e-ISSN: 0976-822X, p-ISSN:2961-6042

Available online on http://www.ijcpr.com/

International Journal of Current Pharmaceutical Review and Research 2024; 16(3); 410-413

Original Research Article

Nasal Transseptal Suturing after Septoplasty: An Upcoming alternative to Nasal Packing?

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Received: 10-01-2024 / Revised: 16-02-2024/ Accepted: 22-03-2024

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Conflict of interest: Nil

Abstract

The study was carried out to compare the efficacy of nasal transseptal suturing with that of anterior nasal packing after septoplasty in the department of ENT, JLNMCH, Bhagalpur between March 2021 to November 2022. Two groups of 30 patients each were assessed. Group A was assigned to all patients with septoplasty with nasal transeptal suturing while Group B was assigned to all patients where anterior nasal packing was done after septoplasty. The patients were followed up for 6 months.VAS score for post op nasal pain and headache were significantly low in group A.In group A no facial edema was seen. Incidence of synechiae was also less in group A as compared to group B..From this study better results were seen in group A where transseptal suture after septoplasty was done.

Key words – Transseptal suturing, Septoplasty, Nasal packing, Epistaxis

Introduction

Septoplasty is one of the most common surgeries in ENT. When peeking into the history of post operation nasal packing, it prevailed during the Killian and Freer in 1847. Much more systematic sub mucosal resection (SMR) and nasal packing was begun by Ephrain and Peterson in 1882. To achieve haemostasis, ensuring stabilization of post nasal septoplasty and for preventing septal haematoma, the practice of anterior nasal packing is popular[1].But this is not free from the discomfort to the patient. Therefore, new methods are being tried to compare their efficiency and their value with that of anterior nasal packing in managing the post surgical complications.

Dry mouth, worsening of breath, sleeping disorder, pain upon removal of nasal packing are associated with nasal packing. Transeptal nasal suturing has the advantages to allow the patients to breath thus reducing the discomfort to patients.

Aims and Objectives

In this study we have made an attempt to compare septoplasty performed with transseptal suturing technique with septoplasty done with anterior nasal packing to assess its outcome and post operative complications

Materials and methods

A prospective comparative study was conducted in the department of ENT, JLNMCH, Bhagalpur from March 2021 to November 2022 in patients with septoplasty. The study was conducted on a total of 60 patients, who were randomly grouped into Groups A and B, with 30 cases in each group. Group A cases were operated with transseptal suturing after septoplasty and group B with septoplasty with anterior nasal packing.

The patients that had symptomatic deviated nasal septum that required septoplasty irrespective of their age, sex and duration of symptoms were included in this study, after a detailed history taking and thorough clinical examination. We excluded those patients with any history of bleeding disorder, nasal polyposis, previous septal or turbinate surgery, allergic rhinitis, pulmonary or cardiovascular disorder and those who were regularly taking medications for any medical condition.

A properly informed written consent was taken from the patients, who were willing to be included in this study. Data was collected. The data was analysed using SPSS version 26. p value <0.05 was considered statistically significant. VAS score (a scale of 0- 10) was used for pain, headache and pain during nasal pack removal. We used the chi - square test to compare the percentage of haemorrhage, discomfort upon swallowing and sleep disturbance. We assessed their quality of life before surgery and 6 months after afterwards using NOSE questionnaire.

Procedure

Septoplasty was done under general anaesthesia. Nasal packing was removed by around 48 hours of postoperative period. In case of transseptal suturing technique, vicryl 3-0 was used to cover all the cartilaginous portion of the septum. The patients were followed up on a monthly basis for about 6 months.

Results

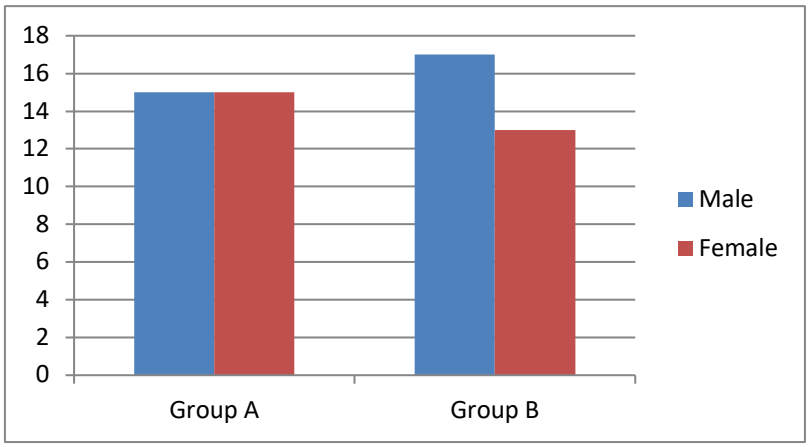

Figure 1: Sex distribution in each group

Total 60 patients were included in the study who underwent septoplasty. Out of these 32 were males and 28 were females. 12 patients were of less than 20 years of age while 43 patients fell between 20 – 40 years of age group. 5 patients were of more than 40 years.

