	Francesco	3819





Mrak	Goran	3970, 4037
Muathen	Sumaiya	4305
Mucsi	Anna	4550
Muhanna	Nidal	4408, 4407
Müller	Simon	4398, 4400
Müller	Sarina	4167
Mullol	Joaquim	3848, 4154, 3852, 4171, 4107, 3851, 4082
Mun	Sue Jean	3762
Muñoz Cordero	Maria Gabriela	4225, 4218
Muñoz Fernández	Noelia	3929
Muñoz-Hernández	Fernando	3721
Muntean	Valeria	3742
Muquit	Samiul	4393
Murashima	Adriana A B	3932, 3946, 3936
Murtomäki	Aada	3700
Mylonas	Georgios	4410
Myuran	Tharsika	3855, 4023, 4186
Nacu	Bogdan Iulian	4211, 4124, 4127, 4106, 3993, 4242
Nagai	Monami	3998
Nagy	Dávid	4223, 4552
Naik	Paresh Pramod	4420, 3901, 3989
Naito	Shoji	3817, 3818
Nakagawa	Takayuki	4288, 4111
Nakanishi	Marcio	4142
Nakazawa	Takara	4417
Nanzer	Alexandra M	4313
Naraghi	Mohsen	4498, 4262, 4249, 4274, 4527, 4253, 4251
Narang	Karamveer	3919, 4128, 4114
Narang	Ved	3650
Nascimento	Diogo	4406, 4002
Nascimento	Joana	4234
Nash	Scott	3841, 4103
Nasirmohtaram	Sevil	3991, 4178
Navaratnam	Annakan	3756
Navarro Arilla	Angeles	4202
Navdeep	Bhamra	4165
Nayak	Jayakar	3665
Nazaré	Francisco	4173
Neagos	Adriana	3699, 3705, 3704
Nefzaoui	Safa	4547, 4549, 4545
Negoias	Simona	3958
Nersesyan	Marina	4009, 3741, 3976, 3740, 4029





Neto	Mariana	4199, 4010
Neumeister	Clara	4219
Neves	Caio Athayde	3665
Ng	Teik-Ying	3707
Ng	Cedric Jonathan	3672
Nicolai	Piero	4175, 3930
Nicolas	Valentine	3781
Nicolau	Beatriz	4236, 4234
Nicolau-Fernandes	António	4399, 4401
Nidal	Muhanna	4407
Nierkamp	Inga	4425
Nikolaidis	Vasilios	4352
Ninos	Alexandros	4410, 4419, 3761
Noel	Julia	3665
Nogueira	Noémi	4277, 4275
Nogueira	Igor	4146
Nogueira	Rúben	3890
Nomura	Kazuhiro	3921
Noon	Edward	4402
Novak	Stepan	3943, 3879
Ntrigiou	Vaia	4123, 4119
Nurmagambetova	Aizhan	3659, 3651
Nuutinen	Mikko	3701, 3700
Oanca	Rares	3909
Oe	Kengo	4288
Oh	Jayoung	4072
Oka	Aiko	3907
Okano	Mitsuhiro	3907
Okhovat	Saleh	4504, 3826, 4489, 3720, 4501
Okuni	Tsuyoshi	3881
Olechowska-Jarząb	Aldona	3999
Olivas	Claire	3760
Oliveira	Pedro	4197, 4192, 4168, 4161
Oliveira	Vitor	4531, 4525, 4366, 4517, 4399, 4401, 4043, 4516, 4512, 4507
Oliveira	Leonor	4510, 4521, 4010
Oliveira	Mariana	4512, 4399
Oliveira	Rita	4019
Oliveira E Carmo	Diogo	4043, 4056, 4057
Olze	Heidi	4303
Omerova	Leylya	4558
Omura	Kazuhiro	3998
Onaran	Öykü İzel	4467





Oom	Constança	3757, 4233, 3759, 3920
Oravcova	Maria	4079
Oren	Keren	3718
Orlandi	Ester	3930
Orlando	Pietro	3927, 4133, 3926, 4390
Orosz	Tünde	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092
Orozco	Sara	3864
Ortolan	Augusta	4131
Orvidas	Laura	3753
Osborne	Lucy	4027
Oscé	Hanne	4099
Osie	Gabriel	4062, 3871
Ostojic	Mirjana	3883
Ota	Humikazu	4417
Otori	Nobuyoshi	3998
Otsuka	Koji	4100
Ottaviano	Giancarlo	4254, 4226
Otten	Josje Janna	4171, 4115, 3628, 3653
Ovadia	Relli	3910
Oved	Amir	3799
Overdevest	Jonathan B.	4153
Oviedo Santos	Angeles Mercedes	4032
Ozbek	Leyla	4003, 4022
Özcan	Kürşat Murat	4468
Ozer	Serdar	3979, 3685
Pacilli	Maria Clara	3914, 4340
Padrão	Miguel	4380
Páez Mantilla	Daniela Cristina	4195, 4118, 4318
Pagella	Fabio	4211, 4106, 3993, 4242, 4557, 4124, 4127
Pais	José	4057, 4056
Palm	Clément	3853
Palmer	James	3736
Pamuk	Saim	4391
Panesar	Harrypal	4309
Pang	Khang Wen	3917
Papadakis	Chariton	4123, 4119
Papadakis	Ioannis	4358
Papadopoulou	Anna - Maria	4386
Papapetropoulos	Aris	3725
Papatheodorou	Effrosuni	4216, 3985, 4410, 3761
Papavasileiou	Ioanna	4410
Papon	Jean Francois	3780, 4016, 3781





