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Evaluation Of Cases Of Nasal Septal Deviations

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ABSTRACT
Background: To assess cases of nasal septal deviations.
Material and Methods: 74 patients of deviated nasal septum of both genders were subjected to a detailed NOSE questionnaire consisted of 0 being the lowest and 4 being the highest. Deviations anterior to the Cottle's line were treated with a Septoplasty.
Results: Out of 74 patients, males were 44 and females were 30. Septal deviation was causal in 32, mid-septum in 24 and posterior septum in 18 patients. The difference was significant ($P< 0.05$). The mean pre- operatively NOSE value was 56.4 and post- operatively was 28.2. The difference was significant ($P< 0.05$).
Conclusion: Deviated nasal septum is common among population. Septoplasty resulted in significant improvement in NOSE score.
Keywords: Nasal Septal Deviations, Septoplasty, Endoscopic Sinus Surgery.

INTRODUCTION

Nasal septal deviations are anatomically often described as C- or S-shaped deviations in the vertical or horizontal plane.[1] Research has shown that the shape and size of septal deviation not always interconnects with the symptoms and the need for surgery – thus the clinical significance of the septal deviation. The nasal septum is an important physiological structure of the nose.[2] It is formed by the quadrangular cartilage anteriorly, the vomer and perpendicular plate of the ethmoid bone posteriorly. Deviated nasal septum (DNS) is a common anatomic variation in healthy adults, affecting 80 % of people, most unknowingly.[3]

Nasal septal deviations are very commonly found in a regular nasal examination. Not all the deviations are symptomatic and thus the need of a surgical correction isn't always a must. If the patient has a gross deviation of the nasal septum causing nasal obstruction, it is very convenient to perform a septal correction surgery.[4] However, it is difficult to say for sure that the symptoms will improve after surgery in patients especially with isolated mucosal contact point between inferior turbinate and septum and without nasal obstruction.[5]

Septoplasty is a well-accepted treatment for nasal airway obstruction as well as for rhinologic headache due to irritation of the septum caused by contact with the lateral nasal wall.

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Traditional septoplasty involves elevation of a large mucoperichondrial flap to excise the deviated bone and cartilage.[6] Newer endoscopic techniques have been described, especially in conjunction with functional endoscopic sinus surgery. These techniques commonly use traditional septoplasty or endoscopic sinus instruments to accomplish the dissection and removal of cartilage.[7,8] The present study was conducted to assess cases of deviated nasal septum.

MATERIAL & METHODS

The present study consisted of 74 patients of deviated nasal septum of both genders. All patients were enrolled with their written consent. Ethical clearance from institutional ethics committee was taken.

Demographic profile such as name. age, gender etc. was recorded. All patients were subjected to a detailed NOSE questionnaire consisted of 0 being the lowest and 4 being the highest. The surgeries were performed under general anaesthesia with LA 1% lidocaine in 1:200000 epinephrine. Deviations anterior to the Cottle's line were treated with a Septoplasty. Results were assessed statistically using chi- square test. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 74		
Gender	**Males**	**Females**
Number	44	30

Table I shows that out of 74 patients, males were 44 and females were 30.

Table II Assessment of grading of septal deviation

Grading	Number	P value
Caudal	32	0.05
Mid-septum	24	
Posterior septum	18	

Table II shows that septal deviation was causal in 32, mid-septum in 24 and posterior septum in 18 patients. The difference was significant (P< 0.05).

Table III Evaluation of NOSE value

NOSE value	Mean	P value
Pre- operatively	56.4	0.01
Post- operatively	28.2	

Table III, graph I shows that mean pre- operatively NOSE value was 56.4 and post-operatively was 28.2. The difference was significant (P< 0.05).

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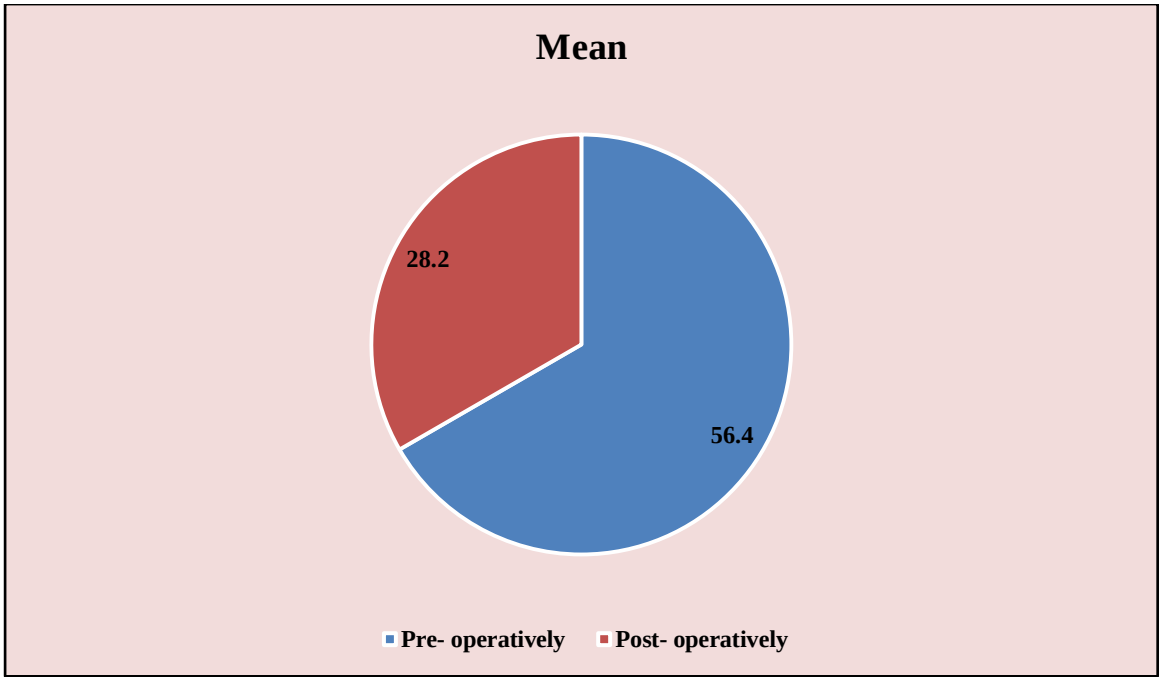

