Minimally invasive endoscopic septoplasty: A review of technique and outcome in 296 cases

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ABSTRACT

INTRODUCTION

Septoplasty is one of the most common otolaryngological surgeries performed today. Indications most commonly include nasal obstruction, chronic sinusitis and for the access to perform endoscopic sinus surgeries. In the recent past, focus has shifted from the conventional “headlight” septoplasty to a much more precise endoscopic guided septoplasty. Endoscopic guidance allows the surgeon to elevate the mucosal flaps with minimal tears and also allows to precisely address the deviation. However even with endoscopic septoplasty there is considerable morbidity associated with septal suturing, splints and nasal packing.

OBJECTIVE

The goal of this study is to review our experience with a new minimally invasive endoscopic septoplasty technique and study the complication rates.

STUDY DESIGN

296 cases of minimally invasive endoscopic septoplasty performed at a tertiary care medical center from August 2006 to August 2008 were retrospectively reviewed. Complications and revision rates were reviewed.

METHODS

Minimally invasive endoscopic surgical technique was performed on 296 patients. This technique requires no septal splints, quilting sutures, incision closure, or nasal packing, allowing patients to return to work the following day. Cases were reviewed with respect to revision rates and complications such as septal hematoma, post-operative bleeding, nasal perforation, septal flapping, and adhesions.

RESULTS

296 patients were identified with a mean age of 49.6 and a male to female ratio of 1.6:1. Of these patients, 260 were primary cases, and 36 were revision cases. The mean follow-up was 10.6 months. Indications included access for functional endoscopic sinus surgery (61.2%), nasal obstruction (33.1%), obstructive sleep disease (14.2%), and facial pain (6%). Complications included post-operative bleeding (2%), septal perforation (1%), adhesions (1%), septal hematoma (0.3%), and septal flapping (0.3%). Two (0.6%) patients required non-operative treatment for post-operative bleeding.

CONCLUSIONS

Minimally invasive endoscopic septoplasty is an alternative to conventional open and limited endoscopic septoplasty. This unique technique avoids splints, stitches, or packing, improves patient comfort, and decreases operating time while maintaining a low complication profile.

METHODS AND MATERIALS

296 cases of minimally invasive endoscopic septoplasty performed at a tertiary care medical center by a single surgeon from August 2006 to August 2008 were retrospectively reviewed. Cases were reviewed with respect to indications, revision rates and complications such as septal hematoma, post-operative bleeding, septal perforation, septal flapping, and adhesions. Institutional review board approval was obtained before starting the retrospective study.

RESULTS

296 patients were identified with a mean age of 49.6 and a male to female ratio of 1.6:1. Of these patients, 260 were primary cases, and 36 were revision cases. The mean follow-up was 10.6 months. Indications included access for functional endoscopic sinus surgery (61.2%), nasal obstruction (33.1%), obstructive sleep disease (14.2%), and facial pain (6%). Complications included post-operative bleeding (2%), septal perforation (1%), adhesions (1%), septal hematoma (0.3%), and septal flapping (0.3%). Two (0.6%) patients required non-operative treatment for post-operative bleeding. Sixteen patients (5%) had persistent caudal deviation, of which three (1%) underwent revision septoplasty.

DISCUSSION

The popularity of endoscopic septoplasty is ever increasing. Endoscopic guidance allows the surgeon to elevate the mucoperichondrial and mucoperiosteal flaps under direct visualization thereby minimizing any mucosal tears. In addition, the deviation in the septum can precisely addressed thereby removing only the deviated portion of the cartilaginous and bony septum. The minimally invasive endoscopic septoplasty allows the surgeon to utilize a smaller incision, thereby requiring no closure of the incision. The morbidity is reduced by avoiding the nasal packing, which is one of the most important causes of postoperative morbidity in nasal surgeries. All the patients in the study were able to return to work or school one day following the surgery demonstrating a reduced morbidity than conventional techniques. Complications of the minimally invasive septoplasty were rare and comparable to the ones described in literature.

CONCLUSIONS

Minimally invasive endoscopic septoplasty is an alternative to conventional open and limited endoscopic septoplasty. This unique technique avoids splints, stitches, or packing, improves patient comfort while maintaining a low complication profile.

REFERENCES


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