Papouliakos	Sotiris	4386
Pardo Muñoz	Laura	3837, 3824, 3858
Parikh	Miti	4220
Park	Hee-Jun	4060
Park	Marn Joon	4044
Park	Jonas	3854
Parmar	Dilen	3779, 4258
Parreño	Santiago	4497
Pascutti Sant'ana	Juliana	4454
Pasha	Hamdan	3626
Pasquini	Ernesto	4405, 4145, 4254
Pastor Vázquez	Juan Francisco	4151
Pastorčić Grgić	Marija	4532, 4364, 4294
Patel	Zara	3665, 3666, 3736
Patel	Meeta	4012
Patrascu	Oana Maria	3909
Paulucci	Bruno	3779
Paun	Lorena Adriana	3909
Pavlovic	Bojan	3887
Pazardzhikliev	Dimitar	4422
Peça	Rita	4516, 4507, 4366
Pedersen	Christian	4089
Pediaditaki	Angeliki	4123
Pedro	Escada	4227
Peer Mohamed	Syed Ahamed	3636
Peñaranda	Augusto, Daniel	4266, 4259
Pendolino	Alfonso Luca	3778
Penêda	José	4378, 4049
Pengpeng	Wang	3655
Peponoula	Athina	4506
Pereira	André	3940, 3941, 3944, 4019, 3939, 4230
Pereira	Susana	4236, 4234
Pereira	Inês	3980, 3982
Pereira	Paulo	4512
Pérez Carbonell	Tomás	3929
Pérez Orribo	Alicia Maria	4225, 4218
Perez-Herrera	Lucia C.	4259, 4266
Peris Celda	Maria	4175
Pesold	Vanessa	4167
Peta-Lee	Sacks	4404
Péter	Hegyi	3836
Péter	Tóth	3774





Peterković	Vjerislav	3970, 4037, 4294, 3883
Pezoulas	Vasileios	3632
Pezzella	Paolo	4328
Pfaar	Oliver	3848, 3852, 3851, 4082, 4163
Phan	Huu Ngoc Minh, Thi Khanh Trinh	4059
Phanthong	Siratcha	4152
Phetpong	Juthaporn	3623
Philpott	Carl	4343, 3855, 3899, 3823, 4215, 4186
Piao	Yingshi	3787, 3796, 3795, 3793, 3791, 3794
Pierri	Michelangelo	4314
Pietris	Nick	4091
Pilarska	Magdalena	4204
Pilette	Charles	4219
Pinto	Catarina Martins	3733, 4147, 4335, 4197, 4168, 4192, 3734
Pinto	Jayant M.	3806, 3841, 4137
Pinto	Mariana Rodrigues	3884
Pinto Moura	Carla	4221
Pipolo	Carlotta	4254, 3993, 4563
Pires	Rafael	4510, 4199
Pires-Martins	Sónia	4054
Pir-Siahbazy	Ramtin	4496
Pisciottano	Serena	4340, 4131
Piszczatowska	Katarzyna	4205
Pjevac	Petra	4511
Plach	Michael	3735
Plaza	Guillermo	3688
Ploumidou	Katherine	4514
Plzák	Jan	3943, 3827
Png	Lu Hui	3903, 3668
Po-Han	Huang	3984
Poirrier	Anne Lise	4176, 4099, 3780, 3853
Poje	Gorazd	3971
Polášková	Simona	4007
Polev	Georgiy	3743, 3741, 3742, 3740
Ponnarambil	Sandhia S	3848, 3852, 3851, 4082
Pons	Nicolas	3866
Pontes	Isabela	4454
Pooldum	Vorachai	3623, 3908
Popaduk	Valentine	4029
Popov	Todor	3857, 3773
Pordzik	Johannes	3687







