

## PROVING THE POINT

In the United Kingdom, we are about to be subjected to a process of commissioning of secondary services by the primary care doctors who are now effectively in charge of the National Health Service (NHS). This means that contracts for everything from hearing aid provision to head and neck or major skull base surgery have to be 'bid' for with the inevitable problems of balancing quality and expertise against cost. At the same time, surgeons are being made to publish individual raw data on their outcomes in the public domain, potentially without risk-level adjustment or taking into account the influence of other members of the multi-disciplinary team. Although many of us would welcome the opportunity to publicise the quality of the care that our patients receive, the potential ambiguities in the system lead to a natural nervousness and a need for even more robust outcome measures and studies to demonstrate the value of what we do. A number of the papers in this issue of the journal address these areas but also highlight some of the difficulties in undertaking these studies. Notable amongst these, is the paper from Graz by Tomazic et al. <sup>(1)</sup> who despite an unparalleled expertise in endoscopic sinus surgery, had to eventually abandon a feasibility trial with balloon technology.

The difficulties of diagnosing chronic rhinosinusitis (CRS) have long been recognised and in primary care must rest solely with symptomatic assessment <sup>(2a)</sup>. However, a recent study of 125 patients with CRS based on symptoms alone found no radiological evidence of disease on CT scan in 40% <sup>(3)</sup>. A Sinonasal Audit was conducted on CRS patients with and without nasal polyps undergoing surgery in ENT departments throughout England and Wales. When the pre-operative LundMackay CT score was examined in 1,840 patients, 20.9% had a score of <4, i.e. within the normal range. Endoscopy correlates rather better with symptoms, as shown in a subset of the GA<sup>(2)</sup>LEN study <sup>(4)</sup> where symptom-based diagnosis was significantly associated with a positive endoscopy (OR 2.62: 95% CI 1.57 - 4.39,  $p < 0.001$ ). Unfortunately in large epidemiological studies, it is not practicable to do either endoscopy or imaging by way of validation so the study by Lange et al. is timely as it compares a questionnaire-based and clinical-based diagnosis using endoscopy in 366 Danish patients <sup>(5)</sup>. As might be expected from the previous studies, there was only moderate agreement ( $\kappa = 47.08$ ). However, this correlation was considerably improved by the addition of questions on whether the patients had been previ-

ously diagnosed by a doctor with CRS and whether they were currently being treated for the condition ( $\kappa = 57.65$ ). The sensitivity was particularly high in those without allergic rhinitis, asthma and non-smokers, which, in the first two instances, are understandable confounding factors.

Of all the symptoms associated by patients with CRS, facial pain is the most tricky to evaluate. The Sinonasal Audit again showed it to be a relatively uncommon symptom in CRS without nasal polyps and even less common in those with them <sup>(6)</sup>. In a cohort of >3,000 patients, whilst the vast majority complained of nasal obstruction (CRSwNP 96.5%, CRSsNP 93.5%), only 64% of CRSsNP and 45% of CRSwNP complained of facial pain and this is also the subject of an upcoming paper, now available online <sup>(7)</sup>. It is especially unlikely to be due to sinus inflammation when it is the sole or predominant symptom and the prodigious work of Nick Jones and colleagues has demonstrated that most of these patients have one of a wide range of neurological conditions, notable amongst which is midfacial segment pain <sup>(2b,8,9)</sup>. This is often ascribed by the patient and their primary care physician to 'sinusitis' and the repeated use of antibiotics and subsequently surgery, only serve to reinforce this contention in the patient's mind. This situation has been embodied in the International Headache Society's classification which states that 'CRS is not validated as a cause of headache or facial pain unless relapsing into an acute stage' <sup>(10)</sup>. As the latest study of Agius, Jones and Muscat elegantly demonstrates in a randomised trial, these patients may be successfully treated with low-dose amitriptyline, which the addition of pindolol may enhance <sup>(11)</sup>.

