

## CASE REPORT

# TIP RHINOPLASTY: CASE REPORTS AND A BRIEF REVIEW OF THE LITERATURE

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### SUMMARY

Surgical correction of nasal tip abnormalities is considered the greatest challenge in rhinoplasty even by experienced surgeons. It often is said that “he who masters the tip, masters rhinoplasty”. Rhinoplasty results mainly depend on the degree of patient satisfaction after surgery and a subjective perception. No routine tip procedure is ever used and there are many ways to reconstruct and make nasal tips more attractive. Successful rhinoplasty begins with careful preoperative analysis and planning, also the understanding anatomic different in patients nose is the key for a successful result.

**Key words:** rhinoplasty, nose, tip

### RÉSUMÉ

*La rhinoplastie du bout du nez: rapports de cas et courte revue de la littérature*

La correction chirurgicale des anomalies du bout du nez est considéré même par les chirurgiens expérimentés comme le plus grand défi dans la rhinoplastie. On dit le plus souvent que "celui qui maîtrise la reconstruction du bout du nez, maîtrise la rhinoplastie". Les résultats de la rhinoplastie dépendent du degré de la satisfaction du patient suite à l'opération et une perception subjective. Il n'y a aucun procédé de routine jamais utilisé de reconstruction du bout du nez et il existe beaucoup de voies de reconstruction afin de rendre plus attrayant le bout du nez. La rhinoplastie réussite commence par des analyses et un plan attentif en pré-opératoire, et également la perception de la différence anatomique du nez des patients est la clé d'un bon résultat.

**Mots clés:** rhinoplastie, nez, bout du nez

### BACKGROUND

The nasal tip is the most challenging part of rhinoplasty because it plays a very significant role in the achievement of a functional, aesthetically pleasing, and natural result. (1) The complexity of its structures, such as the cartilage elements arranged in a variable fashion and positioned against gravity, the relatively poor blood supply and variable skin thickness. (2)

The major nasal tip support mechanisms are the lower lateral cartilage, the fibrous attachments of the medial crura to the caudal septum and suspended by ligamentous attachments such as Pitanguy's ligament, scroll ligaments, and cephalic attachments to the pyriform aperture. (3,4) Rhinoplasty dissection by the open approach frequently

distorts these ligaments. Ideally, to obtain a stable nasal tip, the divided ligaments should be either repaired or reconstructed. (5) Disrupted Pitanguy and scroll ligaments may result in loss of definition of the nasal tip.

A successful outcome is predicted by appropriate patient selection. Time spent developing a good rapport with the patient and listening to their concerns during this visit is time well spent. Although an operation may be perceived as a technical success by the surgeon, it may not satisfy the patient who is the ultimate judge. Full disclosure of the physical and psychological motivations of the patient and the limitations perceived by the surgeon are essential to avoid confusion, misgivings, and dissatisfaction. (6)

Due to anatomical variations and complexity of the nasal tip deformities, No single technique is adequate to correct the several anatomical presentations of the nasal tip. There-

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fore, preoperative planning is the basis of rhinoplasty. The surgeon must have the technical skills required and the experience to take advantage of them to achieve the best aesthetic and functional result. (1,7)

## CASE REPORTS

### Case 1

This 29-year old woman presented with complaints of poorly defined nasal tip (*fig. 1*). Finding on nasal analysis included moderately bulbous nasal tip with asymmetric alar cartilages with thick sebaceous skin requested refinement of her nasal tip.

The operative plan included the following: open rhinoplasty approach through a transcolumellar incision with infracartilaginous extensions; septoplasty and cartilaginous graft harvesting; cephalic trim leaving symmetric alar cartilages and a 6-mm rim strip; a floating columellar strut graft for tip complex stability and correction of medial crural weakness and asymmetry; interdomal and transdomal sutures.

Twelve-month postoperative photographs are shown in *fig. 1*. The patient was satisfied with the aesthetic result and the nasal tip is refined and the bulbous tip has been corrected.

### CASE 2

This 46-year old male patient presented with a history

of previous rhinoplasty. Presented with complaints of a pinched nasal tip and droopy nose (*fig. 2*). Finding on nasal analysis included a pinched nasal tip caused by severely concave lateral crura and mild dorsal hump.

The operative plan included the following: open rhinoplasty approach through a transcolumellar incision with infracartilaginous extensions; septoplasty and cartilaginous graft harvesting; Dorsal hump reduction; cephalic trim leaving symmetric alar cartilages and a 6-mm rim strip; Lateral crural strut graft reversed from concave shape to convex and sutured to mucosa; Shield graft approximately 7mm sutured from domes to caudal septum to reduce overprojection & rotate dome upward; interdomal and transdomal sutures. Twelve-month postoperative photographs are shown in (*Figure 2*). The patient was satisfied with the aesthetic result and the pinched nasal tip has been corrected with the use of the lateral crural strut grafts.