Porpodis	Konstantinos	4194
Postma	Elbrich	3630
Poza Guedes	Paloma	4225
Pozzi	Fabio	4175
Praestgaard	Amy	4103
Premebida	Sofia Michaelsen	3708
Presman	Yuval	4407
Prieto	Carlos	4229
Proimos	Efklidis	4119
Prokopakis	Emmanuel	4180, 4158, 4443
Pulpa	Raluca Oana	4519, 4490, 4465, 4469, 4486, 4488
Quadros	Gonçalo	4238, 3982
Quay	Elliot	3826
Quer-Castells	Mireia	4113
Quílez-Playán	Nayima	3866
Quintal	Aldora	4199
Quitter	Christian	4540
R.	Balakrishnan	3967, 3963, 3968
Radeloff	Andreas	4550, 4149
Radermecker	François	4176
Radwan	Amr	3806, 3845, 4103
Rafaela	Fernandes	3645
Ragos	Vasileios	3725
Rainer	Katja	3715
Rainha Fernandes	João	3757, 4233, 4263, 3759
Raj-Koziak	Danuta	3876
Rakan Joudi	Rakan Joudi	4155
Rampinelli	Vittorio	4175, 3993
Ranasinghe	Sethmi	4267
Ranganathan	Prerna	4154, 4163
Rankin	Alina	4296
Rapsa	Karina	3846, 3792
Rathor	Aakanksha	3665
Ratnayaka	Roshan	3975, 3722
Rautiainen	Markus	4021
Raychowdhury	Ranjan	4481
Razali	Adam Harith	3912
Rebelo	Joana	4192
Reboșapcă	Mara-Andra	4466, 4486, 4488, 4469
Redondo-Benavente	Jose-Carlos	4376
Regev	Ohad	4320
Reis	Sandra	4192





Reitsma	Sietze	4171, 4115, 4085, 3628, 3653
Rejeb	Emna	4549
Rekhade	Tanvi	4371
Rena	Kobayashi	3877
Renner-Sattler	Kathrin	4138
Rennie	Catherine	3829, 4283, 4244, 3898, 3895, 4003, 4022, 4120
Rezaei	Mina	4283
Rhee	Chae-Seo	3711
Ribeiro	Leandro	4161
Ribeiro	Diana	4157
Rieckmann	Thorsten	4209
Riestra Ayora	Juan Ignacio	3872, 3816, 4261
Rimmer	Janet	3637, 3871, 4062
Rinia	Bas	3653
Rishab	Balaji	4165
Rizopoulou	Sotiria	3830
Rizzi	Angela	4131
Rizzuti	Alberta	3914, 4340, 4131
Robledo	Patricia	3866
Roccuzzo	Giuseppe	4226, 4175
Rocha	Francisco	4146
Rodrigues	Beatriz	4231, 3940, 4515, 4104, 4019, 3939, 3888
Rodrigues	Bárbara	3980, 4238, 3982
Rodrigues	Tomás Manteigas	4484, 4462
Rodrigues	Jorge	4247
Rodrigues	Luciana	4002, 4406
Rodriguez Dussan	Isabela	4259
Rodriguez Van Strahlen	Camilo	4229, 3858, 4171
Rodriguez-Rodriguez	Dolores	4376
Rogister	Florence	4102, 3853
Roine	Risto	3822
Rokade	Ashok	4028
Rolim	Ana	4234
Rom	Darren	4030, 4026
Romano	Ricardo	4454
Romanova	Olga	3972, 4009, 3976, 4029, 4029
Rombaux	Philippe	4219, 3925
Romdhane	Nadia	4547, 4549, 4545
Ronen	Ohad	3766
Rong	Tan	3652
Rooper	Lisa	4272
Roozdar	Pooya	3665





Roque	Bárbara	4263
Roque Reis	Luís	3940, 3941, 3944, 4019, 3939
Rosa	Cláudia	4531, 4525, 4512, 4366, 4507, 4516, 4399, 4401
Rosa	Helena	4510
Rosario Cuenca	Carmen	4005
Rosman	Yossi	4067
Ross	Talisa	4283, 3898, 4003, 4022, 3829
Roux	Karolien	4099
Rovó	László	3709, 3863, 3923
Roxbury	Christopher	4137, 3798
Różycki	Radosław	3723
Rubek	Niclas	3782
Ruckes	Christian	4353, 3687
Rudack	Claudia	4426, 4425, 4424, 3854
Rudolf Briner	Hans	4173
Rui	Cabral	4227
Ruiz-Lama	Angela	4376
Rumeau	Cecile	4016
Rupa	Vedantam	3902
Rupnik	Zsuzsanna	4564
Rupp	Niels	4398, 4400
Rusescu	Andreea	4485, 4519, 4490, 4466, 4463, 4486, 4469, 4488, 4465, 4427
Rusetsky	Yuri	3744
Russell	Jemima	4365
Russescu	Carina	4488
Russo	Mario Brandon	4328
Ruthberg	Jeremy S.	4138
Ryan	Matthew	3703
Ryser	Fabio	4397, 4160, 4396, 4555
Saad	Daniel	4120
Saak	Tiana	4153
Sabatino	Lorenzo	4314, 4315
Saberi	Hooshang	4498
Saboya Romero	Diana Milena	4198
Sabrina	Michelle	3884
Saccardo	Tommaso	4226
Sacks	Raymond	4090, 3637, 3871, 4062
Sacks	Peta-Lee	4524, 4355, 4313
Sacramento	Beatriz	4218
Sadrehosseini	Seyed Mousa	3991, 3992, 4178
Saeedi	Elnaz	4301





