

Surgical Outcome of Septoplasty: Experience at a tertiary care hospital

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ABSTRACT

Objective: To determine surgical outcome of septoplasty at a tertiary care hospital.

Material and methods: This descriptive study was conducted at the departments of ENT, Head, Neck Surgery Postgraduate Medical Institute (PGMI) Lady Reading Hospital Peshawar from March 2008 to Feb. 2009, with a total duration of one year. The patients of both sex and with age 10 to 30 years were included in the study while those who had previous intervention or refused surgery were excluded. After thorough evaluation of the patient informed consent was taken and septoplasty was performed in all cases and the data was analyzed using SPSS version 11.

Results: This study included 85 cases constituting 56 male and 29 female, with male: female ratio of 1.9:1. The age of the patients ranged from 10-50 years with mean age of $31.74 \pm S.D 11.74$ years. The clinical features of these patients were mainly nasal obstruction. Septoplasty was performed in all cases. Among these patients 74 cases (87.05%) were fully satisfied from surgery. All the patients were followed up to 6months on monthly basis and no significant complication was found.

Conclusion: It is concluded from this study that septoplasty is the best surgical procedure for relief of nasal obstruction, if it is not cured with medication.

Key words: Septoplasty, Deviated nasal septum, Nasal obstruction.

INTRODUCTION

The septum is the vertical wall between two nostrils that extends back into the nasal cavity. As much as 75% to 80% of the general population is estimated to exhibit some type of anatomical deformity of the nose, most commonly a deviated nasal septum¹. This deviation results in a smaller nasal passage on one side or the other, or even on both leading into nasal obstruction. Sometime extra mucosal tissue, cartilage and even bone may result in blocking of nose.² The terms deviated nose, crooked nose, and scoliotic nose encompass a multiplicity of deformities that require specific maneuvers to be corrected precisely because the change in airflow can contribute to mucosal drying leading to epistaxis and sinusitis. Frequently these complications respond to medical treatment such as antibiotic and steroid therapy. When medical management is not successful, a septoplasty is considered^{1,2}. This surgical procedure, usually performed under local or general anesthesia, corrects nasal septum defects. Appropriate treatment is of great importance to patients with nasal obstruction.³ A septoplasty can straighten a deviated, twisted, bent, or crooked septum to improve breathing, reduce the incidence of nasal and sinus infections, and increase comfort.⁴ Surgical management of the deviated nose is a challenging

problem even for experienced rhinologic surgeons. The proper management of this condition requires a thorough preoperative or intraoperative analysis of the shapes and relationships of the anatomical components of the nasal skeleton, and the surgical maneuvers should be executed in a precise manner.⁵ The primary goal of therapy is to maximize the nasal airway for as extended a period as possible while minimizing complications of therapy, such as nasal drying, hemorrhage, and atrophic rhinitis.⁶

MATERIAL AND METHOD

This descriptive study was conducted at the departments of ENT, Head, Neck Surgery Postgraduate Medical Institute (PGMI) Lady Reading Hospital Peshawar from March 2008 to Feb. 2009, with a total duration of one year. The patients of both sex and with age 10 to 50 years were included in the study. Those patients having less than 10 years or more than 50 years age, had previous septal surgery and having external nasal deformity were excluded and the study was approved by ethical committee of the institute. All these patients were admitted in ENT department and were evaluated in terms of detailed history, thorough examination and radiological investigations. A well informed consent was taken from patient explaining the procedure, its risks, benefits and associated complications.

In the ENT operation theatre initially anterior nasal packing was done with roll gauze impregnated

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with 50ml solution of 4% xylocaine and 10 inj. adrenalines for topical anesthesia. Then after anesthetizing the patients using endotracheal intubation Inj xylocaine 2% with adrenaline was injected on four quadrants of the nasal septum for vasoconstriction. Then incision was given on caudal border of the septum. Skin flap was elevated and septum was made straight with resection of deviated part and preserving the non deviated part of the septum. The nose was splinted after securing haemostasis. Anterior nasal packing with polyfax ointment was done for 24 hours. The patients were put on prophylactic oral amoxicillin, antihistamine and analgesics after calculating the appropriate dose according the weight and age of the patients. The patients were discharged on 3rd post op day. The splint was removed on 10th post op day and all patients were followed on monthly basis for 6 months. The data of all the patients was analyzed on SPSS 11. The frequencies and %age were presented for qualitative variables and Mean±SD was presented for quantitative variables.

