



ELSEVIER

Endoscopic septoplasty



Lori A. Lemonnier, MD

From the Department of Otolaryngology, Head & Neck Surgery, Louisiana State University Health Sciences Center, Shreveport, Louisiana

KEYWORDS

Endoscopic surgery;
 nasal endoscope;
 septoplasty;
 nasal septal deviation;
 nasal obstruction

Endoscopic septoplasty was first described as an alternative to the traditional technique in 1991. Two decades later, it has been accepted as a viable method of treatment of nasal septal deformities. Owing to improved visualization, the endoscopic approach offers a number of advantages over traditional septoplasty. Here, the endoscopic technique and its benefits have been described.

© 2014 Elsevier Inc. All rights reserved.

Introduction

Endoscopic septoplasty was first described in 1991 by Lanza and Stammberger as an alternative to the traditional technique.¹ Two decades later, it has been accepted as a viable method of treatment of nasal septal deformities and is frequently performed in conjunction with endoscopic submucosal resection of the inferior turbinates and sinus surgery. Owing to improved visualization, the endoscopic approach offers both technical and educational advantages over traditional septoplasty. Here, the endoscopic technique and its benefits have been described.

Indications

The most common indication for septoplasty is a symptomatic septal spur or deviation that adversely affects nasal airway patency. However, the procedure may also be required when a septal deformity precludes adequate visualization during an endoscopic procedure. More unique considerations include a septal deformity that results in

narrowing of the osteomeatal complex and subsequent recurrent acute sinusitis, epistaxis associated with a prominent septal spur or deviation, and poorly tolerated nasal continuous positive airway pressure in a patient with obstructive sleep apnea and a septal deformity. The last and most controversial indication for septoplasty is headache that is felt to be secondary to an intranasal contact point between the septum and lateral nasal wall structures.

One consideration or relative contraindication for using the endoscopic technique is a caudally located septal deformity. In such cases, the telescope does not afford a significant benefit until flap dissection is carried more posteriorly.

Technique

The setup for an endoscopic septoplasty is the same as used in endoscopic sinus surgery, thus easing the transition between procedures when performed in conjunction. The patient is placed in the supine position on the operating table. Following intubation, the endotracheal tube is secured to the left side of the oral cavity. Lubricant eye ointment is then placed bilaterally and each eyelid is secured in the closed position with a transparent dressing. Oxymetazoline-soaked neurosurgical cottonoids of 0.5 × 3 in are placed in the bilateral nasal cavities. The head of the bed is then rotated 90° and elevated to decrease intraoperative venous congestion. The head of the patient is positioned on a gel

The author has no proprietary or commercial interest in any products mentioned or concepts discussed in this article.

Address reprint requests and correspondence: Lori A. Lemonnier, MD, Department of Otolaryngology, Head & Neck Surgery, Louisiana State University Health Sciences Center, 1501 Kings Hwy, PO Box 33932, Shreveport, LA 71130.

E-mail address: lori.lemonnier@gmail.com

<http://dx.doi.org/10.1016/j.otot.2014.02.004>

1043-1810/© 2014 Elsevier Inc. All rights reserved.

headrest. The patient is then draped, including the nose and both eyes in the surgical field. After removal of the oxymetazoline-soaked cottonoids, a 30° rigid nasal endoscope is used for visualization. A solution of 1% lidocaine with 1:100,000 epinephrine is used to inject the septal mucosa in the submucoperichondrial plane bilaterally. An adequate injection should result in hydrodissection, elevating the perichondrium and periosteum from the underlying cartilage and bone, and blanching the overlying mucosa (refer to [Figure 1](#), cartilaginous and bony anatomy of the nasal septum).

The incision is planned ipsilateral to the septal deformity. A 15-blade scalpel is used to make an L-shaped incision through the mucosa and underlying perichondrium. The vertical limb of the incision is made immediately anterior to the septal deformity. The horizontal limb is created at the junction of the septum and the nasal floor (refer to [Figure 2](#), L-shaped septal mucosal incision).

Identification of the submucoperichondrial plane is the next and one of the most crucial steps in the procedure so as to avoid creating an intraoperative mucosal perforation. A posterior superiorly based mucoperichondrial flap is then raised with a sweeping vertical motion of a Cottle periosteal elevator or a Freer suction elevator. When a spur is encountered, the flap is first elevated above and below the deformity. The 2 tunnels are then connected, releasing the mucosa over the point of maximal tension.