Saeki	Misaki	3998
Safronovs	Jegors	3808, 3758, 3737
Sagar	Safiye Gunes	3911
Sahin Yilmaz	Ayse Asli	4548
Sahlman	Johanna	4085, 3785, 3701
Sain Oulhen	Charlotte	4093
Saito	Yoshinori	4417
Sakano	Eulália	4142
Sakaue	Hiroshi	3921
Sakurai	Rinko	3998
Salameh	Ramez	4451
Salazar	Jhonder	4497
Saleh	Hesham	4523, 4241, 4245, 4502, 3895, 4526, 4480, 4365, 3854, 4258
Salib	Rami	4036, 4028, 4035
Sallavaci	Suela	4494
Salmi	Viljami	3701
Sami	Saber	4215
San Millán González	María	4196, 4144
Sanabria	Jaime	4318
Sanchez	Alejandra	3693
Sánchez	Álvaro	4034
Sánchez	Moisés	3864
Sánchez Gómez	Serafín	4159, 4166, 3698, 4487, 3688
Sanda	Ileana Alexandra	4485, 4490
Sander	Nicole	4436, 4436
Sannasardo	Roberto	4211, 4124, 4242, 4127, 4106
Santiago Horcajada	Marta	4118, 4117
Santillán Coello	Jéssica Mireya	4195, 4034
Santoro	Gianmaria	4340
Santos	Maria José	4512, 4507, 4399, 4401, 4531
Santos	Alberto	3920, 3757
Santos	Ana Rita	4525, 4512
Santos	Lisete	4510
Santos	Mário	4199
Santos	Mariline	4134
Santos	Mariana	3733
Santos	Amando Virgilio	3731
Santos Pérez	Jaime	4196, 4151, 4198, 4144
Santos Silva	Carolina	4052
Sanyal	Shaoni	4481
Sanz	Diego	3779
Sanz-Sanchez	Cristina-Isabel	4376







Sapic	Neda	4483
Sarafidou	Anastasia	4194
Sarafoleanu	Codrut	3966, 4170, 4040
Sawada	Masafumi	4075
Sayed Elsherif	Hossam	4538
Sayın	İbrahim	4391
Sayuri Yada	Leticia	4473
Scabello	Rodrigo	3884
Scarano	Mariella	4405
Scarpa	Bruno	3778
Schalek	Petr	4360
Schalkwijk	Stein	4154
Schayman Dopico	Waleska	4202
Scheckenbach	Kathrin	4436, 3858, 4508, 4115
Scherzad	Agmal	3812
Schiavo	Gloria	4033, 3930, 4214
Schilder	Anne	4301
Schinas	Georgios	4222
Schindowski	Katharina	3706
Schlosser	Rodney	3767
Schmetterer	Klaus	4081
Schneider	Sven	4511, 4115, 4081, 3858, 4171
Schofield	Lynne	3780
Schreiber	Alberto	4175, 3993
Schuknecht	Bernhard	4173
Schwarz	Yehuda	3718
Seah	Cherie	3732
Seccia	Veronica	4563
Sedghi	Anita	3895
See	Alicia Su Yun	3912
See	Jing Ying	3903
See	Anna	3686
Seifen	Christopher	4353
Seinen	Caroline	4444
Sekine	Rumi	3998, 3706
Sela	Eyal	3619
Seneca Silva	Joana	4511
Seo	Eunhye	3957
Sepe	Angela	4328
Sequeira	Sara	3940, 3941, 3939
Serboiu	Crenguta	3964
Seresirikachorn	Kachorn	3624, 3637





