

SEPTOPLASTY WITH AND WITHOUT NASAL PACKING: A COMPARATIVE STUDY

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ABSTRACT

Septoplasty is one of the most commonly performed surgeries in rhinology to relieve nasal obstruction of patients with distortion in the midline cartilage or septum of the nose to relieve nasal obstruction of patient and findings consistent with nasal endoscopy. The anterior nasal packing routinely done following septoplasty is usually conventional and not evidence based. The purpose of nasal packing is to obtain haemostasis, enhance opposition of septal flaps, avoid septal haematoma formation, close the dead space, avoid synechiae formation, provide support to septal cartilage and prevent its displacement.

OBJECTIVE

This study intends to evaluate the effects of nasal packing on surgical success and related complications in septoplasty.

MATERIALS AND METHODS

The present clinical prospective and randomised study was carried out on patients attending Otorhinolaryngology Department of Santhiram Medical College & General Hospital between March 2012 and March 2015. Patients undergoing septoplasty were randomised either to receive anterior nasal packing or to not receive nasal packing postoperatively.

RESULTS

Levels of pain experienced by patients with nasal packing postoperatively during the initial 24 hours postoperatively and during the removal of the pack were significantly more. Post-operative headache, epiphora, swallowing discomfort and sleep disturbance were more in patients with nasal packing and statistically ($p < .05$) significant. Post-operative oozing was more (19%) in patients without nasal packing and statistically insignificant ($p > .05$). Septal haematoma, adhesions and local infections in both groups were statistically insignificant ($p > .05$).

CONCLUSION

Septoplasty enhances the standard of living of patients with septal deviation and nasal obstruction. Our study results suggest that nasal packing after septoplasty is not obligatory. Nasal packing causes considerably more pain and complications, and it should be reserved only for those who have bleeding predisposition.

KEYWORDS

Septoplasty, Nasal Packing, Pain, Complications.

HOW TO CITE THIS ARTICLE: Sreenivasulu M, Hemanth V, Durgaprasad B, et al. Septoplasty with and without nasal packing: A comparative study. J. Evid. Based Med. Healthc. 2016; 3(36), 1765-1767. DOI: 10.18410/jebmh/2016/395

INTRODUCTION: The term septoplasty derives its meaning from the Greek term which means "To reshape or mould the septum". Septal deviation correction was conceived in the 19th century and has been modified and enhanced ever since. Septoplasty is one of the most frequently performed procedures in rhinology, used to overcome nasal obstruction due to a distortion in the midline cartilage or septum of the nose. It is usually followed by nasal packing.

The routine nasal packing following septoplasty is usually conventional and not evidence based. The purpose of nasal

packing is to obtain haemostasis, enhance opposition of septal flaps, avoid septal haematoma formation, close the dead space, avoid synechiae formation, provide support to septal cartilage and prevent its displacement. Nasal packing is not an innocuous procedure and may result in complications due to the fact of lymphatic and venous obstruction, cardiovascular changes, continued bleeding, nasal mucosal injury, decreased arterial oxygen saturation during sleep, Eustachian tube dysfunction, hypoxia, foreign body reaction, infection and rarely toxic shock syndrome. The most important disadvantage of nasal packing is patient's discomfort. This study intends to evaluate the effects of nasal packing on surgical success and related complications in patients undergoing septoplasty.

MATERIALS AND METHODS: The present clinical prospective and randomised study was carried out on patients attending Otorhinolaryngology Department of

*Financial or Other, Competing Interest: None.
Submission 05-04-2016, Peer Review 19-04-2016,
Acceptance 28-04-2016, Published 05-05-2016.*

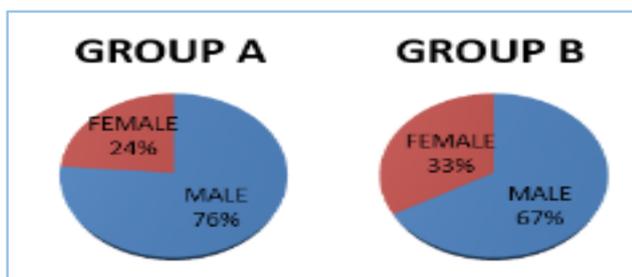
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DOI: 10.18410/jebmh/2016/395*

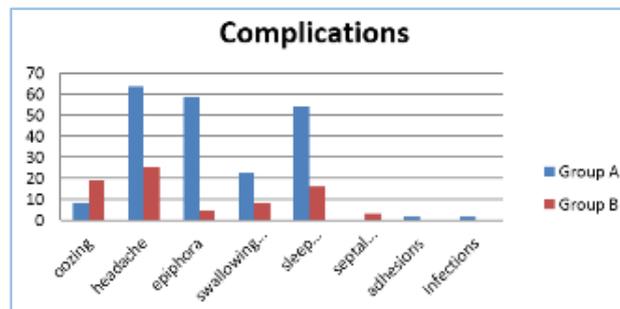
Santhiram Medical College & General Hospital between March 2012 and March 2015.

