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Assessment of postoperative relief and complications correlated with septoplasty and septoplasty with turbinectomy

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ABSTRACT

Background: Nasal obstruction was the common symptom of deviated nasal symptom. Many surgical procedures are available to correct the deviation. The current study was aimed to assess and compare the postoperative relief and complications of septoplasty alone and septoplasty with turbinectomy.
Methods: This prospective study was done on 50 patients with nasal blockage due to deviated nasal septum. Study was done at department of ENT, Dr. D.Y. Patil Medical College and Hospital, DPU between July 2016 to September 2018. Patients randomly selected and operated with septoplasty alone (n=25) and septoplasty with turbinectomy (n=25). Assessment and comparisons was made in terms of postoperative relief and complications in both the groups.
Results: Significant postoperative relief was seen in group of patients after septoplasty with turbinectomy. Retained deviation and dryness of nose are the common complications observed in group of patients treated with septoplasty and septoplasty with turbinectomy respectively and on follow up of 4 weeks postoperatively the rate of frequency of complications was reduced in group of patients managed with septoplasty with turbinectomy.
Conclusions: Postoperative relief and reduction in complication rate after 4 week follow-up was higher in group of patients operated with septoplasty with turbinectomy compared to group of patients managed with septoplasty alone.

Keywords: Septoplasty, Septoplasty with turbinectomy, Postoperative relief, Complications

INTRODUCTION

Deviated nasal septum is one of the most common sources of nasal blockade. It creates breathing difficulties, drying of mucosa leading to epistaxis and crusting.[1] Many anatomical studies revealed that 75–80% of all humans some degree of nasal deviation.[2,3]

Many surgical procedures are available for the correction of nasal septum deviation. In the olden days submucous resection of septum was done but the procedure was associated with many complications. Later septoplasty technique was developed and it had advantages of minimal resection of septum with less complications.[1] In some cases, along with the deviated nasal septum, patients may also have the turbinate hypertrophy which needs surgical management to achieve complete relief. Inferior turbinate hypertrophy is commonly carried out and it can be done with the help of various techniques which increases the nasal cavity and provides more room for the airflow.[4]

The aim of the present study was to assess and compare postoperative relief and complications after septoplasty and septoplasty with turbinectomy.

METHODS

This was a prospective observational study done on 50 patients with complaints of nasal block attending to the

Department of ENT, Dr. D.Y. Patil Medical College and Hospital, DPU between July 2016 to September 2018. After getting approval from institutional ethics committee, a written informed consent was obtained from all the patients after clearly explaining the study protocol. Patients of age group between 18-50 years with symptoms of deviated nasal septum and inferior turbinate hypertrophy were included in the study. Patients below the age of 18 years and patients above the age of 50 years, patients with previous septal surgery, allergic rhinitis, chronic sinonasal problems such as nasal polyp, sino nasal tumour were excluded from the study.

Of them, 25 patients were randomly selected and subjected to septoplasty and other 25 patients were managed with septoplasty and turbinectomy. Routine blood and urine investigations were conducted on every patient and pre anaesthetic fitness was taken. Procedure will be conducted under local anaesthesia. Bilateral nasal cavity packed with ointment soaked anterior nasal packs. Pack was removed after 48 hours. Post operatively class IV antibiotics, analgesics and anti histaminics were given to the patients and patients were asked to follow up after 1 week and 4 weeks to assess the postoperative relief and complications if any. Data was collected and analysed using Microsoft excel and presented in tables.

RESULTS

In the group of patients operated with septoplasty, only 10 patients were totally relieved of the symptoms, 12 were partially relieved and 3 patients reported of no relief. In comparison, 15 patients out of 25 of the septoplasty with turbinectomy group reviewed with total relief, 9 patients were partially relieved and only 1 patient complained about no relief (Table 1).

Table 1: Postoperative relief in patients of both groups.

Types of surgery	Postoperative relief		
	Totally relieved (N)	Partially relieved (N)	Not relieved (N)
Septoplasty alone (n=25)	10	12	3
Septoplasty and turbinectomy (n=25)	15	9	1

In terms of complications, postoperatively after one week of septoplasty, 4 patients followed up with complaints of retained deviation, 3 patients suffered from septal perforations, 1 patient developed septal hematoma and no patient got septal abcess. In cases subjected to septoplasty with turbinectomy two patients suffered from severe bleeding, two patients showed crusting, one patient got synechiae formation and three complained of dryness in nose post operatively after 1 week. Reduction in severity of complications was seen in both the groups after 4 weeks of postoperative follow up (Table 2 and 3).

Table 2: Complications seen in septoplasty patients postoperatively after 1 and 4 weeks follow up.

Complications	After 1 week	After 4 weeks
Retained deviation	4	4
Septal perforation	3	2
Septal hematoma	1	0
Septal abcess	0	0

Table 3: Complications seen in septoplasty with turbinectomy patients postoperatively after 1 and 4 weeks follow up.

Complications	After 1 week	After 4 weeks
Severe bleeding	2	0
Crusting	2	1
Synechiae formation	1	1
Dryness in the nose	3	3

DISCUSSION

In the present study, postoperative relief was compared in the patients of both groups and noticed more relief of symptoms in group of patients operated with septoplasty and turbinectomy. There was significant relief at the evaluation period of 4 weeks in the study and it is expected to further improve with time when the post-operative edema and inflammation improves. This was in corroboration with the findings of Stewart et al.[5]

Both the procedures show complications postoperatively. In our study, retained deviation was the common complication observed in patients who underwent septoplasty alone even after 4 weeks of surgery. On contrary to this observation, in a study done by Sathyaki et al, no septal deviation was observed after septoplasty in all the 25 patients.[1]

Septal perforation was the second complication in our study observed in patients operated with septoplasty alone. This was in agreement with the study of Dąbrowska-Bień et al.[6] The rate of septal perforation after septoplasty ranges from 1.6 to 6.7%.[7,8] Many rationales were related with incidence of septal perforations after septoplasty. Most commonly, perforations result from traumatic elevation of the mucosal flaps with opposing tears in the flap on both sides. Another reason for septal perforation involves the location of sutures to maintain septal splint placement or quilting sutures. The other reason could be caused by healing complications due to infection, typically *Staphylococcus aureus*.[6]

The rate of incidence of local infection and abscess in septoplasty ranges from 0.4 to 12%.[8] In our study, none of the patients with septoplasty reported septal abscess.

Dryness of nose is the common complication encounterd with septoplasty along with turbinectomy. We observed

dryness of nose in 3 patients for up to 4 weeks after the surgery. This was in accordance with the findings of Dąbrowska-Bień et al.[6] Excessive bleeding was the other complication observed in patients operated with septoplasty along with turbinectomy. This was similar to other studies done by Ketcham et al and Bloom et al.[8,9] We observed crusting in 2 patients after septoplasty with turbinectomy. After 4 week follow up, the presence was seen only in 1 patient.

CONCLUSION

In conclusion, the observations of the study confirm that the operative procedure septoplasty combined with turbinectomy has showed more efficacy and significant postoperative relief in patients with deviated nasal septum. In terms of complications, after 4 weeks of postoperative follow up, the reduction rate of prevalence of complications was higher in group of patients managed with septoplasty with turbinectomy compared to septoplasty alone.

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