Serra-Franco	Rodrigo	4517, 4531
Serras	Daniela	4233, 4263, 3920
Settimi	Stefano	4254
Seung-No	Hong	4347
Seys	Sven	4171, 4115, 3858, 4099
Shahzada	Ahmed	3736
Shaida	Zara	3898
Shaikh	Ahmed	4065
Sharma	Rishi	4175, 4003, 3720
Sheik-Ali	Shirwa	4317
Sheik-Ali	Sharaf	3677
Shen	Shen	3787, 3796, 3795, 3793, 3791, 3794
Shenfeld	Itamar	4320
Sheng-Dean	Luo	4078
Shi	Zhaohui	3931, 4450, 4447, 3869, 4452, 4441
Shi	Li	3787, 3796, 3795, 3793, 3791, 3794
Shi	Haibo	3787, 3796, 3795, 3793, 3791, 3794
Shi	Jianbo	4361, 4384
Shida	Youjirou	3697
Shih	Liang-Chun	4385, 3983, 3707, 4374, 3821, 3839, 4395, 3983, 3953
Shih	Ting Yu	3739
Shimamura	Yosuke	4417
Shin	Seung-Heon	4060
Shiroto	Kosuke	4111
Shoji	Naito	3817
Shrivastava,	Manu	3684
Siempis	Timoleon	4343
Sileo	Giorgio	4214
Silva	César	4399, 4401, 4516, 4507, 4531, 4525, 4366
Silva	Miguel	4238, 3982
Silva	Francisco M	3733, 4335
Silva	Guilherme	4146
Silva	Pedro Alberto	4052
Silva	Joana	3982
Silva Carvalho	Isabel	4134
Silva Sousa	Patrícia	4221
Silveira	Marco	4146
Simhi Cohen	Dana	3910
Simmen	Daniel	4543, 3646, 3648
Simões	Joana	4049
Simon	Morris	3788, 3789
Simou	Dimitra	3727, 3726, 3724, 3728







Sin	Kit Man	3960
Singh	Rohit	3967, 3963, 3968
Singh	Dave	4156
Sinks	Lauren	4220
Sintonen	Harri	3822
Sinz	Christoph	4511
Siow	Jin Keat	3732
Sjölander	Isabella	4138
Skarzynski	Piotr	3876
Skjødt Jørgensen	Oliver	3832
Skouloudaki	Agapi-Iliana	4506
Skoumpas	Ioannis	3805
Skourti	Pinelopi	4004, 4110, 4066
Škrlec	Martin	3717
Skrzypiec	Łukasz	3723
Snidvongs	Kornkiat	3623, 3624, 3637, 3622, 3621
Soares	Pedro	3944
Soares	Mateus	3932
Soares Santos	Tiago	4406
Sobhan	Rashed	4215
Sofokleous	Valentinos	4514, 4522, 4506, 4138
Soler	Zachary	3767
Solís Fesser	Ana	3872, 3816
Sollini	Giacomo	4145
Soltan	Islam	4538
Sombutpiboonphon	Kunjira	3622
Song	Xicheng	3787, 3796, 3795, 3793, 3791, 3794
Song	Harris Jun Jie Muhammad Danial	3686
Sookdee	Sirinkarn	3615
Soontornchainaksaeng	Suchanart	4152
Soponpongpipat	Phattharapol	3908
Soudry	Ethan	3768, 3799
Sousa	Carlota	3886, 3888, 3889, 3891, 3890, 4019, 4094, 4515, 4224, 4095
Sousa	Herédio	4484, 4236, 4234, 4462
Sousa	José Pinto	4484, 4462
Sousa	Ana R.	4154, 4107
Sousa-Machado	Andre	3645, 3989, 3646, 3647
Sovardi	Fabio	4211, 4124, 4127, 4557
Sowerby	Leigh	4319, 3645
Soyka	Michael	4397, 4555, 4333, 4398, 4400, 4396, 4160
Spanu	Camilla	4340, 4131





Speleman	Kato	4102
Speth	Marlene	3829, 4244, 4120, 4241
Springford	Laurie	4121
Stanek	Victoria	4511, 4081
Stanley	Halina B.	4560
Stathopoulos	Constantinos	3639, 3638, 4222
Stavrakas	Marios	4554, 4203, 4349, 4474, 4350, 4371, 4393
Stavrev	Valery	4422
Steffen	Armin	3854
Steindl	Hubert	3735
Steineger	Johan	3873
Steiner	Urs	4397, 4396, 4160, 4555
Steinke	Maria	3834, 3812
Stengs	Cor	4444
Stenin	Igor	4508
Stew	Benjamin	4038, 4169
Stosovic	Rajica	3969
Stracenski- Perge	Mirjana	3769
Stroni	Gentian	4494
Strzembosz	Agnieszka	3736
Sun	Yue	3760
Sunnergren	Ola	3997
Suresh	Adithya	3686
Sutton	Liam	3811
Szakács	László	3923
Szaleniec	Joanna	3999
Szalenkó-Tőkés	Ágnes	4223, 3709, 4015, 4018, 4276, 4189, 4184, 3863, 3923, 4092
Szalóki	Tibor	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836
Szczepański	Mirosław	4205
Szonja	Varga	3836
Sztanó	Balázs	4189
Ta	Ngan Hong, Tanya	4186, 3855
Tabari	Azin	4178
Taboni	Stefano	4175
Tačigin	Tamara	3971
Taciuc	Iulian Alexandru	3947
Tae-Gyun	Kim	4060
Tai	Chih-Jaan	3983, 3707, 3821
Takabayashi	Kosuke	4363
Takahashi	Hideyuki	3867
Takano	Kenichi	3881
Takayuki	Nakagawa	3815







