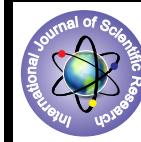


ENDOSCOPIC SEPTOPLASTY : STUDY OF 25 CASES



Medical Science

KEYWORDS : Endoscopic Septoplasty, deviation, septal cartilage, complications, nasal obstruction.

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ABSTRACT

Aim of our study was to study the outcome of endoscopic septoplasty. 25 patients of deviated nasal septum were selected by simple random sampling methods, who were admitted in the department of Otorhinolaryngology of Sheth VS General Hospital from May 2010 to June 2013. The incidence of complications were very less in patients operated by endoscopic technique. To conclude our study showed good results and very few complications in endoscopic technique.

Introduction :

Correction of deviated nasal septum has been performed by variety of techniques since the middle of 19th century.^{1,2} Among them, the submucous resection (SMR) technique and septoplasty are mainstay. Septoplasty is commonly performed procedure aimed at relieving nasal airway obstruction, often in conjunction with other nasal and sinus procedures. In traditional septal surgeries there is inadequate illumination, lack of magnification and poor access which requires bigger incision. This creates unnecessary exposure and tissue manipulation.

Endoscopic septoplasty is a minimally invasive technique that helps us to correct septal deviations under direct vision. Endoscopic septoplasty is also done along with endoscopic sinus surgeries, endoscopic dacrocystorhinostomy and is best for revision septal surgeries. Lanza et al and Stemberger initially described the usefulness of endoscopic technique for septoplasty in 1991.⁶

Methods:

The study was prospective type. In this study a combined approach, comprising both quantitative and qualitative approaches were used to collect, analyze and interpret data. Informed consent was obtained from patients and relatives prior to study. 25 patients of deviated nasal septum were selected by simple random sampling method, who were admitted in the department of otorhinolaryngology of Sheth V S General Hospital, Ahmedabad, Gujarat from May 2010 to June 2013.

Inclusion Criteria : Patients with nasal obstruction, history of nasal discharge, hyposmia, post nasal drip, facial pain and headache were included in the present study.

Exclusion criteria : patients with allergic rhinitis, polyposis and acute upper respiratory tract infection were excluded.

A self prepared Performa was used to collect the patient's information which included patient's name, age, sex, occupation, present history, past history, complete examination of nose, anterior rhinoscopy, nasal endoscopy and radiological examination.

Technique of endoscopic septoplasty

Patient was taken under local anaesthesia with preanaesthetic medication. Local infiltration (1% xylocaine with 1:100000 adrenaline) was given on the both side on the most deviated part of the septum using 0 degree 4mm endoscope with video monitoring. A vertical incision was made just caudal to deviation. In gross deviation conventional hemitransfixation (Killian's) incision was placed and in bony deviation incision

was placed at junction of cartilage and bone. A submucoperichondrial flap was raised using elevator and rigid scope under direct vision. The flap elevated was limited as it was raised over the most deviated portion of the nasal septum. Septal cartilage was incised parallel but posterior to flap incision (not on same incision line as of submucoperiosteal flap) till good exposure was obtained. The small luc's was used to remove the deviated portion till satisfactory correction is achieved. The flap were repositioned back after clearance and edges of the incision were just made to lie closely without the need to suture. The nasal cavity was packed with ribbon gauze for 24 hours.

Post operative care :

Patients were given oral antibiotics, analgesics and antihistaminics. Patients were discharged after removal of nasal packing. Topical nasal decongestants were advised for 2 weeks. All patients were followed as outpatient after 1 week, 3 week, 8 week and 12 weeks after surgery and were assessed for subjective improvement, nasal obstruction and headache. Objective assessment was done by nasal endoscopic examination for adequateness of space in nasal cavity, post nasal drip and other criterias.

Observations :

Our patients comprised of 19 males and 6 females of age group 18-65 years. The most common complaint of patients were nasal obstruction, headache, nasal discharge and sore throat.

Table 1 : Deviated portion diagnosed

Deviation	Incidence
Only cartilaginous	15
Both cartilaginous and bony	9
Only spur	1

Table 2 : Post operative complications in 24 hours

Complication	Incidence
Hemorrhage	2
Nasal pain	13
Watering eye	10
Longer hospital stay >48hrs	2
Hematoma	0
headache	5

Discussion :

Most common complaints of patients with septal deflections were nasal obstruction, nasal discharge, headache and post nasal drip. The order of complaints of nasal obstruction and nasal discharge were same to the study of Gupta and Motwani (2005) but the headache was second major complaint in their study.^{3,4}

In Sindwani and Wright's study (2003) 54% patients having complaints of nasal obstruction and facial pain were cured and 38% showed improvement and 8% was not cured. In the present study more number of patients was relieved from the symptoms by endoscopic septoplasty. This is in concordance with the observations of Harley et al. & Gulati et al. (2009).² Park et al. (1998) observed that there was less formation of synchiae in patients of endoscopic septoplasty group as compared to conventional group. As described above regular follow up nasal endoscopy was performed. We did not notice any synchia formation or septal perforation in any of the patient and also the presenting complaints of facial pain and headache subsided. Complication rate in endoscopic septoplasty group was very less and that too limited to immediate post operative period in the present study while complication rate was found to be 2.08% and 5% by Gupta et al. (2005) and Hwang et al. (1999) respectively.^{4,5} Endoscopic septoplasty is becoming more popular than traditional headlight septoplasty due to good exposure, safe elevation of flaps, resection of limited part of septum and elimination of etiologic dynamic forces.

Conclusion :

The endoscopic approach to septoplasty reduces operative time and improves surgical outcome. Thus endoscopic septoplasty is associated with significant decrease in patients' morbidity in both operative and post operative period. Lastly, endoscopic septoplasty can also be considered an effective teaching tool in the training of assisting surgeons and medical students.

However, the endoscope has its own limitations which include need for frequent cleaning of the tip of endoscope especially when there is more bleeding and lastly by endoscopic approach to septoplasty, complex deformities with caudal deflection are difficult to treat.

REFERENCE

- 1.Gaskin RE : A surgical staging system for chronic sinusitis. *American journal of rhinology*, 1992;6(1) 5-12 | 2.Gulati S P, Wdhera R, Ahuja N, Garg A, Ghai A : comparative evaluation of endoscopic with conventional septoplasty. *Indian journal of otolaryngology and head and neck surgery*, 2009; 61(1) 27-29 | 3.Gupta M, Motwani G : comparative study of endoscopic aided septoplasty and traditional septoplasty in posterior nasal septal deviation. *Indian journal of otolaryngology and head and neck surgery*, 2005; 57(4) 309-311 | 4.Gupta N. endoscopic septoplasty. *Indian journal of otolaryngology and head and neck surgery*, 2005;57(3) 240-243 | 5.Hwang PH, McLaughlin RB, Lanza DC, Kennedy DW: Endoscopic septoplasty : indications, techniques and results. *Otolaryngology head and neck surgery*, 1999;120(5) 678-682 | 6.Lanza DC, Kennedy DW, Zinreich SJ : Nasal endoscopic and its surgical applications. In : Lee KJ. *Essential otolaryngology:head and neck surgery*. 5th edn. Appleton & Lange, 1991;pp. 373-387