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Nasal Packing: Is It Necessary in Septal Surgery

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ABSTRACT

Aim the study was carried out to evaluate the necessity of nasal packing following septoplasty. **Methods:** This observational study of 60 cases was carried out at the Department of ENT, Shaikh Zayed Federal Postgraduate Medical Institute & Hospital, Lahore from September 2008 to March 2009. Group A contained patients with nasal packing. Group B contained patients without nasal packing. **Results:** The incidence of headache in group A was very high as compared to group B. 90% patients in group A had headache as compared to 20% patients in group B ($p<0.001$) The incidence of sleep disturbance in group A was very high as compared to group B. 24 (80%) patients in group A had sleep disturbance as compared to 4 (13.3%) patients in group B ($p<0.001$) The incidence of hemorrhage following septoplasty was low in both groups. Only 2 (6.6%) patients developed hemorrhage in group B. It was not found in group A (0%). The incidence of septal hematoma following septoplasty was low in both groups. Only 2 (6.6%) patients in group A developed septal hematoma and required incision and drainage, as compared to 0 (0%) patients in group B. **Conclusion:** Nasal packing is not necessary in each post operative patient of septoplasty.

Key Words: Septoplasty, Nasal Packing.

INTRODUCTION

Nasal septal deformities are common and may be developmental, congenital, traumatic or accidental and can occur in any age. Symptoms develop mostly at adolescent or adult age. Septal deformities are of different types.[1] Surgery septoplasty or SMR on the nasal septum is one of the most common operations performed by otorhinolaryngologists.[2,3] It is commonly performed for deviated nasal septum causing nasal obstruction.[4] Nasal packing is routinely performed following septoplasty. It is done to prevent hemorrhage and septal hematoma[5,6] but this evidence is not supported by studies with large number of cases.[7,8] The most common problem encountered by the patients after septoplasty is pain and discomfort during removal of the nasal packs.[9] It has also been reported to cause edema of the nose and periorbital area, epiphora, sleep disturbance, dry mouth, and an increase in cardiopulmonary complications like hypoxemia and cardiac arrhythmias.[10,11] Septoplasty without nasal packing causes significantly less postoperative pain, headache, epiphora, dysphasia, and sleep disturbance. Nasal packing after septoplasty is regarded not only unnecessary, it is actually a source of patient discomfort and other signs and symptoms.[12] Septoplasty can be safely performed without postoperative nasal packing. Only few percentages of patients require nasal packing post operatively.[2] The consensus in literatures nowadays is that nasal packing after septoplasty should be avoided. We have also started practicing septoplasty without nasal packing recently in our hospital but we don't have our own data to support this.

MATERIAL AND METHODS

This observational study of 60 cases was carried out at the Department of ENT, Sheikh Zayed Federal Postgraduate Medical Institute & Hospital,

Lahore from September 2008 to March 2009. The patients with odd serial numbers were treated with septoplasty with nasal packing and the patients with even serial numbers were treated with septoplasty without nasal packing .Total of sixty cases of septoplasty were taken into the study. Thirty cases were treated with septoplasty with nasal packing and thirty cases were treated with septoplasty without nasal packing. Both male and female patients in all ages with DNS, allergic or atrophic rhinitis, acute infection of the nose and paranasal sinuses, chronic conditions like syphilis, T.B. and Leprosy and bleeding disorders. Patients were diagnosed on the basis of history and physical examination. Chest x-ray, ECG, CBC, PT, APTT and any relevant laboratory investigation were done to rule out any co-existing pathology. Standard septoplasty was performed.

Post operatively patients were kept in semi sitting position. Soft diet was allowed in initial two post operative days to minimize active mastication. Analgesics were given as required. Antibiotics were given for initial 5-7 days postoperatively. Decongestants nasal drops and liquid paraffin was given for 7–10 days post operatively. Nasal packs were removed in the group with packing after 24–48 hrs postoperatively. Pain score during nasal pack removal was also recorded in these patients. Nasal splints were removed after 1-2 weeks. The patients were followed in outpatients department at 1, 3 and 6 weeks. The variables were recorded for time taken for removal of splint. Post operative complications like hemorrhage, infection, septal hematoma, adhesion and perforation were managed accordingly. Need of post operative packing or repacking during immediate post operative period in either group due to some complications were noted as a discredit to the procedure.

