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ENDOSCOPIC SEPTOPLASTY: RETROSPECTIVE ANALYSIS OF OUTCOMES

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ABSTRACT

Endoscopic septoplasty is a new armamentarium in dealing with deviated nasal septums and spurs which were operated by conventional headlight source. the objective of present study done at BPS GMC, KHANPUR, Sonepat was to retrospectively analyze the outcomes in patients operated by this technique. the outcomes were assessed in terms of patient symptoms .It was concluded that patients operated by endoscopic septoplasty have great improvement in their symptoms and that endoscope allows the surgeon to be more conservative and preserve septal flap tear than conventional technique which uses headlight.

KEYWORDS: Endoscopic septoplasty, Retrospective analysis.

INTRODUCTION

Endoscopic septoplasty is minimally invasive method that helps to correct deformed septum under brilliant visualization. Lanza and Stammberger in 1991 were first to describe the procedure of endoscopic septoplasty.[1,2] Endoscopic septoplasty is an eye-catching option, to traditional septoplasty done using headlight, whose primary benefit is the reduced morbidity and postoperative swelling in isolated septal deviations by restraining the dissection to the region of the deviation. A directed approach using endoscopic septoplasty results in limited dissection and faster postoperative healing.[3] Endoscopic septoplasty is a minimally invasive method therefore particularly valuable for the patient having had prior nasal septal surgery because it limits the dissection and minimize trauma to the nasal septal flap under excellent visualization.[4]

MATERIALS AND METHODS

In present study, 20 patients were studied who had undergone endoscopic septoplasty at BPS GMC Khanpur, Sonepat, Haryana between September 2016 to February 2017. Included patients had septal deviation and symptomatic nasal obstruction for at least 3 months for which medical management had failed. Preoperatively, all patients were evaluated by nasal endoscopy and CT scan.

Under endoscopic visualization with a 0 degree endoscope, topical nasal packing with oxymetazoline was applied for decongestion; 1% lidocaine with 1: 200, 000 epinephrine was injected subperichondrially along the septum. A vertical incision was made caudal to the deviation and for a broadly deviated septum, a standard Killian or hemi-transfixion incision was used. For more posterior isolated deformities, the incision was placed posteriorly in the immediate vicinity of the deformity. Mucoperichondrial flap elevation was performed with a Cottle elevator under direct endoscopic visualization with a 0-degree endoscope. The flap elevated was limited as it was raised from over the most deviated portion of the nasal septum, without disturbing the anterior normal septum. Septal cartilage was incised parallel but posterior to the flap incision and caudal to the deviation. If the deviation was found to be mainly bony, the incision was made at the bony-cartilaginous junction. The contra-lateral mucoperichondrial flap elevation was then performed. Flap elevation was continued bilaterally until the complete extent of the septal deformity had been dissected. Luc's forceps was used to excise the deviated portion.

RESULTS

In present study, age range of patients included was 17-40 years and mean age was 23 +/-3.4 years (table 1). Out of 20 patients, 13 (65%) were males and 7(35%) were females (table 1). 13patients (65%) had grossly deviated septum, 5(25%) had deviated septum with spur and 2(10%) patients had deformed septum with spur (table 2). Analysis of pre and post operative symptoms of patients was done results are tabulated (table 3). in our study it was found that the symptoms caused by nasal septum deviation viz nose block and anterior nasal discharge were improved in significant number of patients.

Table 1: Personal characteristics.

Personal characteristics	Findings
Gender	
Male	13(65%)
Female	7(35%)
Age	
Range	17-40yrs
Mean + SD	23+/-3.4ys

Table 2: Nasal septal deformities–preoperative findings.

Nasal septal deformities	Findings
Septum deviation	13(65%)
Spurs	5(25%)
Septum deviation+ spurs	2(10%)

Table 3: Patients symptoms before and after endoscopic septoplasty.

Symptoms	Preoperatively	Postoperatively	P value
Nasal obstruction	11	3	<0.005
Headache	4	1	<0.005
Anterior discharge	8	2	<0.05
Posterior discharge	6	3	<0.05

DISCUSSION

This study revealed that all the 20 patients studied had nasal septal deformities i.e. septum deviation, septum deformity with spur or combined. In the postoperative period, there were considerable improvements in all patients complaints which explains the rationality of endoscopic septaplasty as the preferred surgical technique among patients.

Brennan et al. noted that to attain good results in septal surgery, there should be excellent exposure; safe elevation of flaps; and resection of the deviated part of the septum only. These could be achieved only by endoscopic septoplasty which has the advantage of a beleaguered approach to the specific septal problem, without necessitating need for divulging excessive bone and cartilage.[5]

Lanza et al. added that the rationale for developing an endoscopic technique from a traditional "headlight" approach came from the fact that during common nasal procedures, the surgeon's view is obstructed due to the narrowing caused by septal spurs or septal deviations. So, endoscopy usually enables the ENT surgeon to localize deviations.[3]

Jain et al. stated that early reports of endoscopic septoplasty described several advantages associated with the technique, e.g., it makes easier for surgeons to see the tissue planes and it offers a better way to treat isolated septal spurs. Additionally, the endoscopic approach makes it possible for others to simultaneously observe the procedure on a monitor, making the approach useful in a teaching hospital.[6]

Paradis and Rotenberg stated that the endoscopic approach for septoplasty is superior to the traditional approach for the correction of septal deviation.[7] Moreover, Sautter and Smith concluded that nasal endoscopy is an excellent tool for outpatient surveillance following septoplasty during the initial postoperative healing period.[8]

We established that endoscopic septoplasty is better to traditional septoplasty due to following.

- Effective in management of nasal obstruction.
- Prevents contact between septum and lateral nasal wall.
- Provides precise identification of the septal anatomy.
- Enhanced visualization and accessibility to the posterior deviations.
- Efficient teaching tool.
- Direct endoscopic vision of incision and elevation of the flap over the deviated part.
- Less time consuming and less morbidity.

CONCLUSION

Initial diagnostic endoscopy is essential to correctly assess the septal deviation. The mucosal incision must be adequately anterior to permit wide access to the deformity. The cartilage incision must conserve Killian's L-strut. Resection of an anterior strip of cartilage allows good visualization of the operative area. Complementary resection of bone and cartilage and the maxillary crest can be done depending on the characteristics of the deviation.

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