

Rhinoplasty in the Asian Nose



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KEYWORDS

- Asian rhinoplasty • Dorsal augmentation • ePTFE • Costal cartilage • Multilayer tip grafting
- Extracorporeal septoplasty • Short nose

KEY POINTS

- In augmentation rhinoplasty for Asian people, tip surgery using autologous cartilage followed by dorsal augmentation using alloplastic implant materials such as Gore-Tex (expanded polytetrafluoroethylene) or silicone is the most commonly performed procedure.
- Tip grafting procedures including shield grafting, multilayer tip grafting, and modified vertical dome division are mainstays in improving the Asian nasal tip.
- For severely deviated Asian noses, the senior author's modified extracorporeal septoplasty technique is useful before augmentation.
- A short-nose deformity is one of the typical problems in revision surgery for Asian people and requires the surgeon's best effort in correcting, using various maneuvers such as the use of extended spreader grafts and dorsal augmentation.
- Costal cartilage is an important graft material for Asian rhinoplasty; however, it is best reserved for primary surgery in thick-skinned individuals with poorly developed noses and complicated revisions.

ANATOMIC CHARACTERISTICS OF THE ASIAN NOSE

The tip of the Asian nose, particularly the east Asian or oriental nose, is usually low, and the lower lateral cartilages are small and weak. The nasal bones are flat and thick, resulting in a low radix. The average nasal length/nasal tip projection/dorsal height/radix height ratio of the nose in white people has been shown to be 2:1:1:0.75 (**Fig. 1A**).¹ However, in the senior author's study, young Koreans had a nasal length/nasal tip projection/dorsal height/radix height ratio of 2:0.97:0.61:0.28 (see **Fig. 1B**).² This finding supports the popularity of augmentation rhinoplasty to correct a low-profile nose among Asian people. Regarding the septum, the septal cartilage of some Asian people is thin and small. In a study

of the senior author's patients having external rhinoplasty, intraoperative measurement of the harvested septal cartilage was performed with preservation of L struts 10 mm wide. The mean caudal length of the harvested septal cartilage was 15.1 mm, and the mean dorsal length was 18.2 mm. Therefore, the size and the quantity of harvestable septal cartilage may be inadequate for complex rhinoplasty procedures, increasing the need of harvesting grafts from other sites.³ Typical Asian noses tend to have thicker skin than noses of white people, with abundant subcutaneous soft tissue. In the senior author's research using computed tomography (CT) scans of the nose of Koreans, the mean nasal skin thickness was 3.3 mm at the nasion, 2.4 mm at the rhinion, 2.9 mm for the nasal tip, and 2.3 mm for the columella (**Fig. 2**). In this study, the thick skin at the