The Cottle periosteal elevator can next be used to incise and cross over the septal cartilage (refer to [Figure 3](#), incision of the cartilaginous septum). The contralateral submucoperichondrial plane can then be directly visualized with the 30° telescope and the second flap raised, again in the submucoperichondrial plane. As opposed to traditional septoplasty, when using the endoscopic technique, septal cartilage and bone can be removed in a piecemeal fashion prior to complete dissection of the contralateral flap if needed to improve visualization or ease the elevation of the mucosa over additional deformities. This technique is of particular

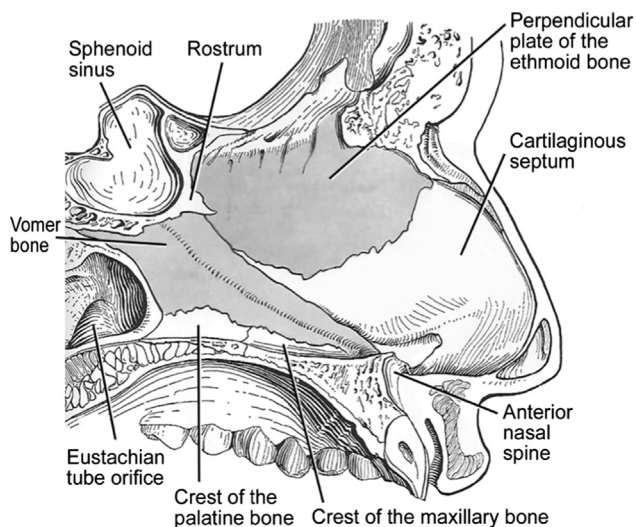


Figure 1 Structural anatomy of the nasal septum. (Reprinted with permission from Casiano. Endoscopic Sinonasal Dissection Guide. Figure 5.8.)

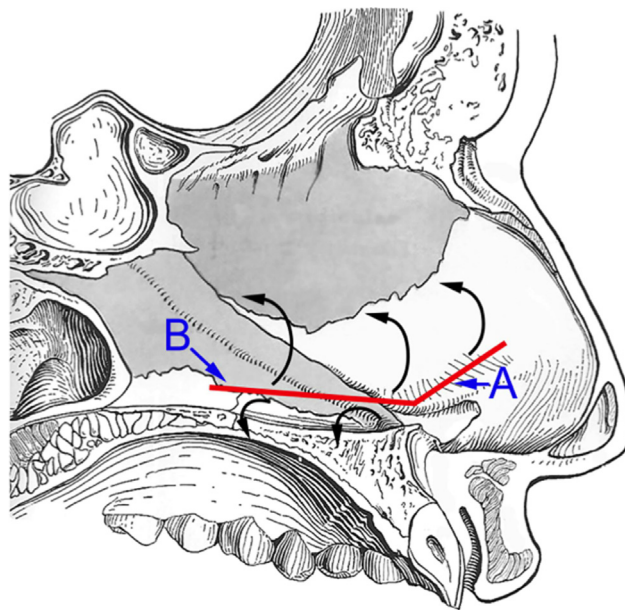


Figure 2 L-shaped septal mucosal incision. A, vertical limb, initiated immediately anterior to the site of deviation. B, horizontal limb, along the junction of the nasal floor and septum. (Reprinted with permission from Casiano. Endoscopic Sinonasal Dissection Guide. Figure 5.9.) (Color version of figure is available online.)

benefit in the case of bilateral septal deviations or spurs. However, before removing the cartilaginous septum, it is important to identify and subsequently preserve a 1 cm or greater caudal and dorsal strut so as to prevent postoperative tip ptosis and saddle nose deformity. Transillumination can be used as a guide to prevent excessive cartilage removal. Light transmitted behind the nasal bones, superior to the

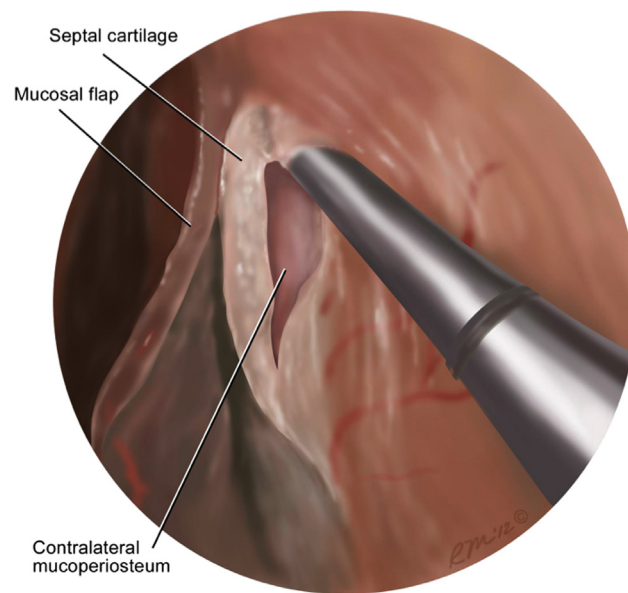


Figure 3 Endoscopic view of the incision of the cartilaginous septum. The 30° telescope is used to directly visualize the contralateral submucoperichondrial plane during elevation of the second flap after crossing through the septal cartilage. (Reprinted with permission from Casiano. Endoscopic Sinonasal Dissection Guide. Figure 5.10.) (Color version of figure is available online.)

Download English Version:

<https://daneshyari.com/en/article/4122680>

Download Persian Version:

<https://daneshyari.com/article/4122680>

[Daneshyari.com](https://daneshyari.com)