



STUDY OF COMPARISON OF ENDOSCOPIC VERSUS CONVENTIONAL SEPTOPLASTY IN THE KOLHAN BELT POPULATION OF JHARKHAND

ENT

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ABSTRACT

BACKGROUND: DNS is common problem in all age group of both sexes as DNS is an idiopathic problem and challenge to otolaryngologist hence both methods have been used to compare the pros and cons of both techniques and evaluate the least post-surgical complications. **METHODS:** Out of 50 patients 25 treated with conventional septoplasty and 25 Endoscopic septoplasty problems associated with various nasal DNS. **RESULTS:** Right DNS left DNS, Spur, hypertrophied IT; polypoid MT, concha bullosa nasal discharge were operated by both methods and post-surgical complications were Bleeding 0% in Endoscopic septoplasty (ES) and 1 (4%) in conventional septoplasty (CS), synechiae 1 (4%) in ES, 2 (8%) in CS, DNS, 2 (8%) in ES and 4 (16%) in CS Epistaxis was observed in both ES and CS 1 (4%) but crusting was observed only in CS 2 (8%). **CONCLUSION:** Majority of post-operative complication were observed in conventional septoplasty as comparative Endoplastic septoplasty because ES is more illuminative, least incision, precise cutting is an ideal for Nasal disease in all age groups of both sexes.

KEYWORDS

ES = Endoplastic Suptoplasty, CS = Conventional Septoplasty, DNS, Spur, Hypertrophied IT, Jharkhand

INTRODUCTION

Nasal obstruction is the most common complaint in rhinologic practice and a deviated nasal septum is the most common cause of nasal obstruction. The evaluation of septal deviation causing nasal obstruction depends mainly on physical examination and radiological examination⁽¹⁾. Apart from nasal obstruction, a significantly deviated nasal septum has been implicated in epistaxis, sinusitis, obstructive sleep, apnoea and headaches are associated symptoms or contact points with structures of the lateral wall of the nose⁽²⁾.

Although numerous medical descriptions are available regarding pathology and the treatment of the deviated procedures has its limitations and deal with all the variants of the deformities of the nasal septum⁽³⁾. An ideal surgical correction of the nasal septum should satisfy the following criteria, (a) Should relieve the nasal obstruction (b) should be conservative (c) should not produce iatrogenic deformity (d) should not compromise the osteo-meatal complex (e) must have the scope for revision surgery, if require later⁽⁴⁾.

The Traditional surgeries of the nasal septum improve the nasal airways but do not fulfil the above mentioned criteria in most instances, because it has multiple reasons such as poor visualization, relative inaccessibility, poor illumination⁽⁵⁾, difficulty in evaluation of exact pathology, need for nasal packing, unnecessary manipulation, resection and over exposure of septal frame work reducing the scope for revision surgery if required later.

Hence both methods have been used to compare the advantages and disadvantages and evaluate the least post-surgical complications.

MATERIAL AND METHOD

50 (patients) visiting to ENT department of MGM Medical College hospital Jamshedpur-831020 Jharkhand were studied.

Inclusion Criteria: Adult patients aged between 18 to 50 years having symptoms of Deviated Nasal Obstruction chronic rhino sinusitis, complications like Epistaxis, headache, snoring, were selected for study.

Exclusion Criteria: Children below 8 years above 80 years, External deviated with deviated Nasal septum patients with acute rhinitis or allergic rhinitis, vasomotor rhinitis. The patient's previously undergone surgery of DNS patients suffering with immune compromised disease were excluded from the study.

Method: All the patients were informed about the techniques and written consent was collected from the every patient before surgery pre medications were given to the patients, 25 patients for conventional

septoplasty and 25 patients for endoscopic septoplasty with the consent of the patient's techniques for conventional septoplasty.

After infiltration with 2% xylocaine with adrenaline in columella and septum under headlight incision (hemitransfixation incision) was made at caudal border. The mucoperichondrial and periosteal flaps were elevated up to perpendicular plate of ethmoid was removed with LCS forceps. An inferior cartilaginous strip of 0.5 cm was removed if necessary. The incision was closed using chronic catgut (3-0) and nasal packing was done Technique for Endoscopic septoplasty.

