

# Sinonasal Polyposis: Quality of Life After Surgical Treatment: About 21 Cases

Belasri Anas,\* Fatima Zahra Essahli, Achraf Amine Sbai, Drissia Benlfadil, Azzedine Lachgar, Adil Abdnbestein, Fahd Elayoubi

*Department of Otorhinolaryngology and Cervico-Facial Surgery, Mohammed VI University Hospital of Oujda, Morocco*

## ABSTRACT

Nasosinusal polyposis is a major health problem with important socio-economic implications. Our work presents a retrospective study of 21 patients operated on for nasosinusal polyposis, over a 10-Month, from January 2017 to January 2019 in the Otorhinolaryngology Department of Mohammed VI University Hospital Center in Oujda. The average age of our patients 39, 8 with a range from 16 to 66 years with a male predominance (sex ratio of 1,3). The objective of our study is to evaluate the quality of life and the severity of individual symptoms in patients with nasosinusal polyposis, were measured using the Sino-Nasal-Outcome Test 22 (SNOT-22). The main preoperative symptom score was nasal obstruction with a main score of 4,3, Anosmia had the second highest preoperative score of 3, 63. The clinical course was marked by improvement in nasal symptomatology with an improvement rate of 43% for nasal obstruction, 54% for anosmia, 50% for the need to blow nose.

**Keywords:** Nasosinusal Polyposis, Score SNOT-22, The Quality of Life.

## INTRODUCTION

Nasosinusal polyposis is an inflammatory disease of the mucosa of the nasal cavity and sinuses, due to multifocal and bilateral edematous degeneration of the mucosa of the lateral masses of the ethmoid. It is characterized by the presence of smooth gelatinous translucent and pyriform polypous lesions. It predominates very clearly in adults and is part of chronic inflammatory diseases of the respiratory mucosa, hence the interest in systematic research for asthma, intolerance to aspirin, and nasal allergy. Rarer pediatric forms should lead to a search for mucociliary dysfunction or cystic fibrosis [1-20].

The diagnosis of this condition has benefited greatly from the advent of endoscopy and computed tomography.

The treatment is always medical, sometimes surgical, depending on symptomatic discomfort, socio-professional impact, comorbidity, extent and severity of the disease.

The objective of our study: Is to evaluate the impact of surgery on symptoms linked to PNS and its interaction with long-term quality of life [21-30].

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### \*Corresponding Author

**Belasri Anas**

Department of Otorhinolaryngology and Cervico-Facial Surgery, Mohammed VI University Hospital of Oujda, BP 4806 Oujda University 60049 Oujda, Morocco, Tel: 0655793630

**E-mail:** belasri.anas24@gmail.com

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## MATERIAL AND METHODS

Retrospective study spread over a period of 2 years from January 2017 to January 2019, bringing together 21 patients with PNS operated on in the Otolaryngology department of the Mohammed VI University Hospital in Oujda.

For our study we used the rhinosinusitis symptom score: composed of 22 items from the SNOT-22 questionnaire (Figure 1), asking the patient about the existence of

specific symptoms of acute or chronic rhinosinusitis (nasal obstruction, taste and/or smell disorders,, anterior rhinorrhea, posterior rhinorrhea, sneezing) and on the existence of secondary and non-specific symptoms (facial pain, ear pain, dizziness) and on the overall discomfort felt in relation to the nose.

The patient had to qualify each symptom according to its subjective degree of severity. The result of each questionnaire was carried out by telephone.

SINO-NASAL OUTCOME TEST (SNOT-22)

	No Problem	Very Mild Problem	Mild or slight Problem	Moderate Problem	Severe Problem	Problem as bad as it can be
1. Need to blow nose	0	1	2	3	4	5
2. Nasal Blockage	0	1	2	3	4	5
3. Sneezing	0	1	2	3	4	5
4. Runny nose	0	1	2	3	4	5
5. Cough	0	1	2	3	4	5
6. Post-nasal discharge	0	1	2	3	4	5
7. Thick nasal discharge	0	1	2	3	4	5
8. Ear fullness	0	1	2	3	4	5
9. Dizziness	0	1	2	3	4	5
10. Ear pain	0	1	2	3	4	5
11. Facial pain/pressure	0	1	2	3	4	5
12. Decreased Sense of Smell/Taste	0	1	2	3	4	5
13. Difficulty falling asleep	0	1	2	3	4	5
14. Wake up at night	0	1	2	3	4	5
15. Lack of a good night's sleep	0	1	2	3	4	5
16. Wake up tired	0	1	2	3	4	5
17. Fatigue	0	1	2	3	4	5
18. Reduced productivity	0	1	2	3	4	5
19. Reduced concentration	0	1	2	3	4	5
20. Frustrated/restless/irritable	0	1	2	3	4	5
21. Sad	0	1	2	3	4	5
22. Embarrassed	0	1	2	3	4	5

**Figure 1.** Rhinosinus symptoms score adapted from the SNOT -22, are rated from 0 (No problem) to 5 (very severe problem).

