

Original Research Article

Evaluate functional outcomes of postoperative septoplasty with and without splints and packing

ABSTRACT

Aim: to evaluate functional outcomes of septoplasty with and without splints and packing. **Methodology:** This cross sectional study was done at ENT department PUMHSW Nawabshah Pakistan. In this study 100 patients were selected who underwent septoplasty procedure both under local and general anaesthesia. This sample size was divide into two groups, group 1 (n=50) had splints and packing while the other group 2 had not. This study was approved by ethical review committee PUMHSW Nawabshah. Written inform consent was taken from all participants. Written proforma was used to analyze functional results of septoplasty with and without splint and packing. **Results:** Out of 50 patients who were having nasal obstructions 3 (6%) were relieved in group 1 33(66%) were relived in cases of group 2. Headache were relieved in 20 out 30 patients (66%) and 20 out 27 (74%) in cases group1 and 2 respectively. Rhinorhea was relieved in 9 out of 18 patients (50%) in group 1 while 5 out 11 (48%) in group 2. **Conclusion:** There was no significant difference regarding post operative functional outcomes in both groups.

Keywords: Septoplast, headache, post operative functions, Splint and packing.

1. INTRODUCTION

The symptoms caused by septal derivations are entirely the result of their effects on nasal function. Deviations of the nasal septum are common but majority of these are asymptomatic.^{1,2} The age at which symptoms appear is usually adolescence and adult, because in younger age period either the patient do not mind minor complaints or these are appreciable adoption³. It is only when regressive deflection or the development of some other nasal disease breaks down the adoption, symptoms develop.⁴ Nasal obstruction affects the quality of life by causing discomfort and interference with sense of smell and taste. Patients with nasal obstruction are mouth breathers due to which they get dryness of the mouth.^{2,5}

Nasal sepal surgery is one of the most commonly performed operations in routine otorhinolaryngological practice. The patients were admitted the day before the procedure one group have intranasal splints and packing inserted at the end of the operation in order to maintain septal position, prevent bleeding and haematoma formation in the immediate post operative period.⁹ In other group septoplasty be carried out as day care procedure where nasal packing is not routinely done with a low complication rate and is a safe and acceptable procedure provided that strict selection criteria are followed.⁶ In the past it has been traditional to insert splints and / or packs into the nose after septal operations.¹ Splints were first described by Salinger and Cohen in 1955 and now a wide range is available commercially made of various plastic or rubber materials^{7,8}

Intranasal splints are effective in the prevention of nasal adhesions. Adhesion formation is common after turbinate surgery and when combined procedures on the septum and turbinates are necessary so intranasal splints are recommended in such cases but not when septal surgery alone is performed because here the risk of adhesion formation is minimal^{1,8}

Nasal packing is also considered as a routine at the completion of septal surgery for the prevention of bleeding Haematoma formation and giving support in holding the septal mucosa in place. It is recommended to be maintained for 12 to 24 hours, but in case which are more prone to bleeding such as inferior turbinectomy, the pack may be maintained for 48 hours^{3,9,10}

This study was planned to evaluate functional outcomes of septoplasty with and without splints and packing.

2. MATERIAL AND METHODS

This cross sectional study was done at ent department pumhsw nawabshah pakistan. In this study 100 patients were selected who underwent septoplasty procedure both under local and general anaesthesia. This sample size was divide into two groups, group 1(n=50) had splints and packing while the other group 2 had not. The patients between the age of 16-45years and due to dns, having nasal obstruction were included. All patients had any acute suppurative disease in the nose, had any systemic disease like hypertension, diabetes mellitus, , any bleeding disorder or tuberculosis were excluded. Written proforma was used to analyze functional results of septoplasty with and without splint and packing. While sending patient home, they were told about their medications, about nasal discharge, discomfort and headache. In routine, they were asked to come on 10th post operative day for splints removal. They were advised to seek immediate medical advice in cases of any problem.

3. RESULTS

Intranasal splints are mainly used to maintain septal stability and prevent intranasal adhesions following septal surgery. It has been shown that intranasal splints add significantly to post-operative pain and complications. The mean age of patients available for followup, male to emale ratio and history of previous nasal surgery is explained in table 1.

Table No. 1 Number (No) of patients available for follow up mean, age, male: female ratio and history of previous nasal surgery.⁷

	Splints Group		No Splints Group	
	Septum Only	Septum +IT	Septum Only	Septum +IT
No of patients	25	25	25	25
Follow up at 1Week	25	25	22	23
6 Week	23	23	21	22
Mean age (range)	34.8 (23-57)	29.1 (17-52)	35.3 (15-78)	32.1 (23-48)
Male: Female ratio	2:1	1.3:1	2.6:1	1.4:1
Previous Septal Surgery	1	2	2	0
Previous IT surgery	0	1	1	0

(IT= Inferior trurbenectomy)

Out of 50 patients who were having nasal obstructions 3 (69%) were relieved in splints and packing group while out of 50 patients who were having nasal obstruction 33(66%) were relived in cases of no splints and no packing group. Headache were relieved

in 20 out 30 patients (66%) in cases of splints and packing group while 20 out 27 (74%) in cases of no splints and no packing group.

Rhinorhea was relieved in 9 out of 18 patients (50%) in cases of splints and packing group while 5 out 11 (48%) in no splints and no packing group. Relief from sneezing in cases of with splints and with packing group was 45% (3 out of 7) while 40% (2 out of 5) in no splints and no packing group.

Snoring was relieved in 8 out of 15 (54%) in cases of splints and packing group while 43% (4 out of 9) in no splints and no packing group. Hyposmia was relieved in 4 out of 10 (40%) in splints and packing group while 4 out of 8 (50%) in no splints and no packing group (table 2).

