

EFFECTIVENESS OF ENDOSCOPIC SEPTOPLASTY IN DIFFERENT TYPES OF NASAL SEPTAL DEFORMITIES: OUR EXPERIENCE WITH NOSE EVALUATION

Nurmatovoa Aziza Kozimovna

Rustamov Azizbek Akbarovich

Abstract. In rhinologic practice, septal abnormalities are a common complaint and the most common cause of nasal obstruction. The use of the endoscope to treat septal abnormalities has grown in popularity since Lanza et al.'s 1991 initial presentation. This study aims to assess the efficacy of endoscopic septoplasty in correcting each of the seven categories of septal abnormalities identified by Mladina's classification. As far as we are aware, this is the first study to analyze objective results obtained before and after surgery, as well as subjective results obtained from the validated NOSE questionnaire, in order to assess the remedial ability of this procedure for each aberration. Even if endoscopic septoplasty is currently regarded as a dependable substitute for the traditional method, the optimal treatment option must be provided by correctly identifying the deformity prior to surgery.

Key words: Endoscopic septoplasty, Septal deviation, NOSE scale, Septal deformities, Cottle's area

Introduction.

The most frequent cause of nasal obstruction is septal deviations, which are a prevalent complaint in rhinologic practice. Procedures for correcting nasal septal abnormalities have changed since they were first introduced, ranging from extreme septal resection to the potential retention of the nasal mucosa and septal framework. Septal abnormalities are often linked to or the cause of disorders of the lateral wall. Due to contact points with lateral nasal wall structures, a markedly deviated nasal

septum has been linked to headaches, sinusitis, obstructive sleep apnea, and epistaxis (1).

Because of this, treating lateral wall abnormalities when they occur is inextricably linked to correcting septal defects. Endoscopic septoplasty is therefore a helpful method for both addressing symptomatic abnormalities and enhancing intraoperative surgical access to lateral nasal wall procedures (e.g. functional endoscopic sinus surgery, dacryocystorhinostomy) (2,3).

Since the first description by Lanza et al. in 1991, the use of the endoscope for the correction of septal deformities is increasingly more frequent (4).

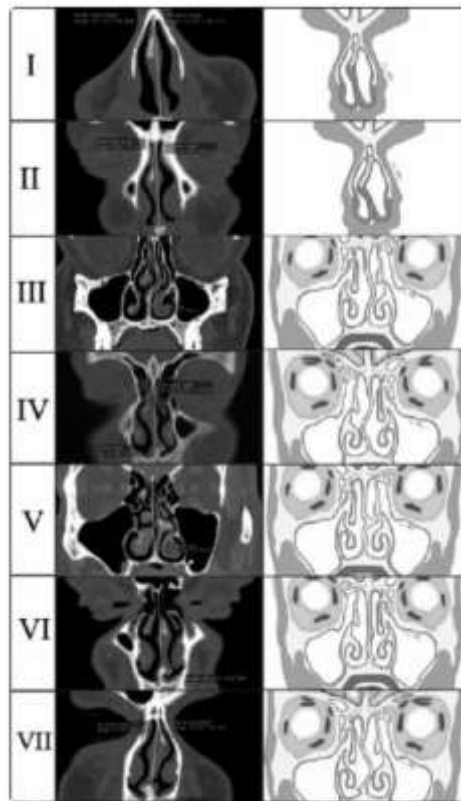
Compared to a traditional method, there is growing support in the literature for endoscopic septoplasty. However, no author has examined the effectiveness of endoscopic repair while taking into account all kinds of septal abnormalities to date. Mladina developed a comprehensive categorization of septal abnormalities more than 20 years ago. It proposed seven distinct categories of deformity and accurately defined clinical symptoms at the nasal septum (5,6).

This study aims to assess the efficacy of endoscopic septoplasty in correcting each of the seven categories of septal abnormalities identified by Mladina's classification.

Materials and methods.

18 consecutive patients who presented to our department for endoscopic septoplasty during a 30-month period (February 2024 to August 2024) had their charts reviewed retrospectively. The patients, who ranged in age from 18 to 69, had a mean age of 34.9 years and included 8 girls and 10 males. At least 17 years of age, septal deformity with nasal obstruction, and persistent symptoms following at least 4 weeks of treatment—including topical nasal steroids alone or in combination with antihistamines—were requirements for inclusion. The study excluded patients with sinonasal malignancy, those who required nasal surgery other than septoplasty (functional endoscopic sinus surgery, or FESS), nasal valve surgery, turbinate surgery, etc.), as well as those who had sinonasal infections or sinonasal inflammatory illness.

Preoperative evaluation of all patients was done using paranasal sinus computed tomography (CT) (120 kV, 215 mA s, 1 mm slice thickness), because the presenting symptoms of patients may indicate certain types of rhinosinusitis (chronic or acute



recurrent

forms).

Fig.1. The seven types of septal deviations proposed by Mladina. In the first column, CT scans processed with OsiriX program are shown; the second column shows schematic illustrations for each deviation.

To prevent mucosal injury during packing removal, mucosal flaps were always put back in place and secured with a silastic stent. After 48 hours, nasal packing (Merocel, Medtronic, Mystic, CT, USA) was taken out of both nasal fossae. Typically, patients were released within 48 hours. Following surgery, all patients got a week of oral cephalosporin, saline nasal douching, and oral steroids at progressively lower dosages.

Results.

Type 5 was the most common deviation observed (23.7%, 14 cases); types 3 and 6 were also relatively common (20.3%, 12 cases, and 18.6%, 11 cases, respectively);

types 2 and 1 were observed equally frequently (13.5%, 8 cases, and 11.8%, 7 cases, respectively); and types 4 and 7 were uncommon (6.7%, 4 cases, and 5%, 3 cases, respectively). The patient cohort was split based on the Mladina classification.

Conclusion

This study has demonstrated that the type of deviation affects the corrective power of endoscopic septoplasty. Even if endoscopic septoplasty might be regarded as a trustworthy substitute for conventional methods, choosing the best surgical approach requires accurately determining the kind of deformity prior to surgery. To more precisely evaluate the indications and limitations of endoscopic-assisted septoplasty in all forms of deviation, longer-term follow-up and bigger series are required.

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