Takeuchi	Kazuhiko	3780
Taleb	Chakib	3929
Talisa	Ross	3820, 3683
Tamashiro	Edwin	3932, 3946, 3936, 4142, 3884, 4122, 4146
Tamayo Gómez	Eduardo	4151
Tamminen	Pekka	4021
Tan	Jian Li	3732, 3675, 3627
Tan	Claire Jing-Wen	3686, 3670, 3668
Tan	NC	4136
Tang	Jun	3787, 3796, 3795, 3793, 3791, 3794
Tang	Ya-Cheng	3754
Tanrisever	Alper	4546
Tantilipikorn	Pongsakorn	4152
Tarabichi	Shirley	3966
Tarpov	Atanas	3878
Tatsuya	Fujii	3746
Tatsuya	Yamasoba	3643
Tavares Correia	João	4134
Tavi	Jules	4438
Távora	Fábio	4146
Tay	Kaijun	3903
Tay	Laura	3686
Taylor	Cullen	3934
Tei	Masayoshi	3998
Teixeira	Mónica	4168, 4173, 4161
Teixeira	Henrique	4510, 4521
Teixeira Marques	Francisco	4197, 4192
Teng	Thomas Zheng Jie	3912
Teng	Han Lo	3739
Teo	Neville Wei Yang	3668, 3912, 3686, 3903
Teo	Chong Boon	3686
Teoh	Lucie	4301
Tepedino	Miguel	4142
Teplova	Elizaveta	4518
Terese	Low	3917
Terradico	Laura	4557
Tervo	Jeremy P.	4153
Tetsuo	Ikezono	3877
Thabet	Wadii	4492, 4411
Tharsika	Myuran	4023
The Uk Ent Trainee Research Network	Integrate	3855







Thodupunoori	Sharanya	3798
Thomas	Mike	4301
Thompson	Gabrielle	3996, 4027, 3994, 3844
Thompson	Mark	4099
Tiago	Soares	3820
Tidemandsen	Jens Even	3838, 3782, 3843
Tiszlavicz	László	3863
Tobias	Zoltan	3709
Todaro	Miriam	4390
Toffenetti	Leonardo	4214
Toh	Song Tar	3686
Tőkés-Szalenkó	Ágnes	4552
Tomacelli	Giovanni	3993
Tomás	Rita	4399, 4401
Tomazic	Peter-Valentin	4171, 4115, 3858, 4138
Tombu	Sophie	4099
Tomé	Diogo	4516, 4512, 4507
Tomic-Spiric	Vesna	3969
Topalova- Shishmanova	Aleksandrina	4240
Toppila-Salmi	Sanna	3701, 4085, 3700, 3785
Topuria	Grisha	3633
Torkki	Paulus	3700
Torres Branco	Elisabete	4161
Torres Morientes	Luis Miguel	4151
Torretta	Sara	4254
Tosco	Antonella	4328
Tóth	László	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092, 3836
Trabelsi	Wejdan Mohamed	4547, 4549, 4545
Triaridis	Stefanos	4194
Trigueiros Cunha	António	4263, 3759
Trinta	Renato	4454
Trombitas	Veronica-Elena	3942
Trumpf-Müller	Cäcilie-Elisabeth	4149
Tsagkovits	Aikaterini	4386
Tsakiraki	Eleni	4123
Tsakiropoulou	Evangelia	4352, 4351, 4560
Tsang	William	4028
Tsiliggeridou	Aikaterini	3805, 4194
Tsiouprou	Ioanna	4194
Tsou	Yungan	4129, 4126
Tsur	Nir	3768
Tsvirinko	Iryna	4132, 3860, 3861





Tu	Aldine	4511, 4081, 3858, 4115
Tünde	Orosz	3836
Tungtrongchitr	Anchalee	4152
Turri Zanoni	Mario	3993, 4214, 4175, 4033, 3930
Tyler	Matt	3665
Tytarchuk	Oleksandra	4132, 3860
Tzima	Konstantina	4123, 4119
Udomdamrongkul	Thanadet	4152
Udrea	Andreea	4463, 4486, 4469, 4488, 4466
Ulka	Vamadevan	4355
Ulrik	Charlotte	4097
Ungersbäck	Klemens	4081
Urbančič	Jure	3828, 3715, 3716, 3955, 3717
Uyar	Yavuz	4467
Uyttebroek	Saartje	4099
Vaduva	Cristina	3872, 3816, 4261
Vale	Fernando	4278
Valente	Pedro	4052
Valentini	Marco	4214, 4175
Valera	Fabiana C P	3932, 3946, 3936, 4122, 4146, 4142
Vallamkondu	Vamsidhar	4373
Vamanshankar	Hemanth	3667
Van Der Lans	Rik	3653, 3628
Van Dijk	Birgit	3630
Van Gerven	Laura	4099, 4102, 4171, 4339
Van Gogh	Christine	3780
Van Waterschoot	Julie	4339
Van Zele	Thibaut	3736, 4086, 3755
Vanderveken	Olivier	4102
Vandewalle	Elke	4086, 3755
Vanhee	Stijn	4086, 3755
Varagkas	Stylianos	3805
Vardaxi	Chrysoula	3805
Vardouniotis	Alexios	4358
Varghese	Lalee	3906, 4116, 3905, 3902
Varini	Alessandro	4008, 4031
Vasallo García	Virginia	4118
Vasconcelos Pereira	Rita	4049
Vass	Vivien	4223, 4552, 4018, 4276, 4189, 4184, 4092, 3836
Vass	Roni	3807
Vavrina	Joel	4333
Vaz	Ricardo	4247, 4221, 3810, 4052, 4054