The procedure was performed under local or general anaesthesia. The septum was injected 2% xylocaine in 1:20,000 epinephrine on the convex side of the most deviated part of the septum using rigid 4 mm endoscope. Hemitrans fixation incision was made. Incision was needed to expose the most deviated part. A sub-muco perichondrial flap was raised using a suction elevator under direct visualisation with endoscope underlying bone was removed. The flap was repositioned back after suction clearance and edges of incision were just made to lie closely without the need of the suture. The nasal cavity was packed with Vaseline nasal packs.

Intra-operatively following parameters were noted. (a) Duration of Surgery (b) Blood loss during surgery (c) Associated turbinate procedure.

Nasal package was done for all cases in both groups (techniques) with Vaseline Nasal packs and IV antibiotics started.

The patients of both groups were discharged with one week of antibiotics and analysis. Decongestant nasal drops till next visit (follow up), post operatively 2nd, 4th and 8th weeks follow up were, done and following points were noted on diagnostic nasal Endoscopy (a) persistence of anterior / posterior deviation or spur (b) Formation of synechiae or spur (b) Formation of synechiae (c) persistence of pathology Turbinate's (d) presence of discharge in middle meatus (e) Cold spatula test (f) Any change in the external appearance.

Duration of study was April-2018 to June-2020 (2 years)

Statistical analysis: The clinical manifestations, post-operative complications in both groups were classified with percentage. The statistical analysis was carried out in SPSS software. The ratio of Male and female were 2:1.

OBSERVATION AND RESULTS

Table-1: The clinical Manifestations of both groups – Right DNS – 6 (24%) operated with conventional septoplasty (CS) while 5(20%)

with Endoplastic Septoplasty (ES).

- Left DNS – 4 (10%) with CS, 5 (20%) with ES.
- Spur – 6 (24%) with CS, 4 (16%) with ES.
- Hypertrophied IT – 7 (28%) with ES and 8 (32%) with ES
- Polypoid MT – 1 (4%)
- Concha Bullosa – 1 (4%)
- Discharge – 2 (8%) in CS and 1 (4%) in ES.

Table-2: Post – Operative complications in both techniques (groups)

Bleeding 0% in ES and 1 (4%) in CS
 Synechiae 1(4%) in ES, 2 (8%) in CS,
 DNS 2 (8%) in ES, 4 (16%) in CS
 Epistaxis 1 (4%) in both ES and CS
 Crusting 0% in ES and 2 (8%) in CS

DISCUSSION

In the present comparative study of Endoscopic versus conventional septoplasty in Jharkhand population. The clinical manifestations were Right DNS operated in 6 (24%) by CS, 5 (20%) by ES, left DNS operated by ES 4 (16%) by CS and 5 (20%) in ES, spur operated 6 (24%) by CS and 4 (16%) by ES Hypertrophied IT operated 7 (28%) by CS and 8 (32%) by ES, polypoid MT operated in 1 (4%) by ES concha in 1 (4%) operated by (4%) by ES Discharge of nasal cavity 2 (8%) by CS 1 (4%) by ES (Table-1). Post-surgical complications were Bleeding – 0% in ES and 1 (4%) in CS, Synechiae – 2 (8%) in ES 4 (16%) in CS DNS – 2 (8%) in ES 4 (16%) in CS Epistaxis – 1 (4%) in ES 1 (4%) in CS Crusting – (0%) in ES 2 (8%) in CS (Table-2) These findings are more or less in agreement with previous studies⁽⁶⁾⁽⁷⁾⁽⁸⁾.

In the present minimum post-surgical complications were observed in Endoplastic septoplasty (ES). It helps dealing in with posterior deviations, high deviations and isolated spurs. It gives better illumination and precise vision of the anatomy of the nasal cavity and thus helps in proper planning of surgery. ES was performed with minimum incision and minimal manipulation. This resulted minimal damage of tissue minimal removal of septum and precise reconstruction. So that stability of the septum was not compromised, mucosal tears are avoided⁽⁹⁾.