However, there is one group of 'CRS' patients, albeit small, where facial pain may be of significance and that is non-invasive fungus affecting the sphenoid. This is obviously a rather rare occurrence but facial pain/headache and post-nasal drip are the two most commonly reported symptoms, both in Eloy et al.'s series of 25 cases from France, in 29 cases from Korea reported by Kim et al., and in the literature <sup>(12-16)</sup>. Here imaging and surgery are requisite.

All of these studies serve to emphasise the need for specialist assessment in those patients with presumed CRS who fail initial medical therapy in primary care.

## References

1. Tomazic PV, Stammberger H, Braun H, et al. Feasibility of balloon sinuplasty in patients with chronic rhinosinusitis: the Graz experience. *Rhinology*. 2013; 51: 120-127.
2. Fokkens, W, Lund VJ, Mullol J, et al. European Position paper on rhinosinusitis and nasal polyps 2012 *Rhinology*. Suppl 23: a) 5-8, b) 95-107.
3. Ferguson BJ, Narita M, Yu VL, Wagener M, Gwaltney J. Prospective observational study of chronic rhinosinusitis: environmental triggers and antibiotic implications. *Clin Infect Dis*. 2012; 54: 62-86.
4. Tomassen P, Newson R, Hoffmans R, et al. reliability of EP3OS symptom criteria and nasal endoscopy in the assessment of chronic rhinosinusitis-a GA<sup>(2)</sup>LEN study. *Allergy*. 2011; 66: 556-561.
5. Lange B, Thilsing T, Baelum J, Holst R, Kjeldsen A. Diagnosing Chronic rhinosinusitis: Comparing questionnaire-based and clinical-based diagnosis. *Rhinology*. 2013; 51: 128-136.
6. Browne JP, Hopkins C, Slack R, et al. Health-related quality of life after polypectomy with and without additional surgery. *Laryngoscope*. 2006; 116: 297-302.
7. Eweiss AZ, Lund VJ, Barlow J. Do patients with chronic rhinosinusitis with nasal polyps suffer with facial pain? *Rhinology*. 2013; E-pub ahead of print: DOI:10.4193/Rhino12.087.
8. Fahy C, Jones N. Nasal polyposis and facial pain. *Clin Otolaryngol*. 2001; 26: 510-513.
9. Clifton N, Jones N. Prevalence of facial pain in 108 consecutive patients with paranasal mucopurulent discharge at endoscopy. *J Laryngol Otol*. 2007; 121: 345-348.
10. The International Classification of Headache Disorders. 2nd Edition. *Cephalalgia* 2004; 24 Suppl 1: 9-160.
11. Agius AM, Jones NS, Muscat R. A Randomized Controlled Trial comparing the efficacy of low-dose amitriptyline, amitriptyline with pindolol and surrogate placebo in the treatment of chronic tension-type facial pain. *Rhinology*. 2013; 51: 143-152.
12. Eloy P, Grenier J, Pirllet A, Poirrier AL, Stephens JS, Rombaux P. Sphenoid sinus fungal ball : a retrospective study over a 10-year period. *Rhinology*. 2013; 51: 181-188.
13. Kim TH, Na KJ, Seok JH, Heo SJ, Park JH, Kim JS. A retrospective analysis of 29 isolated sphenoid fungus ball cases from a medical centre in Korea (1999-2012). *Rhinology*. 2013; E-pub ahead of print: DOI:10.4193/Rhino12.145.
14. Wang Z, Kanoh N, Dai C, et al. Isolated sphenoid sinus disease: an analysis of 122 cases. *Ann Otol Rhinol Laryngol*. 2002; 111: 323-327.
15. Grosjean P, Weber R. Fungus balls of the paranasal sinuses: a review. *Eur Arch Otorhinolaryngol*. 2007; 264: 461-470.
16. Toussain G, Botterel F, Alsamad I, et al. Sinus fungus balls: characteristics and management in patients with host factors for invasive infection. *Rhinology*. 2012; 50: 269-276.

*Valerie J. Lund, Co-Editor*  
London, United Kingdom