Vaz Osório	Rita	4168
Vazaiou	Eirini	4522
Ved	Tanavde	4272
Velada	Tiago	4484, 4236, 4234, 4462
Veneti	Paraskevi	4514
Vennik	Jane	4301
Vereshchagina	Olga	4518
Verhaeghe	Benedicte	4102
Verillaud	Benjamin	4175, 3736, 3930
Viana	Miguel	4049
Vicheva	Dilyana	4422
Vilarello	Brandon J.	4153
Villacampa Aubá	José Miguel	4195, 4118, 4117, 4318
Villarreal Patiño	Ithzel Maria	3688
Villarroel-Gonzalez	Pedro Pablo	3635
Viñas Domingo	Marta	4202
Vinciguerra	Alessandro	4033, 3930, 4175, 4214
Virdee	Sukhraj	4524
Virkkula	Paula	4201, 3785, 3822, 4085
Vis	Peter	4444
Vischioni	Barbara	3930
Viskens	An-Sofie	4102
Viveros Díez	Patricia	4196, 4198, 4144
Vizcarra-Melgar	Julissa-Aída	4159, 4487
Vlastos	Yiannis	4216
Voermans	Tonny	4424, 4426
Voiosu	Catalina	4485, 4427, 4519, 4490, 4466, 4463, 4486, 4469, 4465, 4488
Volkmar Schwarzbach	Jens	4089
Volpi	Leonardo	4454
Volpi	Luca	4175
Von Buchwald	Christian	4089, 4187, 4180
Voulgari	Athanasia	3830
Voyagis	Gregorios	3830
Vozel	Domen	3828, 3715, 3955, 3717
Vranjes	Vladimir	3986, 3987
Vrentzou	Maria	4119
Vrettakos	Petros	4322
Vrinceanu	Daniela	3947, 3964, 3909
Vroegop	Anneclaire	4102
Vukadinovic	Tijana	3887
Vural	Alperen	4175
Vyskocil	Erich	4175, 4136





Wagenmann	Martin	4436, 4171, 4115, 3858, 4508, 3806, 3841, 4107
Wagner	Sebastian	3882
Wakasugi	Ryo	3696
Walker	Abigail	4182
Walls	Andrew	4036, 4035
Walrave	Laura	4107, 4163
Wang	Ming	3787, 3796, 3795, 3793, 3791, 3794
Wang	Guangke	3787, 3796, 3795, 3793, 3791, 3794
Wang	Haifei	3787, 3796, 3795, 3793, 3791, 3794
Wang	Chengshuo	3787, 3796, 3795, 3793, 3791, 3794
Wang	Ying-Piao	4445, 4446
Wang	Pengpeng	3618, 3658
Wang	Ziyi	4383
Wang	Eric W.	4175
Warrier	Manish	3668
Weber	Rainer	3854
Wei-Chih	Chen	4078
Weise	Susanne	3866, 4079, 4560
Wei-Shan	Chen	4078
Wejden Trabelsi	Mohamed	4520
Welge-Luessen	Antje	3958
Wenda	Nina	3882, 3854
Wendler	Olaf	4167
Wengier	Anat	4235, 4265
Westman	Marit	4421
White	Andrew A.	3845
Wikstén	Johanna	4085
Williams	Stephen	3748, 3703, 3994, 3975
Williams	Isabelle	3855, 4186
Williamson	Andrew	3855, 4186
Williamson	Alyson	3809
Witkiewicz	Joanna	4210
Witkowska	Agnieszka	4348
Wittig	Lukas	4209
Wjeden Trabelsi	Mohamed	4541
Wolter	Nikolaus E.	3780
Won	Tae-Bin	3711
Wong	Jeremy	4343
Wong	Alicia	4203, 4474
Wong	Andrew Chun Lok	3960
Wood	Andrew	4064
Woods	Samantha J.	4154





