

Alar Cartilage Complex Control in Asian Rhinoplasty

Abstract

Background: The Asian nasal tip is characterized by thick skin, abundant soft tissue, and relatively weak, broad alar cartilages, frequently resulting in a low, bulbous, and poorly defined tip. Conventional tip-plasty techniques often emphasize tip projection or isolated cartilage resection without comprehensive control of the alar cartilage complex, leading to persistent tip fullness, contour irregularities, structural instability, and unsatisfactory long-term outcomes.

Objective: To present a comprehensive strategy for controlling the alar cartilage complex to achieve a refined, stable, and naturally defined nasal tip in Asian rhinoplasty.

Methods: Surgical planning is based on detailed morphological analysis of the nasal tip together with the Polygon concept introduced by Baris Çakir. The alar cartilage complex is systematically evaluated, including the lateral crus, medial crus, dome configuration, cartilage orientation, resting angle, structural strength, and overall tip geometry. Depending on the anatomical findings, multiple cartilage remodeling techniques are selectively combined, including soft tissue reduction, cephalic trim, lateral crural excision, medial crus overlap, cephalic oblique dome sutures, hemitransdomal sutures, 7X lateral crural sutures, and resting angle modification to reconstruct the nasal tip framework.

Results: Comprehensive control of the alar cartilage complex enables three-dimensional refinement of the nasal tip, improves structural support and light reflection, enhances tip definition, and provides greater long-term stability while reducing postoperative deformities.

Conclusion: Successful Asian tip rhinoplasty requires comprehensive management of the entire alar cartilage complex rather than isolated modification of individual cartilage segments. A morphology-based, individualized strategy allows predictable aesthetic outcomes, improved tip stability, and durable long-term results.

Keywords: Asian rhinoplasty; alar cartilage complex; nasal tip refinement; lateral crus; polygon concept.