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Original Article

Short duration anterior nasal packing after submucosal resection of nasal septum

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Abstract

Objectives: To find out the shortest possible duration of nasal packing after submucosal resection (SMR) operation. To compare the outcome of the patients who underwent SMR operation and anterior nasal pack (ANP) removed after 24 hours with those who had ANP removed after 2 hours of operation.

Materials and methods: A prospective randomized hospital based study was undertaken to compare the outcome of early removal of nasal packs after 2 hours of operation and after 48 hours. Seventy four patients undergoing SMR operation with ANP were divided in two groups. Group I: patients who underwent SMR and ANP removed after 24 hours to 48 hours (n= 37 patients). Group II: patients who underwent SMR and ANP removed after 2 hours (n= 37 patients).

Results: There was no significant difference between the two groups in terms of age distribution (p = 0.244), sex (p = 0.76), synaechia formation (p = 0.615) and bruise in the upper lip (p = 1.000). There were no complications following early (2 hours) removal of ANP except synaechia, no significant post-operative bleeding occurred and no post operative septal hematoma were noted. In addition, patients reported less post-operative discomfort when the packs were removed early in Group II. This practice reduced the length of hospital stay and therefore reduced costs.

Conclusion: Our study shows that there is no significant difference in the post operative events and recovery between removal of ANP after 48 hours and after 2 hours of operation. This supports that ANP removal can safely be done after two hours of operation.

Key words: Sub mucosal resection of the nasal septum (SMR), anterior nasal packing (ANP)

Submucosal resection of the nasal septum (SMR) is one of the most commonly performed operations in nose to correct its deformity. ANP has remained the gold standard to stop nasal bleeding and to prevent septal hematoma. The time duration of the nasal packing is variable with most centers leaving the pack for longer period of time (48 to 72 hours). A prospective randomized study was undertaken to compare the outcome of early removal of nasal packs after two hours of operation and after 48 hours. Each group had 37 patients.

This is a prospective study of cases that underwent SMR for deviated nasal septum (DNS) in B & B Hospital, Kathmandu University Medical School from August 1, 2003 to September 28, 2007.

Total patients operated were 85 but 11 patients were missed to follow up after 1 month (5 of whom had ANP removed after two hours and six had anterior nasal packing removed after 24 hours)

Materials and methods

Inclusion criteria

Patients who underwent SMR operations, and who could also be reviewed at one month of follow up of the operation

Exclusion criteria

Patients who did not attend follow up at one month after the operation.

Patients who underwent SMR operation along with other operations like Caldwell-Luc operation, intranasal polypectomy, and manipulation of the inferior turbinates etc

The patients were divided into two groups

Group I: patients who underwent SMR and ANP removed after 24 hours to 48 hours (n= 37 patients).

Group II: patients who underwent SMR and ANP removed after 2 hours (N= 37 patients).

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Objectives

To compare the outcome of the patients who underwent SMR operation and ANP removed after 24 hours with those who had ANP removed after 2 hours of operation.

Procedure

All patients were operated under General Anesthesia. If both mucoperichondral flaps were intact a deliberate horizontal incision was made very near to the floor to avoid septal hematoma. It is our practice after SMR to make a horizontal incision in the lower part of the septum if there is intact mucoperiosteum. On the other hand, if there is a small tear in one of the flaps, no incision is made. In one of the cases, the vertical Killian's incision on the left mucoperiosteum was sutured with 3.0 chromic catgut because of a through and through cut in the both mucoperiosteal flaps. No septal splints were used, as it is not the authors' practice to use them in such cases. The ANP consisted of Soframycin cream impregnated ribbon gauze. The ANP was removed after two to three hours. During removal, a gauge swab wetted with cold water was placed over the nasal bridge, which was pinched and some pieces of ice cubes were given to put in the mouth. The nose was pinched for about 15 minutes and then released. A slight blood stained discharge was usually present after removal of the ANP that stopped by putting a cotton ball in the nostril. Patients were observed closely for four hours and were discharged home after one night stay in the hospital with antibiotics and analgesics. The statistical analysis was done with SPSS 11.5 for Microsoft windows. Chi square test and Fisher's exact test were done to compare the two groups in terms of age, sex and complications. The *p* value of less than 0.05 was considered to be significant.

Results

The ages and gender of the patients are summarized in Table One.

There was no significant difference between the two groups in terms of age distribution ($p = 0.244$), sex ($p = 0.76$), synaechia formation ($p = 0.615$) and bruise in the upper lip ($p = 1.000$).

There were no complications following early (2 hours) removal of ANP except synaechia in one patient and bruise in the upper lip next day in the patient whose vertical incision was sutured due to through and through perforation. In particular, no significant post-operative bleeding occurred and no post operative septal hematoma were noted. In addition, patients reported less post-operative discomfort when the packs were removed early in Group II. This practice reduced the length of hospital stay and therefore reduced costs.

Table 1: Age and Gender of the Study Group (n= 74)

Age	**Male**	**Female**	**Total**
17 – 24	40	7	47
25 – 34	16	5	21
35 – 44	4	0	4
45 Above	1	1	2
Total	**61**	**13**	**74**

Table 2: Comparison between group I and group II

	Group I	**Group II**	***p* Value**
Age			
17 – 24	22	25	0.244
25 – 34	13	8	
35 – 44	2	2	
> 44	0	2	
Sex			0.76
Male	30	31	
Female	7	6	
Complications			
Synaechia	3	1	0.615
Hematoma	Nil	Nil	
Bleeding	Nil	Nil	
Bruise in the upper lip	Nil	1	1.000

Discussion

ANP is the standard technique after operations in the nasal cavity like SMR, Intranasal polypectomy etc. To pack or not to pack, has always been a debate, especially after septal and functional endoscopic sinus surgery[1]. Surgeons have debated since decades on the efficacy or inefficacy of nasal packing. Many packing materials are in vogue namely - BIPP, paraffin gauze, Merocel, Teflon etc. Studies have been done to compare packing materials with a view to patient compliance, bleeding and difficulty in removal[2]. The packing is supposed to be just tight enough to stop bleeding but should not be so tight that will jeopardize the blood circulation of the mucus membrane of the nasal cavity. In practice it is difficult to be sure that pack placement is optimal. Many times surgeons leave the ANP in the nasal cavity for more than 72 hours because of the fear of nasal bleeding and septal hematoma if pack is removed early.

There is no definite rule concerning the timing of removal of nasal packing after SMR operation. Long term (24-72 hours) nasal packing is always accompanied by some degree of discomfort. The blood circulation in the nasal mucosa may be jeopardized. Nasal packing caused a significant decrease in oxygen saturation in the arterial blood[3]. In some literatures it is mentioned that chances of septal perforation and rate of infection as sinusitis otitis media may increase. Prolonged hospital stay increases the cost of treatment. Their removal is painful and can cause other complications like bleeding, adhesions, septal perforations and rarely infections. That is why early removal of the pack is desirable, provided that post operative nasal bleeding and formation of septal hematoma do not occur as a result. Some surgeons were practicing SMR without nasal packing but later on they landed with very short time ANP. Consequently if at all nose bleeds, eventually nasal packing is the best treatment.

Conclusion

This study shows that anterior nasal packing can be safely removed two hours after SMR without jeopardizing the result of the operation. The results need to be interpreted cautiously as the sample size is relatively small. More extensive studies with larger sample size will help to shed more light on this issue.

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