RESULTS

Our study included 85 cases constituting 56 male and 29 female, with male: female ratio of 1.9:1(Fig. 1). The age of the patients ranged from 12-51 years with mean age of 31.74 ± S.D 11.74 years. The clinical features of these patients were mainly nasal obstruction, headache and septal deviation (Table 1). Most of the patients were given trial of medication for relieving nasal obstruction. Septoplasty was performed in all cases. In some of the patients partial inferior turbinectomy was done in addition to septoplasty (Table 2). Among these patients 74(87.05%) were fully satisfied from surgery while only 3(3.52%) were not satisfied, due to persistence of nasal obstruction (Table 3). All the patients were followed up to 6months on monthly basis. In 3(3.52%) adhesion between inferior turbinate and septum was found and no other significant complication was found.

Fig.1: Sex-wise distribution of patients (n=85).

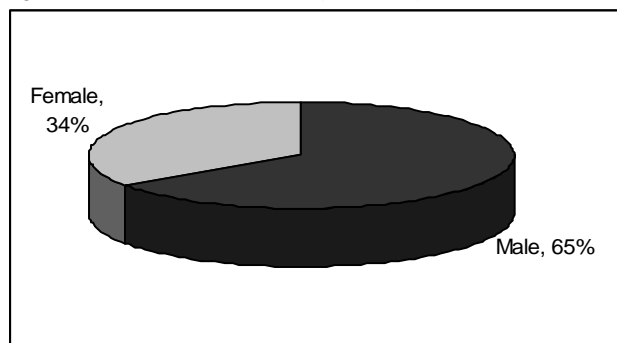


Table 1. Clinical features of the Patients (n=85).

Symptoms	=n	%age
Unilateral nasal obstruction	49	57.64
Bilateral nasal obstruction	36	42.35
Frontal Headache	16	18.82
Facial Discomfort	11	12.94
Signs		
Left deviated nasal septum	52	61.17
Right deviated nasal septum	33	38.82

Table 2. Surgical procedures adopted in this study (n=85).

Procedure	=n	%age
Resection of deviated septum	76	89.41
Resection and scoring of septum	21	24.70
Partial inferior turbinectomy	15	17.64
Scoring of septum	09	10.58

Table 3. Patients satisfaction after septoplasty (n=85).

Satisfaction	=n	%age
Fully satisfied	74	87.05
Partially satisfied	8	9.41
Not satisfied	3	3.52

DISCUSSION

Correction of deviated nasal septum has been performed by a variety of techniques since the middle of the 19th century. Among them, the submucous resection (SMR) technique and septoplasty are the present mainstays, although they have been common for more than 90 years⁷. Septoplasty is a commonly performed surgical procedure aimed at relieving nasal airway obstruction⁸. In our study the mean age of the patients was 31.74 years which is comparable to the reported means of literature i.e. 22.44 years to 40 years⁹. In our study nasal obstruction was the main complaint (n=85, 99%) which is comparable to result of Nawaish S, who reported nasal obstruction in 55((91.6%) patients¹⁰. In our study septoplasty was performed mainly by resection of deviated nasal septum, in 17.64% cases partial inferior turbinectomy and in 10.58% cases scoring of the septum was also done which is also reported in national and international studies.¹¹ We found subjective satisfaction in our study 87.05% which is better from the report of Jang YJ who obtained satisfaction in 68% patients while no satisfaction of patients from septoplasty in our study was 3.52% which 17% in Jang study¹². In our study each case of septoplasty was carried out in 30-50minutes while in most of the literature the average time of septoplasty is 45 minutes¹³. Like some of the studies the outcome of septoplasty was assessed by outcome instrument (nasal obstruction symptom evaluation scale) before and 3 and 6 months after septoplasty¹⁴. In 3 cases (3.52%) adhesion between inferior turbinate and septum was observed and similar report is also found

in literature¹⁵. During healing from septoplasty surgery, one must limit physical activity to avoid putting strain on incision. Do not lift over five pounds for the first five days. Limit bending and climbing stairs for two days. Avoid strenuous activity or exercise for two weeks¹⁰. These precautions were strictly followed in our study.

CONCLUSION

It is concluded from this study that septoplasty is the best surgical procedure for relief of nasal obstruction, if it is not cured with medication.

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