Graph I Evaluation of NOSE value

DISCUSSION

Nasal septal deviations play a critical role in nasal obstruction symptoms, aesthetic appearance of the nose, increased nasal resistance, and sometimes snoring.[9] Consequently, a comprehensive assessment of the nasal septum serves an essential role in preoperative planning, re-establishing function, and overall cosmetic appeal.[10,11] Typically, a septoplasty suffices in addressing significant nasal septal deviations, but on occasion such deviations warrant a single-stage septorhinoplasty.[12] The NOSE scale is a validated, globally accepted instrument to quantify the burden related to nasal obstruction and change herein following nasal surgery.[13] Cross cultural adaptation of the NOSE scale makes it a valuable instrument allowing the comparison of outcome results between institutions and to organize multi-center studies. The NOSE score has become a valuable outcome measure of nasal obstruction treatment.[14] It is a brief, simple and easily administered quality of life instrument specific to nasal obstruction. No normative data or classification system are reported using the NOSE survey. This information would be helpful in many ways.[15,16] The present study was conducted to assess cases of deviated nasal septum.

Our results showed that out of 74 patients, males were 44 and females were 30. Stockmann et al[17] assessed the interrater agreement in the evaluation of nasal septal deviations in patients with chronic rhinosinusitis (CRS). A total of 30 patients were included. Three rhinologists using nasal endoscopy evaluated the presence and degree of septal deviation. A rhinologist and a radiologist also evaluated the presence and degree of septal deviation on sinus CT scans. Interrater agreement was measured using unweighted Fleiss' kappa (Kf). In the endoscopic evaluation of septal deviation, the raters attained a Kf of 0.31, 0.33 and 0.37 for the assessment of anterior deviations, inferior/posterior deviations and deviations by the perpendicular plate, respectively. In the radiologic evaluation of septal deviation, the raters attained a Kf of 0.52, 0.63 and 0.38 for the assessment of anterior deviations, inferior/posterior deviations and deviations by the perpendicular plate, respectively.

We observed that septal deviation was causal in 32, mid-septum in 24 and posterior septum in 18 patients. Eren et al[18] in their study eighty-six patients with septal deviation were recruited

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and divided according to six deviation types as defined previously. Patients were followed up for a mean duration of 6.3 ± 0.9 months. All groups showed significant improvement in VAS scores postoperatively. All groups showed a significant decrease in NOSE scale scores postoperatively. PNIF values of all groups increased postoperatively. AR values of narrow cavities in all groups increased postoperatively, but this increase was observed only for wider cavities in groups 2, 4, and 6. RMM values were higher in the narrow cavities in types 2, 4, and 6 postoperatively, whereas only types 4 and 6 had higher values in the wider cavities. Our results showed that mean pre- operatively NOSE value was 56.4 and post- operatively was 28.2.

Our results showed that mean pre- operatively NOSE value was 56.4 and post- operatively was 28.2. Qannass et al[19] assessed the prevalence of nasal septum deviation and to detect which types of DNS are more prevalent. The study included 408 attendants whose age ranged from less than 1 year up to 100 years with mean age of 32.1 ± 20.6 years old. Exact 154 (37.7%) attendants had DNS. It was diagnosed on the right side among 95 (61.7%) participants and on the left side among 59 (38.3%) participants. Regarding the shape of DNS, 78 (50.6%) participants had anterior DNS, followed by C-shape (29.9%; 46), S-shape (8.4%; 13), spiral (8.4%; 13), and thickened (2.6%; 4).

Muthubabu et al[20] assessed the quality of life after Septal Correction. Fifty patients with complaints of nasal obstruction, trouble breathing via the nose, headache and facial pain were selected for the study. Initial pre-operative assessment was done based on a symptomatic score [Nasal Obstruction Symptom Evaluation Scale (NOSE Scale)]. The presence of a septal deviation was confirmed with an X-ray and computed tomography of the paranasal sinuses along with a diagnostic nasal endoscopy. Based on the extent and location of deviation, the malformed part was corrected. Post-operative assessment was done after a period of 8 weeks based on the NOSE Scale. The results were co-related and documented. It was found that the scores were better post-surgery. They concluded that septal correction as a surgical procedure is still relevant in today's World for symptomatic betterment and for a healthier lifestyle.

CONCLUSION

Authors found that deviated nasal septum is common among population. Septoplasty resulted in significant improvement in NOSE score.

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