

Septal Extension Graft in Asian Rhinoplasty



Na-Hyun Hwang, MD, MSc, Eun-Sang Dhong, MD, PhD*

KEYWORDS

- Rhinoplasty • Secondary rhinoplasty • Septorhinoplasty • Caudal septal extension
- Extended spreader graft • Septal L-strut extension • Tongue-in-groove

KEY POINTS

- The lower two-thirds of an Asian nose can be enhanced anteriorly and caudally using a septal L-strut extension graft.
- Septal L-strut extension comprises caudal septal extension using a modified tongue-in-groove technique and anterior extended spreader graft.
- The purpose of this technique is to create stability and support to the septum-dependent dorsum, as well as the septum-dependent tip.
- The septal L-strut extension graft is indicated in primary cases in which the bony dorsum is acceptable but the cartilaginous dorsum is relatively hypoplastic.
- In secondary cases, such as an iatrogenic short-nose deformity due to alloplastic implants, the septal L-strut extension graft comprises the autogenous tissue to the dorsum and tip.



Video content accompanies this article at <http://www.facialplastic.theclinics.com>.

INTRODUCTION AND OVERVIEW

A short nose is among the greatest challenges in rhinoplasty, regardless of patient ethnicity. Direct elongation of the septum resolves the shortness and complements the central nasal area, allowing for the next step on the lateral side of the lower third of the nose. The septal extension graft (SEG) is a method of controlling nasal tip projection, shape, and rotation. In accordance with intended use and quantity of harvested septal cartilage, 3 different types of grafts have been designed: spreader type, batten type, and direct type.¹ However, the unilateral application of the SEG has been criticized because of the potential shift to either side of the caudal septum. Sufficient stability can be obtained with the tongue-and-groove technique.² This stabilizes the dorsum

and supplies a platform for the columellar strut, which is then sutured to the bilateral medial crura. This provides stability and support, enabling the SEG to maintain its midline position rather than being distorted to either side.

Since its introduction, the SEG has extensively been the primary choice to correct a small nose and an iatrogenic foreshortened nose, especially in Asian rhinoplasty. However, there are differences in the properties and uses of SEGs in Asian patients. In general, SEGs provide nasal lengthening and tip projection. In Asian rhinoplasty, however, the SEG provides greater projection of the nasal tip. The nasal dorsum needs to be projected anteriorly from nasion to tip in accordance with the increased tip projection. Therefore, higher dorsal augmentation is needed for a more harmonious nasal profile after SEG placement in Asian

Disclosure Statement: The authors have nothing to disclose.

Department of Plastic and Reconstructive Surgery, Korea University College of Medicine, Guro Hospital, Korea University Medical Center, 148, Gurodong-ro, Guro-Gu, Seoul 152-703, Republic of Korea

* Corresponding author.

E-mail address: prsdhong@kumc.or.kr

Facial Plast Surg Clin N Am 26 (2018) 331–341

<https://doi.org/10.1016/j.fsc.2018.03.007>

1064-7406/18/© 2018 Elsevier Inc. All rights reserved.

patients. The problem is that most dorsal augmentation is performed with alloplastic implants in Asian rhinoplasty. The combined use of the SEG and dorsal implant has supplanted other techniques in Asian rhinoplasty (**Fig. 1**).