RESULTS

The incidence of pain in group A was high as compared to group B patients. The incidence of pain at different periods following septoplasty was variable. At 24 hrs post operatively, the incidence of pain in group A was high as compared to group B. 20% patients in group A had intense pain (VAS = 5) as compared to 0% in group B.26.6% patients in group A had severe pain (VAS= 4) as compared to 13.3% in group B. At one week post operatively, the incidence of pain in group A was high as compared to group B. 13.3% patients had severe pain in group A (VAS=4) as compared to 6.6% in group B. No patient in any group had intense pain. At three week post operatively, the incidence of pain in group A was high as compared to group B. No patient in any group had severe or intense pain. 26.6% patients had mild pain in group A as compared to 6.6% in group B. At six week post operatively, the incidence of pain in group A was high as compared to group B. No patient in any group had severe or intense pain. 6.6% patients had mild pain in group A as compared to 0% in group B. The incidence of headache in group A was very high as compared to group B. 27 (90%) patients in group A had headache as compared to 6 (20%) patients in group B ($p<0.001$) (Table 3).

Table 1: Age distribution of patients in both groups (n=60)

Age (Years)	Group A (n=30)	Group B (n=30)
9 – 17	6 (20%)	4 (13%)
18 – 25	5 (17%)	6 (20%)
26 – 33	14 (46%)	16 (54%)
> 33	5 (17%)	4 (13%)
Mean±SD=	26.20±7.32	25.97±7.79

Table 2: Gender distribution (n=60)

Gender	Group A (n=30)	Group B (n=30)
Male	22 (73.33%)	26 (86.66%)
Female	8 (26.66%)	4 (13.33%)
M to F ratio =	2.75:1	6.5:1

The incidence of sleep disturbance in group A was very high as compared to group B. 24 (80%) patients in group A had sleep disturbance as compared to 4 (13.3%) patients in group B ($p<0.001$) (Table 4). Only 2 (6.6%) patients developed hemorrhage in group B. It was not found in group A (0%). The incidence of septal hematoma following septoplasty was low in both groups. Only 2 (6.6%) patients in group A developed septal hematoma and required incision and drainage, as compared to 0

(0%) patients in group B. The incidence of adhesion formation and septal perforation following septoplasty was not found in either group A or B (Table 5)

Table 3: Comparison of incidence of headache between both groups (n=60)

Headache	Group A (n=30)	Group B (n=30)	Z value	P value
Yes	27 (90%)	6 (20%)	1.0	<0.001*
No	3 (10%)	24(80%)		

* = Highly significant

Table 4: Comparison of incidence of sleep disturbance between both groups (n=60)

Sleep disturbance	Group A (n=30)	Group B (n=30)	Z value	P value
Yes	24 (80%)	4 (13.33%)	1.0	<0.001*
No	6 (20%)	26 (86.66%)		

* = Highly significant

Table 5: Incidence of hemorrhage, septal hematoma, adhesion formation & septal perforation (n=60)

Hemorrhage	Group A (n=30)	Group B (n=30)
Yes	-	2 (6.66%)
No	30 (100%)	28 (93.33%)
Septal Hematoma		
Yes	2 (6.66%)	Nil
No	28 (93.33%)	30 (100%)
Adhesion Formation		
Yes	Nil	Nil
No	30 (100%)	30 (100%)
Septal perforation		
Yes	Nil	Nil
No	30 (100%)	30 (100%)

DISCUSSION

This prospective study was undertaken in order to evaluate the outcome of the septoplasty with or without nasal packing. The pain and distress caused by nasal packing brings into question whether there is a need to pack the nose at all. Insertion of any type of non-absorbable packing will necessitate its removal, and we have earlier noticed that this painful experience is one of the worst aspects of nasal surgery.[10] Second; the newer modified nasal packing's are expensive and add significantly to the cost of surgery. Third, packing increases the relative risk of toxic shock syndrome. The most dangerous complication is nasopulmonary reflex, which is mediated via the vagus nerve and results in an increase in parasympathetic activity that can lead to broncho-constriction and hypoxia.