Woodworth	Bradford A.	3736
Wormald	P J	4136
Wright	Erin	4402
Wu	Di	3787, 3796, 3795, 3793, 3791, 3794
Wu	Cheng-Jung	4439
Wu	Shinyi	3760
Wu	Chia-Chen	3754
Wuppalapati	Siddhartha	4047
Xia	Changming	3806, 3841, 3845
Xialin	Guo	3695
Xiao	Xiao	3654
Xiaojian	Yang	3654
Xiaoyan	Li	3803
Xu	Xinni	4377
Xu	Shuhui	3686
Xue	Jinmei	3787, 3796, 3795, 3793, 3791, 3794
Yakubovich	Igor	3910, 3766
Yalamanoglu	Ayla	4397, 4396
Yamada	Marie	3907
Yamamoto	Keisuke	3881
Yan	Bing	3787, 3796, 3795, 3793, 3791, 3794
Yan	Hongyue	3787, 3796, 3795, 3793, 3791, 3794
Yan	Carol H.	3665, 3666
Yang	Qintai	4346, 4414, 4447, 4452, 4268
Yang	Xiangli	3787, 3796, 3795, 3793, 3791, 3794
Yang	Yucheng	3787, 3796, 3795, 3793, 3791, 3794
Yang	Ding	3996, 3844, 3756, 3994, 4047
Yang	Qintai	4345
Yang	Xinping	4272
Yang	Yucheng	3791
Yang	Shun-Fa	3764
Yasuhiro	Suzuki	4458
Yazıcı	Zahide Mine	4391
Ye	Jing	3787, 3796, 3795, 3793, 3791, 3794
Ye	Jin	4452, 4441
Yeap	Zhu Hui	4215
Yegin	Rumeysa	4190
Yeo	Brian Sheng Yep	3686
Yeung	Antoinette	4235
Yi	Wan-Ling	3821
Yiğit	Ayşe Arzu	3685
Yildiz	Okan Mustafa	4548







Yilmaz	Mehmet	4562
Yiming	Wufuerjiang	4361
Ying-Piao	Wang	4445
Yi-Tsen	Lin	3984
Yi-Wei	Chen	3765
Ylivuori	Maija	3822
Yokoi	Hidenori	3817, 3818
Yoshiaki	Kitamura	3746
Yoshitaka	Taketomi	3643
You-Ren	Hou	3679
Ysbæk-Nielsen	Alexander	4089
Yu	Shaoqing	3787, 3796, 3795, 3793, 3791, 3794
Yu	Myeong Sang	4044
Yu	Hosokawa	3877
Yueqi	Sun	3681
Yurshevich	Edward	3808, 3758, 3737
Zabolotna	Diana	4132, 4312, 3860, 3861
Zabolotnyi	Dmytro	4304
Zac Romero	Carlos	3929
Zaganelli	Marco	4315
Zaidi	Asiya	4537, 4535, 4265
Zainea	Viorel	4485, 4427, 4519, 4490, 4486, 4469, 4488, 4465
Zaldívar Saiz-Maza	Sara	4195, 4318
Zammit	Matthew	3703, 3674
Zanetti	Maria Eduarda	4142
Zangrilli	James	4156
Zanoaga	Oana	3942
Zapater	Enrique	3864
Zarachi	Athina	3629, 3632
Zarowski	Andrzej	4099
Zech	Henrike Barbara	4528, 4209
Zeinalizadeh	Mehdi	3991, 3992
Zerilli	Andrea	4106, 4124, 4127, 4242
Zghaebi	Mohammed	4081
Zhan	Yinxiu	4272
Zhang	He	4440
Zhang	Luo	4154, 3787, 3796, 3795, 3793, 3791, 3794
Zhang	Yana	4414, 4268
Zhang	Shanshan	4383
Zhang	Lingjiao	4107
Zhang	Margaret	3917
Zhang	Ruoqi	3800







Zhao	Tianfeng	4447
Zhao	Jinhao	3658
Zhou	Yi	3791
Zhu	Yinan	4504, 4489, 4501
Ziavra	Nafsika	3835
Zirong	Chen	3671
Ziuzia-Januszewska	Laura	4478
Ziyi	Li	3654
Zoabi	Tareq	4451
Zoghlami	Imen	4547, 4549
Zoli	Matteo	4145
Zoltán	Fent	3836
Zou	Jonathan	4272
Zsanett	Kövér	3774
Zsíros	Csenge	4223, 4552, 4015, 4018, 4276, 4189, 4184, 4092
Zsolt	Pásztor	3774
Zsolt	Horváth	3774
Zsuzsanna	Rupnik	4564
Zuska	Krystof	4360

CONTENT

ERS 2025 abstract book

31th congress of the European Rhinologic Society

41th Congress of the International Society of Inflammation and Allergy of the Nose (ISIAN)

22nd Congres of the International Rhinologic Society (IRS)

Budapest, Hungary

June 22-26, 2025