## RESULTS

The average age of our patients was 39.8 years (extremes of 16 and 66 years). A male predominance was noted with 12 (57.2%) male patients compared to 9 (42.8%) female patients. The M/F sex ratio was 1,3 [31-40].

The most common symptom was nasal obstruction 95% of patients, Anosmia was reported by 90%, need to blow

nose 85% of patients, the other most common symptoms were runny nose 71% and c 66%, facial pain and dizziness reported 14% of patients.

The principal preoperative symptom score was nasal obstruction, with a mean score of 4.35, with altered sense of smell or taste having the second highest preoperative score, 3.63 in patients with nasal polyps, need to blow nose was the

third highest score with a mean of 3.27, thick nasal discharge and postnasal drip also had a high score of 2.6, facial pain was in the lower range preoperatively.

The elements covering aspects of health-related quality of life, waking up tired and waking up at night represented the main complaints of patients with an average score of 2.72 and 2.42 respectively.

Improvement in symptom scores after surgery were significant for all elements of the SNOT-22 in our patients: In our series the three main symptoms: nasal obstruction, altered smell/gout and need to blow nose: Are improved by 43%, 54%, 50% respectively in terms of rating.

All postoperative scores improved by at least 40%, with 16 items improving by more than 50% at 10 months postoperatively.

Generally, the average SNOT-22 total score before the operation was 45.4 which decreased to 18.27 postoperatively, improving by 59.75%.

## DISCUSSION

Nasosinusal polyposis PNS is defined as a chronic inflammatory disease of the nasal mucosa, bilateral and multifocal, externalized in the nasal cavity in the form of polyps [26,30], which can alter the quality of life [41-50].

The exact prevalence rate is unknown and can be estimated between 1% [31] and 4% of the population [32].

The average age of patients was 39.8 years with extreme ages (16-66 years) in our series, the review of the literature shows a male predominance [35,38].

The evaluation of quality of life in clinical practice is an additional parameter that can be used to evaluate the effectiveness of various treatments: corticosteroid therapy represents the basis of medical treatment [41].

-general corticosteroid therapy: prednisolone 1mg/kg/day or methylprednisolone 0.8mg/kg/day for 10 days, associated with oral antibiotic coverage with amoxicillin and clavulanic acid at a dose of 1g morning and evening for 10 days.

-local corticosteroid therapy: spray of inhaled corticosteroid daily at the rate of two sprays per nostril per day (fluticasone 50cmg).

The patient returned after 3 months, the significant points of effectiveness of the basic treatment are: improvement of nasal obstruction, reduction or disappearance of anosmia. if the symptoms are well controlled, simple local corticosteroid

therapy will be continued for months.

Other treatments can be used:

-Antihistamines in the event of an associated allergy or if the symptoms of nasal hyperreactivity are poorly controlled by local corticosteroid therapy [51-69].

-Immunostimulants and immune modulators [70,71]: sometimes make it possible to reduce the frequency and importance of superinfections in the PNS, especially in winter.

-crenotherapy [72]: After liberation of the nasal cavities, after medical treatment or after polypectomy.

-saline nasal sprays [73].

Surgical treatment occupies a very important place in PNS that is advanced and resistant to medical treatment.

Surgical techniques for the nasal-sinus cavities in the context of PNS have evolved considerably in recent years, beginning with simple polypectomy and transfacial ethmoidectomy currently leading to endoscopic endonasal surgery [74,75].

The SNOT-22 questionnaire developed and validated by Hopkins et al. [76] is the most effective tool currently available to evaluate the severity and impact of clinical symptoms of PNS, examining data from 21 patients undergoing surgery for the PNS in comparison with studies of similar construction (Table 1).

Kosugi and Vitor [35] analyzed a group of patients with chronic rhinosinusitis using SNOT-22, found that the most common and severe symptoms were nasal obstruction, anosmia and postnasal drip. , they demonstrated one of the symptom scores after nasal surgery.