ALLOPLASTIC IMPLANT WITH COMPLEX ANTERIOR SEPTAL SURGERY

When applying SEGs and spreader grafts, separation of the upper lateral cartilage from the anterior septum is the preferred procedure. Although the mucoperichondrium is well-preserved with full separation from the septal cartilage, even without communication between the dissected pocket and nasal cavity, placing an alloplastic implant on the platform of a widely dissected dorsum may not be safe (see **Fig. 1**). An acute postoperative infection around the implant may spread into the dissected septum, resulting in a disastrous intraseptal abscess. Most patients with severe infection, regardless of acuteness or chronicity, will develop nasal foreshortening due to septal framework and soft tissue destruction. Even when the capsule around the alloplastic implant is safe, the question of longevity remains. Gravity causes alloplastic implants to continuously compress the underlying platform, adding to the pressure exerted from the surrounding soft tissues (**Fig. 2**). Salvage of an infected nose following septorhinoplasty is completely different from salvage of an infected nose following a relatively simple rhinoplasty. In cases of acute or delayed infection, complete extirpation of infectious soft tissue, including the capsule, as well as vigorous irrigation, may salvage the nose if the septum has not been dissected. However, in complex septorhinoplasty cases, even after complete eradication of a septal abscess, loss of nasal support follows, and moderate to severe deformity may remain (**Fig. 3**).

Chronic inflammation with fluctuance can result from compound nasal surgery, which includes complex septal surgery, lateral osteotomy, and dorsal alloplastic implants. Biopsies mostly reveal

fluid collection surrounded by a thick capsule with a shiny lining on the inner surface. A bacterial biofilm may rarely initiate intractable chronic infection and cause impending extrusion of alloplastic implants.³ Ingrowth of synovium-like mucosa or de novo proliferation of the endothelium requires further research (**Fig. 4**). Foreshortening after inflammation closely resembles breast capsular contracture. With severe inflammation, a dense, avascular connective tissue layer forms around the capsule by aggregation of monocytes and fibroblasts. Synovial metaplasia may also play a part in causing contractures.⁴

SPECIFIC CONSIDERATIONS OF SEPTAL EXTENSION GRAFTS IN ASIAN PATIENTS

The septal cartilage in Asian patients tends to be smaller than that in white patients. The mean septal cartilage area in Korean patients is reportedly 8.18 cm² to 8.57 cm² in men and 7.36 cm² in women.⁵ The amount of harvested septal cartilage is usually insufficient for multiple simultaneous grafts in Korean patients. Therefore, additional grafts from the concha and costal cartilage should be considered preoperatively.⁶ The septal cartilage is thinner in Asian patients, and submucous resection (SMR) of the quadrangular cartilage has a tendency to weaken nasal support. The swing-door procedure performed above the maxillary crest and anterior nasal spine (ANS) for the correction of caudal septal deviation worsens septal instability at the nasal base.⁷ Even with a successful bilateral spreader graft, a firm attachment between the ANS and the posterior septal angle is required to provide sufficient support. Furthermore, in Asian patients, in whom the middle and medial crura are relatively weak, overcoming a weakened nasal base is the greatest obstacle in obtaining a stable tip. Most Asian rhinoplasties require 2 different dimensional enhancements: anteroposterior and cephalocaudal lengthening. When the nasal length is extended, the height of the nasal dorsum must often be increased. Many

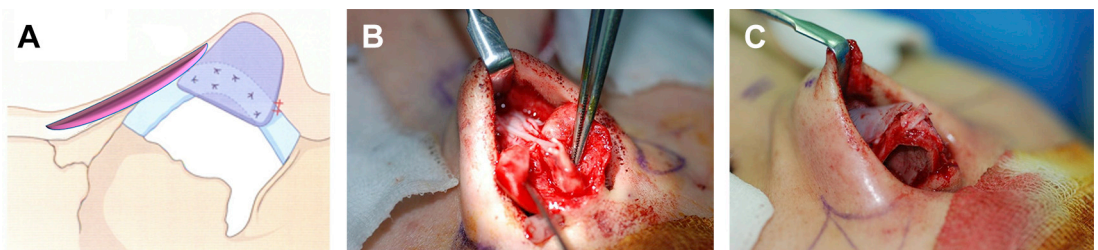


Fig. 1. SEG and insertion of an alloplastic implant. (A) This schematic shows the most popular technique performed in Asian patients. (B) Creating a flat platform by applying a complex SEG. (C) Dorsal augmentation with a silicone implant following SEG.

Download English Version:

<https://daneshyari.com/en/article/8806020>

Download Persian Version:

<https://daneshyari.com/article/8806020>

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