Table no 2: Number (n) and percentage (%) of patients having relief of their symptoms.

Symptoms	Septoplasty with splints and packing		Septoplasty without splints and packing	
	No	%	No	%
Nasal obstruction	35/52	69	33/50	66
Headaches	20/30	66	20/27	74
Rhinorhea	9/18	50	5/11	48
Sneezing	3/7	45	2/5	40
Snoring	8/15	54	4/9	43
Hyposmia	9/10	40	4/8	50

4. DISCUSSION

Regarding the functional results nasal obstruction which was common to all the patients in both the groups was relived in 69% of patients with splints and packing group and 66% in without splints and packing group. The other symptoms like headache, rhinorheas, sneezing, snoring and hyposmia were relieved in nearly the same percentage and showed no significant difference. Other studies also agree that splints added no demonstrable benefit to the patient regarding the position of the septum and patency of the airways^{6,8,11,12,13}.

Recently the advisability of using these splints and / or packing has been challenged. There is uniform agreement that postoperative pain is increased by their use.^{2,7,9} According to some studies, Splints were shown to offer no additional help in stabilizing the septum postoperatively and finally, there is the very slight but definite risk of developing the toxic shock syndrome.^{7, 14,15,16}

5. CONCLUSION

There was no significant difference regarding post operative functional outcomes in both groups.

Ethical Approval And Consent

This study was approved by ethical review committee pumhsw nawabshah. Written inform consent was taken from all participants.

REFERENCES

- 1 Erkan EŞ, Yilmaz I. Pack free septoplasty: functional outcomes and complications. The Turkish Journal of Ear Nose and Throat. 2015 Sep 1;25(5):275-8.
- 2 Alshawadfy M, Fouad Y. Septoplasty with or without postoperative nasal packing: Comparative study. Zagazig University Medical Journal. 2017 Jan 1;23(1):1-6.
- 3 Quinn JG, Bonaparte JP, Kilty SJ. Postoperative management in the prevention of complications after septoplasty: a systematic review. The Laryngoscope. 2013 Jun;123(6):1328-33.

- 4 Islam MA. Functional Outcome of Endoscopic Septal Surgery in Comparison to Conventional Septoplasty. *Journal of Clinical Case Studies Reviews & Reports.* SRC/JCCSR-153. 2020:3.
- 5 Saedi B, Amaly A, Gharavis V, Yekta BG, Most SP. Spreader flaps do not change early functional outcomes in reduction rhinoplasty: a randomized control trial. *American journal of rhinology & allergy.* 2014 Jan;28(1):70-4.
- 6 Erden B, Taş BM, Türkili S, Uğraş H. Do the Types of Nasal Packing Used in Septoplasty Affect Middle Ear Pressure?. *Eur J Rhinol Allergy.* 2021;4(1):26-9.
- 7 Gad HA, Abdelsamea HA, Hashem HF, Abdelrazek NM. Effects of different nasal packs on nasal functions after septoplasty. *Benha Journal of Applied Sciences.* 2021 Sep 1;6(5):263-8.
- 8 Ali M, Najeeb T, Niaz A, Shahzad J, Khan NA, Asghar M. Trans-septal Suturing vs Conventional Nasal Packing in Septoplasty (A study on post-operative pain). *Ophthalmology Update.* 2020;18(2):50-3.
- 9 Islam MA, Mohammad T, Chowdhury NH, Mamoon TB, Khan SR, Rahman AL. A Comparative Study between Endoscopic Septoplasty and Conventional Septoplasty. *Journal of Bangladesh College of Physicians and Surgeons.* 2021 Jun 19;39(3):178-84.
- 10 Awan NU, Azeem M, Cheema KM. Comparison of Endonasal and External Septoplasty for Treatment of Buckled Caudal Septal Deviation. *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP.* 2021 Jan 1;31(1):51-4.
- 11 Zaman SU, Zakir I, Faraz Q, Akhtar S, Nawaz A, Adeel M. Effect of single-dose intravenous tranexamic acid on postoperative nasal bleed in septoplasty. *European Annals of Otorhinolaryngology, Head and Neck Diseases.* 2019 Nov 1;136(6):435-8.
- 12 Topal K, Kars A, Bingol F, Kilic K, Atalay F. Effect of intranasal Merocel packs, silicone splint, and trans-septal suture after septoplasty on Eustachian dysfunction. *B-ENT.* 2020 Dec 1;16(4):193-6.
- 13 Kim SJ, Chang DS, Choi MS, Lee HY, Pyo JS. Efficacy of nasal septal splints for preventing complications after septoplasty: A meta-analysis. *American Journal of Otolaryngology.* 2021 May 1;42(3):102389.
- 14 Babu AR, Shankar De K, Prakash BG, Sreenivas Kamath K. Quest for the ideal nasal pack in post operative cases of septo-turbinoplasty: study in a tertiary care hospital. *Indian Journal of Otolaryngology and Head & Neck Surgery.* 2020 Dec;72(4):463-7.
- 15 Lundberg M, Lilja M, Blomgren K, Kotisalmi I, Mäkitie AA, Sainio S, Hytönen M. One dose of preoperative, intravenous, prophylactic antibiotics significantly lowers postoperative infection rate in septoplasty—a study of 772 operations. *Clinical Otolaryngology.* 2022 Jan;47(1):174-80.
- 16 Shah G. Comparison of Septoplasty with and without Nasal Packing: Its Association with Post-Operative Nasal Adhesion Formation. *Journal of Islamabad Medical & Dental College.* 2018 Nov 18;7(3):169-73.