More recently, Abdalla and Hopkins [36] conducted a study that aimed to assess individual symptoms based on the SNOT-22 in patients with RSC with or without nasal polyposis. They found that the top three symptoms in terms of severity and prevalence were nasal obstruction, anosmia and the need to blow nose, consistent with the EPOS2012 diagnostic criteria.

For our series we found that nasal obstruction and anosmia were the most frequent and serious symptoms, the need to blow nose was the third most serious symptom an average of 3.27.

Runny nose and thick discharge are also symptoms widely observed by patients preoperatively.

The least problematic symptoms are ear pain, facial pain and dizziness.

**Table 1.** Comparison of the SNOT-22 Score of Our series with studies of similar construction

The Elements of The SNOT-22 Score	Average Preoperative Symptom Score			Average Symptom Score 1 Year Postoperative		
	Abdalla/Hopkin (36)	Kosugi (35)	Our Series	Abdalla/Hopkin (36)	Kosugi (35)	Our Series
1-Need to blow your nose	2.9	3	3.27	1.45	1.43	1.63
2-Sneezing	1.9	3	1.77	0.8	1.69	0.95
3-Runny nose	2.5	3.21	3.13	1.4	1.1	1.77
4-Post nasal discharge	2.3	3.31	2.72	0.85	1.37	1.5
5-Thick nasal discharge	2.4	2.76	3	1.1	1.33	1.63
6-Clogged ears	1.6	2.66	1.22	0.6	0.98	0.58
7-Dizziness	0.8	1.48	0.81	0.4	0.79	0.27
8-Ear pain	0.6	1.43	1.36	0.3	0.65	0.27
9-Facial pain	1.6	2.81	1.5	0.7	0.99	0.45
10-Nasal obstruction	3.8	4.25	4.36	2.35	1.3	2.45
11-Cough	1.3	1.79	1.09	0.4	1.12	0.27
12-Difficulty sleeping	1.4	3.7	1.36	0.5	0.96	0.68
13-Waking up at night	2.1	3.47	2.45	0.7	1.25	1.22
14-Poor sleep	2.2	3.19	1.9	0.8	1.01	0.95
15-Wake up tired	2.2	2.73	2.72	0.95	0.88	1.22
16-Fatigue during the day	1.9	2.64	1.63	0.65	1	0.68
17-Loss of concentration	1.6	2.75	1.5	0.6	0.83	0.58
18-Agitation/irritability	1.8	2.35	1.77	0.7	0.97	0.95
19-Low moral	1	3.42	1.9	0.3	0.9	0.68
20-Gene/discomfort	1.4	2.55	1.22	0.8	0.62	0.54
21-Decrease in productivity	1.6	2.22	1.36	0.7	0.27	0.4
22-Insomnia	3.6	3.66	3.68	2.35	1.69	1.63

**Our study clearly demonstrated that PNS compromises quality of life, which corroborates the statements of patients with PNS when they express their difficulties in their daily activities**

The impact of surgery on the postoperative symptom score is remarkable.

Exceptional short and long term results have already been reported in the literature. Abdalla and Hopkins [36] reported an improvement in quality of life for 56% of their patients with a follow-up duration of 3 months.

The UK Nasosinusinusal Polyposis Audit used the SNOT-22 to demonstrate a significant reduction in patients' symptoms

following nasal surgery [72].

We showed in this study that surgery provided improvements in all symptom areas

All 22 post-operative score items improved by at least 40%. 16 items having improved by more than 50% 1 year after the operation. The average total score improved to a greater extent to 57.75% [77].

**Table 2.** Comparison of the total mean SNOT-22 score of our series with studies of similar construction

Author	MEAN TOTAL Preoperative SNOT-22 SCORE	AVERAGE TOTAL post-operative SNOT-22 SCORE
ABDALLA [36]	41	18.3
KOSUGI [35]	60.02	16.02
Our Series	45.4	18.27

## CONCLUSION

The objective of our study: is to evaluate the quality of life and the severity of individual symptoms in patients with nasal polyposis were measured using the Sino-Nasal-Outcome Test 22 (SNOT-22). The impact of surgery on symptoms is remarkable with short-and long-term results reported. The main preoperative symptom score was nasal obstruction with a mean score of 4.3, anosmia obtained the second highest preoperative score of 3.63 in patients suffering from nasal polyps. The clinical evolution was marked by the improvement of nasal symptoms with an improvement rate of nasal obstruction at 43%, anosmia 54%, and the need to blow nose at 50%.

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