Under Endoscopy technique one could identify the bleeding points and reduce the incidence of haemorrhage. In the case of isolated spur it was easier to avoid mucosal tears⁽¹⁰⁾.

Endoscopic septoplasty (ES) is mostly preferred to gain surgical site as in the cases of ESS (Endoscopic sinus surgery) but in complex deformities and caudal deflections conventional septoplasty (CS) was more ideal and beneficial moreover synechiae had significant results in conventional method rather than ES⁽¹¹⁾. Due to high illumination Es technique can be used as teaching tool to students, nurses etc.

SUMMARY AND CONCLUSION

In comparative study of Endoscopic Septoplasty v/s conventional septoplasty, it can be concluded that ES facilitates accurate identification of pathology due to better illumination which helps to access the remote areas and magnification. It has precise resection of pathological areas by precise repair. Moreover it has least post-surgical complications However ES has its own limitations which includes loss of binocular vision, need for frequent cleaning of tip of endoscope especially when there is more bleeding and by endoscopic approach to septoplasty complex determinates with caudal deflections could not be corrected. Hence Every ENT surgeon has to know the pros and cons of both techniques to avoid undue complications.

- This research paper was approved by ethical committee of MGM Medical College Jamshedpur-53 1020 Jharkhand
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Table – 1 Clinical Manifestations of both groups

SI No	Manifestations in both group (I & II)	Conventional Septoplasty 25		Endoscopic Septoplasty 25		Total with %	
		No	%	No	%	No	%
1	Right DNS	6	24	5	20	11	22
2	Left DNS	4	16	5	20	9	18
3	Spur	6	24	4	16	10	20
4	Hypertrophied	7	28	8	32	15	30

5	Polypoid MT	0	--	1	4	1	2
6	Concha Bullosa	0	--	1	4	1	2
7	Discharge	2	8	1	4	3	6

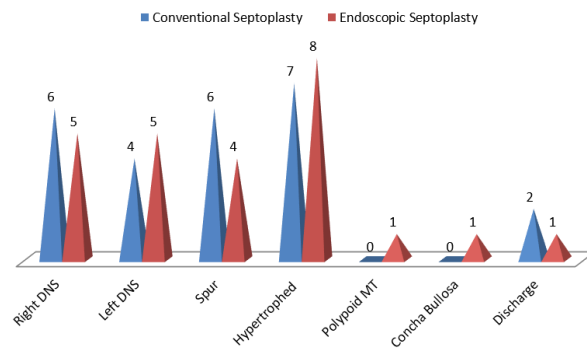


Figure.1 Clinical Manifestations of both groups

Table – 2 Comparison of Post – operative complication in both techniques

SI No	Complications	Endoscopic Septoplasty 25 patients	Conventional Septoplasty 25 patients
1	Bleeding	0 (0%)	1 (4%)
2	Synechiae	1 (4%)	2 (8%)
3	DNS	2 (8%)	4 (16%)
4	Epistaxis	1 (4%)	1 (4%)
5	Crusting	0	2 (8%)

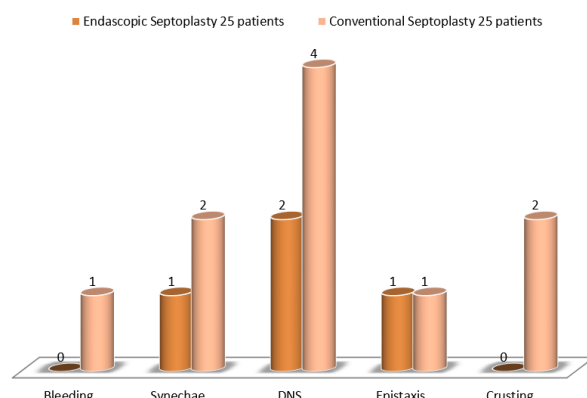


Figure.2 Comparison of Post – operative complication in both techniques

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