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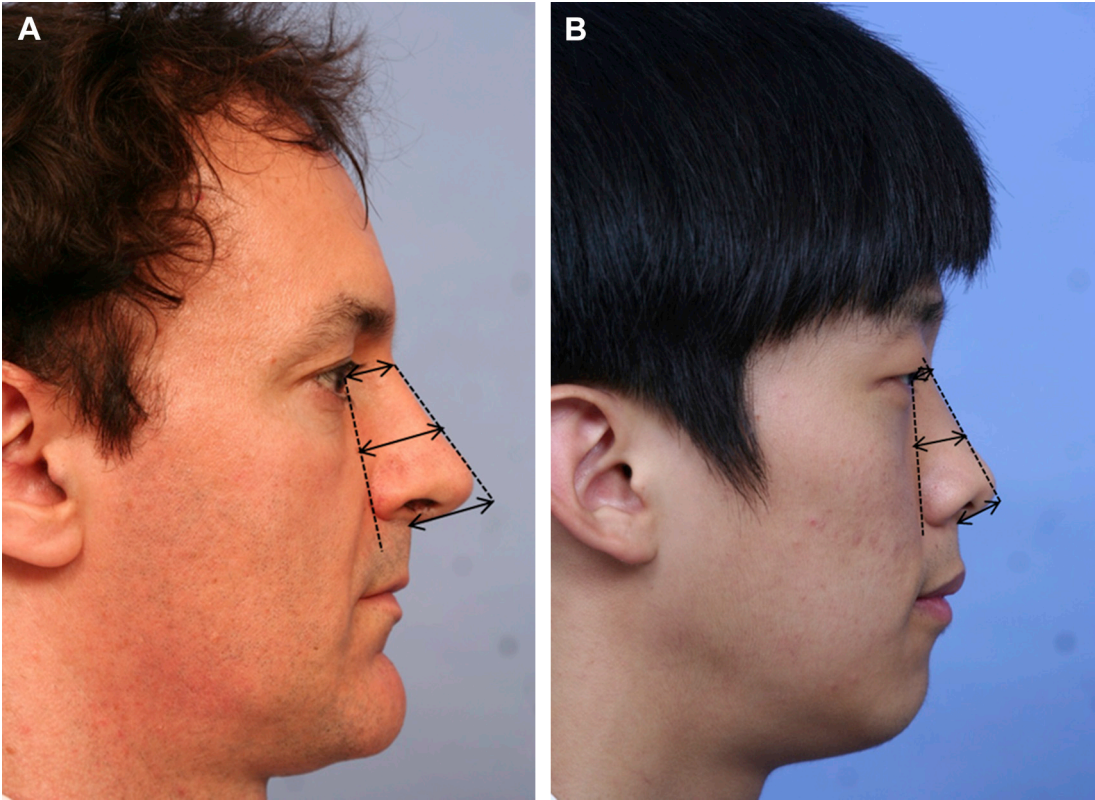


Fig. 1. (A) The average nasal length/nasal tip projection/dorsal height/radix height ratio of the nose in white people has been shown to be 2:1:1:0.75. (B) The average nasal length/nasal tip projection/dorsal height/radix height ratio of Korean noses has been shown to be 2:0.97:0.61:0.28.

nasal tip and columella was associated with poorer surgical outcomes, suggesting that regional skin thickness is an important prognostic factor for tip surgery success.⁴

AUGMENTATION RHINOPLASTY

The purpose of this procedure is the cosmetic improvement of typical low-profile noses without

deviation, saddle or hump deformities, or a short-nose deformity.

Dorsal Augmentation

Dorsal augmentation is the most commonly performed procedure in Asian rhinoplasty. It is also critically important not only in simple cosmetic rhinoplasty but in all types of rhinoplasties in order to

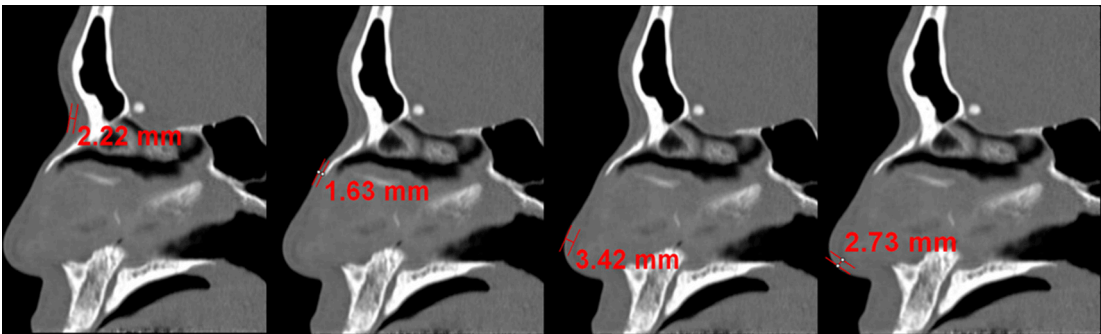


Fig. 2. Skin thickness was measured in several areas of the nose using CT scans. In this patient, the nasal skin thickness is 2.22 mm at the nasion, 1.63 mm at the rhinion, 3.42 at the nasal tip, and 2.73 mm at the columella. For Koreans, the mean nasal skin thickness was 3.3 mm at the nasion, 2.4 mm at the rhinion, 2.9 mm for the nasal tip, and 2.3 mm for the columella.

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