

Achieving a natural nasal dorsum in rhinoplasty

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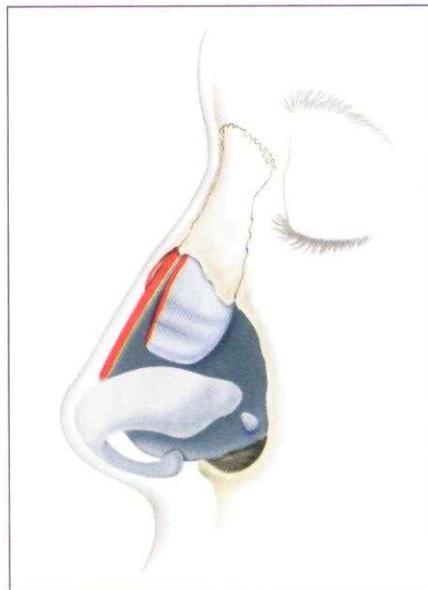


Figure 1. Potential complications of traditional en bloc dorsal hump reduction include avulsion and buckling of the ULCs.

Achieving a straight, smooth nasal dorsum in rhinoplasty is one of the more difficult maneuvers in facial plastic surgery.

In many cases, rhinoplasty patients desire only an improvement in the appearance of the nasal dorsum. In other cases, patients request only a very modest reduction in, for example, a symmetrical but bulbous nasal tip, while most of their concerns are centered on profile alignment, usually a hump reduction and the creation of an attractive, stable, and natural-looking nasal dorsum.

Many risks and other factors must be considered prior to performing dorsal reduction. Especially problematic is a patient with thin skin, a narrow dorsal convexity, and short nasal bones. Such a patient is at high risk for postop-

erative complications, including an inverted-V deformity, asymmetries, and nasal obstruction.

One of the traditional methods of hump reduction is the en bloc resection of the bony and cartilaginous nasal dorsum, including the apex of the upper lateral cartilages (ULCs). Such surgery creates an open-roof deformity that must be closed with lateral osteotomies. Although this method usually results in an adequate outcome in patients with normal to thick skin, it is very dependent on favorable forces of nature in patients with thin skin. During this procedure, the ULCs are weakened and destabilized, which puts thin-skinned patients at particular risk for postoperative complications. Over time, foreshortened ULCs might buckle, collapse, or avulse, resulting in an asymmetric dorsum, an



Figure 2. **A:** The ULCs are separated from the nasal septum along a submucoperichondrial plane. **B:** The dorsal septal convexity is excised under direct vision. **C:** The ULCs are sutured to the septum and to each other.

illusion of deviation, the potential for nasal valve compromise, and airway obstruction (figure 1).

Over the past year, we have used an alternate approach to hump reduction in patients with nasal dorsal convexity and thin skin. The ULCs are separated from the nasal septum along a submucoperichondrial plane via either an external or endonasal approach (figure 2, A). The convex cartilaginous dorsal septum is then excised under direct vision (figure 2, B). This method allows for a more precise and accurate reduction because the excess septal convexity isolated from its surrounding attachments is clearly visualized. The bony hump is then reduced in a standard fashion with a Rubin osteotome. The now-redundant ULCs are allowed to fall down onto the reduced nasal septum. They are sutured back to the septum and to each other with a buried 4-0 polydioxanone suture (figure 2, C). If a significant excess of remaining ULC results in an undesirable fullness of the dorsum, the ULC can be conservatively trimmed.

Although this procedure carries a risk of creating a persistently high dorsum or a polly beak deformity, neither has occurred in our experience; rather, the ULCs fall down to the level of the new septal height and expand laterally, creating a rounded appearance that is consistent with a natural nasal dorsum. Additionally, the internal nasal valve is not narrowed and the thick intact ULCs are stable and at a lesser risk for buckling or avulsing.



Figure 3. Representative pre- (A) and postoperative (B) photographs document the dorsal convexity reduction.

Our results indicate that this technique produces a predictable correction of a nasal dorsal convexity without the postoperative complications sometimes seen with traditional methods of hump reduction (figure 3).

Suggested reading

- Ishida J, Ishida LC, Ishida LH, et al. Treatment of the nasal hump with preservation of the cartilaginous framework. *Plast Reconstr Surg* 1999;103:1729-33; discussion 1734-5.
- Rohrich RJ, Muzaffar AR, Janis JE. Component dorsal hump reduction: The importance of maintaining dorsal aesthetic lines in rhinoplasty. *Plast Reconstr Surg* 2004;114:1298-1308; discussion 1309-12.

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