

# On the outcome of septoplasty\*

Ola Sunnergren<sup>1,2</sup>, Cecilia Alexandersson<sup>3</sup>, Fredrik Eliasson<sup>4</sup>, Mattias Jangard<sup>5</sup>, Ylva Lilja<sup>6</sup>, Kristoffer Sandelin<sup>7</sup>, Cecilia Ahlström Emanuelsson<sup>8</sup>

**Rhinology** 62: 3, 0 - 0, 2024

<https://doi.org/10.4193/Rhin23.472>

<sup>1</sup> Department of Otorhinolaryngology, Region Jönköping County, Jönköping, Sweden

<sup>2</sup> Centre for Oral Health, Department of Odontology and Oral Health, School of Health and Welfare, Jönköping University, Jönköping, Sweden

<sup>3</sup> Department of Otorhinolaryngology, Hallands Hospital, Kungsbacka, Sweden

<sup>4</sup> Department of Otorhinolaryngology, Region Norrbotten, Sunderbyn, Sweden

<sup>5</sup> Department of Otorhinolaryngology, Sophiahemmet Hospital, Stockholm, Sweden

<sup>6</sup> Department of Otorhinolaryngology, Capio Lundby Hospital, Gothenburg, Sweden

<sup>7</sup> Department of Otorhinolaryngology, Kalmar County Hospital, Kalmar, Sweden

<sup>8</sup> Department of Otorhinolaryngology, Head and Neck Surgery, Skåne University Hospital, Lund, Sweden

**\*Received for publication:**

November 29, 2023

**Accepted:** February 12, 2024

## Dear Editor:

In 2019 and 2023, two randomised controlled trials (RCTs) on the effectiveness of septoplasty were published <sup>(1,2)</sup>. Part of the rationale for both studies was that the value of septoplasty had been questioned by policymakers, health insurance carriers and health care providers. The results of both studies showed that patients undergoing septoplasty had a better outcome than patients in the control group. Without questioning these results or the general perception in the rhinology community that septoplasty is of great value to the right patient, we still see the need for caution when interpreting the outcome of the RCTs and when rhinologists try to transfer the results to routine clinical practice. Van Egmond et al. draw the conclusion that the results from their RCT should be applicable to all patients with nasal obstruction due to a deviated septum. This might be a challenge as firm guidance on appropriate preoperative investigations, patient characteristics that predict a better outcome, or how to operate to achieve the best surgical results are still lacking. One reason for our call for caution is the non-negligible number of patients in both studies who had residual nasal obstruction after surgery. While, for example, the mean NOSE scores in the two RCTs dropped from 67.2 and 70.8 to 32.5 and 30.7 <sup>(1,2)</sup>, the postoperative NOSE scores were still higher than NOSE scores reported from asymptomatic subjects (3.5 to 18) <sup>(3,4)</sup>. This means that even though most patients improve by surgery, some end up with residual nasal obstruction (characterised by high NOSE scores) and a risk of dissatisfaction with the septoplasty. Another reason for caution is the results from the Swedish Quality Register for Septoplasty (SQRS) <sup>(5)</sup>. The SQRS has for a decade prospectively monitored the outcome of septoplasty in Sweden. Today, the register contains detailed data on patient-reported

outcome 12 months after surgery in >4500 patients. The proportion of patients (2014-2022) reporting that the outcome of septoplasty was not what they expected was 43.1%, and even though 67.0% reported improved nasal breathing, 39.7% still reported moderate or severe nasal obstruction after surgery <sup>(6)</sup>. A cross-tabulation of the SQRS variables "Was the outcome of your surgery what you expected?" and postoperative "Nasal obstruction" indicates that postoperative nasal obstruction seems to be a significant reason for patients to report that the result of surgery was not what they expected (Table 1).

SQRS data indicates that the main reason for patients to report that they did not obtain the expected outcome of surgery was postoperative nasal obstruction. Among patients who reported an expected result, 88.8% reported no or mild nasal obstruction 12 months after surgery. The corresponding proportion among patients who reported that the result was not what they had expected was 22.8%.

While the results from the two RCTs strengthen the role and value of septoplasty, caution is still needed in clinical routines regarding who to operate on and how. Data from the SQRS indicates that a non-negligible proportion of patients do not experience satisfactory improvement after septoplasty. We believe that population-based quality registers are a necessary complement to RCTs to monitor the real-life outcomes of surgery. Our hope is that, in the near future, an analysis of the detailed data in the SQRS on preoperative characteristics, technical aspects of surgery, and outcome of surgery can provide some of the missing pieces needed to improve septoplasty practice and thereby serve as a complement to RCTs.

**Authorship contribution**

All authors are board members of the Swedish Quality Register for Septoplasty. OS was responsible for study conception and draft manuscript. All authors discussed the results and contributed to the final manuscript.

**Funding**

No funding was received for this study.

**Conflict of interest**

The authors declare no conflicts of interest.

Table 1. Patient-reported outcomes in 4589 patients, 12 months after septoplasty.

Expected result of septoplasty	Post-operative nasal obstruction		
	No/ Mild	Moderate/ Severe	Total
<b>Yes</b>	50.5% (N=2317)	6.4% (N=292)	56.9% (N=2609)
<b>No</b>	9.8% (N=451)	33.3% (N=1529)	43.1% (N=1980)
<b>Total</b>	60.3% (N=2768)	39.7% (N=1821)	100% (N=4589)

**References**

1. van Egmond MMHT, Rovers MM, Hannink G, Hendriks CTM, van Heerbeek N. Septoplasty with or without concurrent turbinate surgery versus non-surgical management for nasal obstruction in adults with a deviated septum: a pragmatic, randomised controlled trial. *Lancet*. 2019; 394: 314-321.
2. Carrie S, O'Hara J, Fouweather T, et al. Clinical effectiveness of septoplasty versus medical management for nasal airways obstruction: multicentre, open label, randomised controlled trial *BMJ* 2023; 383 :e075445 doi:10.1136/bmj-2023-075445
3. Sunnergren O, Pakpour AH, Bergquist H, Sahlstrand-Johnson P, Stjärne P, Broström A. Validation and psychometric evaluation of the Swedish version of the Nasal Obstruction Symptom Evaluation scale. *Laryngoscope Investig Otolaryngol*. 2023; 8: 357-366.
4. Rhee JS, Sullivan CD, Frank DO, Kimbell JS, Garcia GJ. A systematic review of patient-reported nasal obstruction scores: defining normative and symptomatic ranges in surgical patients. *JAMA Facial Plast Surg*. 2014; 16: 219-225.
5. The Swedish Quality Register for Septoplasty. Information in English. <https://sep.registercentrum.se/in-english/the-swedish-national-septoplasty-register/p/BJC7vhMr>; Accessed Nov 18, 2023.
6. Dataset extracted from the Swedish Quality Register for Septoplasty on Nov 11, 2023.

Ola Sunnergren, PhD  
Department of Otorhinolaryngology  
Länssjukhuset Ryhov  
551 85 Jönköping  
Sweden

Tel: +46102421772

E-mail address: ola.sunnergren@ju.se