A total of 126 cases of nasal septum deviation who underwent septoplasty were taken for study irrespective of sex, occupation, socioeconomic status, ethnicity and address. Informed consent regarding the procedure was taken. Patients were randomly assigned (63 with nasal packing and 63 without packing) to undergo septoplasty with or without nasal packing. Patient's younger than 15 years and those submitted to revision surgeries were excluded. All the patients were operated using same standard surgical technique along with suturing of septal flaps by absorbable suture material (3-0 chromic catgut). Group A comprised of 63 patients and nose was packed with ribbon gauze soaked in antibiotic. Group B also had 63 patients without nasal packing. Postoperatively, all the patients received same antibiotics and analgesics. Both groups were compared. Descriptive and analytic statistics using Chi Square test (χ^2) were applied, p-values less than 0.05 were considered as statistically significant.

RESULTS: Majority of patients were between 16 and 36 years of age. Male and female patients were almost equal in two groups (Table 1).



All patients in both groups were asked to assess their pain during the first 24 hours after surgery or during the removal of the packing. Pain was assessed on a visual analogue scale (VAS) 0=No pain, 1=Minimal pain, 2=Moderate pain, 3=Severe pain. Grades of pain expressed by patients in the nasal packing group during the first 24 hours postoperatively and during the removal of the pack were significantly more than that in the group of patients without nasal packing (Table 2). Post-operative headache, epiphora, swallowing discomfort and sleep disturbance were more in patients with nasal packing and statistically ($p < .05$) significant (Table 3). Post-operative oozing was more (19%) in patients without nasal packing and statistically insignificant ($p > .05$), by achieving perfect haemostasis during surgery postoperative ooze is minimised or absent and 2 (3.1%) patients required nasal packing after surgery. Septal haematoma, adhesions and local infections in both groups were statistically insignificant ($p > .05$).



	Male	Female	Total
Group A	48	15	63
Group B	42	21	63
Total	90	36	126

Table 1: Distribution of Patients in two Groups

Equal number of patients were allotted to both groups

Post-operative Pain	No Pain	Mild	Moderate	Severe
Packing (Group A)	0	7 (11.1%)	44 (69.9%)	12 (19%)
During Pack Removal	0	0	23 (36.5%)	40 (63.5%)
Without Packing (Group B)	6 (9.5%)	47 (74.6%)	10 (15.9%)	0

Table 2: Pain Scores Postoperatively and During Pack Removal

	With Packing (Group A)	Without Packing (Group B)	p-Value
Post-operative Haemorrhage (Minimal oozing)	5 (7.9%)	12 (19%)	NS
Headache	40 (63.5%)	16 (25.4%)	$p < .0001^*$
Epiphora	37 (58.7%)	3 (4.7%)	$p < .0001^*$
Swallowing Discomfort	14 (22.3%)	5 (7.9%)	$p = .0250^*$
Sleep Disturbance	34 (53.9%)	10 (15.9%)	$p < .0001^*$
Septal Haematoma	0	2 (3.1%)	NS
Adhesions	1 (1.6%)	0	NS
Local Infections	1 (1.6%)	1 (1.6%)	NS

Table 3: Comparison of Complications between Patients Undergoing Septoplasty with or without Packing

NS- Not significant ($p > .05$), *- Statistically Significant ($p < .05$)

DISCUSSION: The pain and distress caused by nasal packing raises the question whether there is a need to pack the nose at all. The insertion of any type of non-absorbable packing necessitates its removal which is a painful experience and one of worst aspects of nasal surgery.¹ Yavuzer and Jackson quoted one patient as saying, "I have come to have surgery from you because I hear that you don't pack the nose".² The newer modified nasal packs are expensive and add significantly to the cost of surgery.³ Shaw et al. studied the effects of the most commonly used nasal packing materials (Ribbon Gauze) on the nasal mucosa of patients undergoing nasal surgery. He showed that nasal packing can cause significant mucosal injury with ciliary movement problems.⁴ Bajaj et al⁵ showed decreased rates of post-operative complications in patients who have undergone septoplasty without nasal packing. The study done by Awan and Iqbal⁶ showed similar results. Theoretically, if one manages to get a good bleeding control during surgery, postoperative bleeding is not significant.^{6,7} The remaining complications were more frequent in patients with nasal packing and contributed to greater morbidity in the immediate post-operative period in these patients. Epiphora results from obstruction of lacrimal duct; discomfort in swallowing manifests mainly at the ear due to passage of air into middle ear resulting in uncomfortable feeling resulting in poor oral intake and sleep disorders happen because of worsening apnoea and consequent frequent awakenings.

Naghizadeh et al⁸ stated that the frequency of bleeding after septoplasty without nasal packing is very low and nasal packing should be reserved only for those who bleed more during surgery or develop septal haematoma. Septoplasty can be safely performed without postoperative nasal packing. Nasal packing had no significant benefits that would compensate its usage. No significant difference in haemorrhage, crusting or mucosal atrophy was detected in a trial on 50 patients.⁹ Applying Quilt suturing to septum was also found as a safe alternative for packing in a study on 226 patients.¹⁰

CONCLUSION: Septoplasty enhances the standard of living of patients with septal deviation and nasal obstruction. Our study results suggest that nasal packing after septoplasty is not obligatory. Nasal packing causes considerably more pain and complications, and it should be reserved only for those who have bleeding predisposition.

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