## DISCUSSIONS

There are several techniques for obtaining a well-shaped nasal tip, such as cartilage resection, nasal tip grafting, and suturing procedures for repositioning the cartilage, to mention just a few. Today, the majority of rhinoplasty procedures include one or more sutures to alter nasal tip morphological features. The end result of the sutures depends on the strength applied in suture tightening, the intrinsic forces on



Figure 1 - Preoperative (left) and postoperative (right) views (12 months) of the patient in case 1

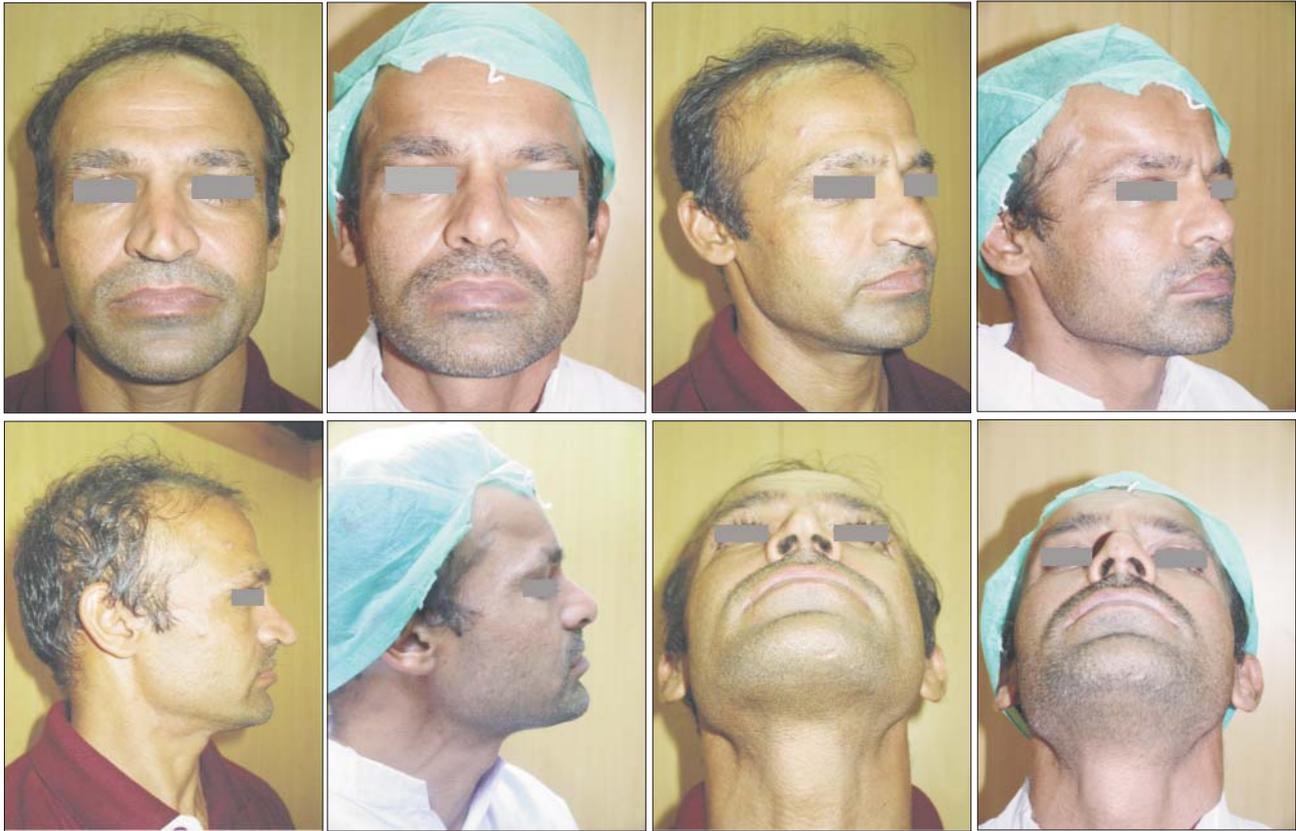


Figure 2 - Preoperative (left) and postoperative (right) views (12 months) of the patient in case 2

the cartilages, cartilage thickness, and the degree of soft-tissue undermining. (7) There are several surgical ways to increase tip projection. These include transdomal suturing, placement of columellar struts, footplate approximation, nasal spine augmentation and grafting. (8)

The roles of nasal ligaments and their effects on tip shape have been emphasized in recent rhinoplasty literature. Çakıret et al advocate delicate dissection, preservation, and repair of Pitanguy's midline ligament, which enables the surgeon to control tip rotation, enhance projection, and emphasize a supratip break by ligamentous manipulation of the nose. (5)

Approximately 10-20% of patients undergoing primary rhinoplasty are dissatisfied with the result of surgery and request revision. (9)

### CONCLUSIONS

Surgical treatment of the nasal tip is one of the most important and challenging aspects of rhinoplasty. Meticulous attention to preoperative analysis, analyzing ethnic characteristics, skin thickness, cartilage strength and nasal tip shape and position to achieving success in rhinoplasty. Also understanding the patient's expectation with the limitation of each procedure is important. During rhinoplasty, all anatomic structures and the relationships

between them should be protected. If we cannot protect them, we should reconstruct again.

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