Table 1: Age wise distribution

Age group	Group A	Group B
Less than 20 years	7	5
20 – 40 years	21	22
More than 40 years	2	3

Table 2: Pain around and on nose in each group

	Group A	Group B
Mean VAS Score	4 $\pm$ 0.5	7.5 $\pm$ 0.5

Table 3: Headache in each group

	Group A	Group B
Mean VAS Score	3.5 $\pm$ 0.25	6.75 $\pm$ 0.33

VAS Scores were noted for pain and headache in each group. We found that in group A mean VAS score for pain was 4 $\pm$ 0.5 and for headache it was 3.5 $\pm$ 0.25. In group B mean VAS score for pain was 7.5 $\pm$ 0.5 and for headache , it was 6.75 $\pm$ 0.33 , which was found to be significant ($p<0.05$)

Table 4: Sleep disturbance in each group

Sleep disturbance	Group A	Group B
Mild	5	7
Moderate	0	20
Absent	25	3
p value (chi square test)	<0.05 (significant)	

Table 5: Difficulty in swallowing in each group

Difficulty in swallowing	Group A	Group B
Present	2	18
Absent	28	12
p value (chi square test)	<0.05(significant)	

Out of 30 patients in group A, only 5 had sleep disturbance while 27 had sleep disturbance in group B. Difficulty in swallowing was observed in 2 patients in group A while 18 patients had difficulty in swallowing in group B.

Table 6: Post operative bleeding in each group

Post operative bleeding	Group A	Group B
Present	4	2
Absent	26	28

Table 7: Facial edema in each group

Facial edema	Group A	Group B
Present	0	15
Absent	30	15
p value	<0.05(significant)	

In group A , we observed that 4 cases (13.33%) showed post operative bleeding which required injectable haemostatics to control it. No case of facial edema seen in this group of patients.
In group B, we observed that 2 patients (6.66%) had post operative bleeding which required no active management and it stopped on its own. In 15 patients (50%) there was facial edema.

Table 8: Incidence of synechiae in each group

Synechiae	Group A	Group B
Present	1	6
Absent	29	24

Discussion

In our study, we had randomly allocated 60 patients in two groups having 30 patients in each group. In group A patients with septoplasty with transseptal suturing was placed while those patients in which anterior nasal packing was done after septoplasty was allocated Group B. [1]

In our study, there was male predominance. Out of 60 patients 32 were males., which was very much resembling to the findings of other studies [2,3]. Most of the patients were of the age group 20 - 40 years. We observed a decrease in VAS scores for pain around and on nose in group A was 4 ± 0.5 as that of in group B was 7.5 ± 0.5.This is similar to the findings of a study conducted by Ozkiris M et al in 2013.They found mean post op VAS score for pain to be 2.8 in transseptal group while 7.3 in nasal packing group [4].A study conducted by Walikar et al had also found reduced post op pain in non packing group as compared to nasal packing group [5].Studies done by Awan MS et al had similar findings of significantly higher pain levels among packing group [6].

We observed that maximum VAS score for headache in group B which was found to be 6.75 ± 0.33 while VAS score for headache in Group A was 3.5 ± 0.25, which was found to be significant (p-value <0.05). Nayak et al had majority of patients developing headache in nasal packing group as compared to non packing group [7]. Wallikar et al had also significantly higher incidence of headache in packing group as compared to non packing group [5]. In the present study we found that sleep disturbance in transseptal group to be only 5 while in nasal packing group it was 27.Thus indicating, nasal packing is quite disturbing to sleep.

In a study done by Korkut et al showed that there was an incidence of dysphagia in transeptal suture group [8].Wang et al and Nayak et al had similar findings [9,7].Awan MS et al showed in their study that 95.5% patients in nasal packing group had difficulty in swallowing while 4.5 % in had swallowing difficulty in non packing group[6].We found similar findings in group A patients as well, in which only 2 patients had swallowing difficulty while in group B 18 patients had swallowing difficulty. We observed that 4 cases in group A had post op bleeding while in group B ,we only had 2 patients with post op bleeding. Guanyadian RO et al showed in their study that minimal bleeding was higher in non packing group as compared to packing group which had no bleeding [10]. In an another study done by Priyosakhi Devi et al showed 18% cases had post op nasal bleeding in non packing group whereas only 14 % nasal bleeding was observed in packing group [11].

In a study done by Wadhera R et al showed that swelling of face and nose was more common in nasal packing group [12].We observed 50 % cases in group with nasal packing had facial edema while no case was observed with facial edema in transseptal group. In our study, the incidence of synechiae was found to be 1 (3.33%) in group A while in group B it was 6 (20%) after 4 weeks. Similar observation was made by Wadhera R where he found 13.5% patients in nasal packing group had synechiae[12].Said

et al showed in their study that 1 patient in the suturing group had adhesions as compared to 2 in nasal packing group [13].

Conclusion

From this study, we were able to see better results in patients whom suturing technique was used after septoplasty. Post operative pain and discomfort after septoplasty could be significantly reduced by suturing nasal septum in place of anterior nasal packing. Anterior nasal packing should be reserved in case of uncontrolled bleeding during surgery or in those who has reactionary bleeding in case of septal haematoma.

This study showed that in suturing technique patient returns to normal daily life in short time as compared to anterior nasal packing after septoplasty. Thus nasal transseptal suturing technique reducing morbidity and therefore can be used as an effective alternative to nasal packing after septoplasty.

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