The only apparent advantage of packing the nose is that it helps achieve good flap apposition. This study revealed that nasal packing groups had some issues such as headache, epiphora, and pain. My decision to use the VAS to subjectively quantify pain was based on the fact it is simple and highly sensitive and it generates directly measurable numerical score. Mean age of the patients was 26 years in group A and 25 years in group B which is comparable to the mean age in other studies conducted on the subject of septoplasty.[12] predominant gender in both groups was male in both groups which is also comparable to previous studies.[12] Post operative nasal packing resulted in increased incidence of pain at 24 hours, 1 week, 3 weeks, and 6 weeks postoperatively. This is in accordance with previous study conducted.[12] Number of patients in this study can be compared to a similar study conducted in Agha Khan University Hospital, Karachi[12] which included 88 patients.

In that study, pain was assessed using visual analogue score (VAS) 1 – 10. Most common score in nasal packing group was 10 while most common VAS was 1 in non packing group. We used VAS 1-5. Score of 1 meant no pain while score of 5 meant intense pain. Results of our study were not different from the above mentioned study. In our study, no patient in nasal packing group had score of 1 within 24 hours while 8 patients with no nasal packing had score of 1. No patient in no nasal packing group had score of 5 while 6 patients had score of 5 with nasal packing. 90.9% of patients who had post operative nasal packing in that study developed post operative headache which is comparable to our study (90%). 20.5% of the patients who did not have nasal packing had post operative headache in the previous study[12] similarly in our study 20% patients with

nasal packing developed post operative headache. Increased incidence of headache observed in our study in patients with post operative nasal packing is not astonishing. It can be attributed to stretching of nasal walls that cause pain which is perceived as headache.

Sleep is very important part of every one s life. It's even more important for the post operative patients who are coming out of stress of surgery. Unfortunately 80 % of the patients, who had nasal packing, had complaint of sleep disturbance while only 13.33 % patients had sleep disturbance in no nasal packing group. These results are also comparable to the previous study (81% and 15% in packing and no nasal packing group respectively).[12] Higher incidence of sleep disturbance in patients with nasal packing can be attributed to the habits of breathing through nose during night time but due to packing, patients have to breath from mouth which cause a lot of disturbance. Advocates of post operative nasal packing have argument that post operative nasal packing causes less bleeding and it keep the flap in its place and prevent septal hematoma. But these arguments have been seriously questioned in the recent past in study conducted by Bajaj et al[2] in that study only 7.7 % had bleeding and only 3.8 % patients required packing to control bleeding.

Similarly study by Sohail and Moghira[12] showed that only 2.3% patients developed bleeding in no packing group while 0% developed bleeding in nasal packing group. Same were the results in our study where 6.6% of the patients had bleeding in no nasal packing group while no patient in nasal packing group had bleeding. Bleeding was not a issue in our study. It was not significantly different in two groups. An important factor for such a low incidence of post operative bleeding is the infiltration of lidocaine and epinephrine solution. If this is achieved and mucosal flap is raised in the right plain, there is virtually no bleeding.

Septal hematoma is another problem that is argued to be reduced after nasal packing. In our study there was not a significant difference in the incidence of septal hematoma in two groups. Only 6.6% patients in packing group developed septal hematoma while no patient had septal hematoma in no packing group. These results were similar to the study by Sohail and Mughira[12] (6.8 % and 0% in packing and no packing group respectively). The increased incidence of septa hematoma in packing group can be explained by the fact that surgeon handles the septum roughly knowing that the packing would take care of any consequent bleeding.

Another justification that has been cited in the past for placing post operative nasal packing is that it might prevent adhesions forming between turbunates and the lateral nasal wall. But we found that no difference in two groups regarding the incidence of adhesion formation. Studies conducted in the past[6] showed increased incidence of adhesion formation in the packing group (18.2% and 0% in packing and non packing group respectively). There was no difference in the incidence of septal perforation in two groups (0% in both groups). The cause of septal hematoma is frequently iatrogenic.

CONCLUSION

This study concludes that postoperative nasal packing is associated with a significant increase in the rate of complications like pain, headache, and sleep disturbance. So, nasal packing after septoplasty should not be carried out in every patient.

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