

My First Two Rhinoplasty Surgeries as Main Operator: Personal Experience and Considerations by a 2nd Year Plastic Surgery Resident

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Received: 2024-08-10; Received in revised form: 2024-09-21; Accepted: 2024-10-15

Abstract

In the present paper, my first two rhinoplasty cases performed as a second-year plastic surgery resident will be presented. The morpho-functional analysis of the patients' noses, the operative procedures, and the results will be described, highlighting the technical and organizational difficulties encountered and the strengths/safety points. The goal is to help young colleagues like me become acquainted with this complex surgery, characterizing possible initial obstacles and areas for improvement.

Keywords: Rhinoplasty, Structure Rhinoplasty, Preservation, Supratip, Septoplasty, Hybrid Rhinoplasty, Cartilage Graft, Pitanguy Ligament

Citation: Costanzo D, Cecchi F, Raposio E. My First Two Rhinoplasty Surgeries as Main Operator: Personal Experience and Considerations by a 2nd Year Plastic Surgery Resident. *Acad J Surg*, 2024; 7(3): 76-80.

Introduction

Rhinoplasty is the surgical procedure used to achieve a morpho-functional remodeling of the nasal pyramid. We classify the different types of rhinoplasty techniques into structural, preservation, and hybrid. According to the surgical approach, rhinoplasty is referred to as open or closed [1-3].

In this article, I, a 2nd-year plastic surgery resident, will recount my experience as the main operator during my first two rhino(septo)plasty cases. I will describe both the technical and organizational strengths and weaknesses I encountered to help young colleagues like me become acquainted with this complex surgery [4-5].

Materials and Methods

We present the following two cases: one of a 46-year-old woman with medium-thickness skin, a dorsal hump, a droopy tip, asymmetric nostrils, and a hypertrophic columellar base (Figure 1); and another of a 50-year-old man with thick skin, a C-shaped deviation of the nasal pyramid, a dorsal hump, septal

deviation with a left-side convexity, and subluxation to the left of the distal septal end by the anterior nasal spine [ANS], with consequent asymmetry of the nostrils (Figure 2). Both surgeries were performed under general anesthesia through a trans-columellar, inverted-V, open access [6].

In the first surgery, we proceeded as follows: after initial infiltration of local anesthetic (2% mepivacaine hydrochloride solution with 1:200,000 adrenaline) with a 30G 0.3 × 21 mm needle along the lateral wall of the nose over the nasal bone and upper lateral cartilage (0.6 ml on each side), the radix area with a direct transcutaneous approach (0.4 ml in close proximity to the periosteal plane), the caudal septum bilaterally (0.6 ml on each side), the area of the anterior nasal spine and the inferior margin of the pyriform aperture (0.8 ml), the columella (0.2 ml), the caudal margin of the lateral crus of the lower lateral cartilage (0.2 ml), and the anterior maxilla close to the infraorbital foramen entering from the lateral area of the nasal vestibule (0.9 ml on each side), we started with tip skeletonization (supraperichondral plane to obtain a skin/SMAS flap with intact vascular and muscular structures) using small Converse scissors.

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Fig. 1: 46-year-old woman with medium-thickness skin, a dorsal hump, a droopy tip, asymmetric nostrils, and a hypertrophic columellar base.



Fig. 2: 50-year-old man with thick skin, a C-shaped deviation of the nasal pyramid, a dorsal hump, septal deviation with a left-side convexity, and subluxation to the left of the distal septal end by the anterior nasal spine (ANS), with consequent asymmetry of the nostrils.



Fig. 3: Pictures at one month of follow-up and post-operative photo (picture on the lower right angle). We obtained a slightly saddle nose with minimal supratip fullness, a good nasolabial angle, and a slightly marked infratip lobule length.

We proceeded with the resection of the deep portion of the Pitanguy ligament and the application of a 6-0 polypropylene simple interrupted stitch at the level of its proximal end for its better identification in the later steps of the surgery. This was followed by: splitting of the upper and lower alar cartilages; dorsum skeletonization (supraperichondral and subperiosteal planes) with Converse scissors first and Obwegeser periosteal elevator later; osteocartilaginous dorsal hump resection using nasal osteotomes; remodeling of the nasal bones by rasping; and low-to-high osteotomies to close the open roof [7-10].

We concluded the surgery with nasal tip refinement procedures (tip shaping):

- Cephalic trim of the lateral crus of the alar cartilages to reduce the volume of the tip.
- Domal creation suture with 5-0 polydioxanone suture to define a new surgical dome and vary the projection of the nasal tip.
- Interdomal suture with 5-0 polydioxanone suture to bring the cephalic extremity of each domal fold together – the two domes were symmetrically placed at an angle of about 90 degrees, which made them diverge from each other in a caudal-

anterior direction.

- Positioning of columellar strut soldered to the medial crus of alar cartilages with a single 5-0 polydioxanone simple suture close to the columellar skin incision margin and two centrally placed stabilizing horizontal mattress sutures to realize a symmetric columella structure and provide stable support to the nasal tip.

The nasal flap was repositioned and the surgical access was sutured with single interrupted 6-0 polypropylene everting stitches [9, 11-17]. Finally, nasal packing, taping, and casting were carried out.

In the second surgery, we also performed the following maneuvers:

- Septoplasty with the taking of a portion of septal cartilage, maintaining the so-called L-strut fixed to the ANS [12, 18-19].
- Reconstruction of the dorsum with spreader grafts obtained from septal cartilage [20].
- Reinsertion suture of the Pitanguy ligament in the supratip area [21].
- Spanning suture with anchorage to the distal septal cartilaginous portion (tip suspension suture) to provide tip rotation [22].



Fig. 4: Pictures at one month of follow-up and post-operative photo (picture on the lower right angle). An appropriate nasocolumellar angle, a good definition of the supratip breakpoint, and adequate resection of the dorsum were secured

Results

In the first case, we obtained a slightly saddle nose with minimal supratip fullness, a good nasolabial angle, and a slightly marked infratip lobule length (Figure 3). In the second patient, an appropriate nasocolumellar angle, a good definition of the supratip breakpoint, and adequate resection of the dorsum were secured (Figure 4). No depressions on palpation of the dorsum nor respiratory difficulties were reported in either patient.

Discussion

These surgeries were performed between the end of April and the beginning of May 2024, so the follow-up is relatively short: definitive results in plastic surgery, especially in open rhinoplasty, are generally assessed at about one year.

In reviewing my work, I found the following critical issues:

- **Photographic imaging:** Images were obtained with frontal lights, which tend to flatten the whole profile and hide some defects. It would have

been useful to take photos with lateral lights pointed at 45° towards the patient and positioned at a distance of more than 1.5 m from the patient to better highlight all details [e.g., Sheen's dorsal lines] necessary for a correct pre-operative assessment and adequate follow-up [23].

- **Pre-operative analysis of nasal valve function,** which can better guide us in corrective valve interventions.
- **Time constraints of the operating room.**
- Compared to cadaveric surgery, in vivo rhinoplasty is not bloodless, and the identification of the planes is much more difficult. The open access allows direct visualization of the anatomical structures, but at the same time, the elevation of the nasal flap is technically more difficult and carries the risk of deconstructing the nose in a completely unpredictable manner.
- **Patient selection:** Initially, it would be best to start with simple cases, gradually increasing the complexity as one becomes more familiar with the procedures. In our cases, we selected two relatively difficult patients, one of whom was HCV(+).

On the other hand, taking charge of the patient as a whole as a second-year resident gave me a greater burden of responsibility, spurring me to deepen topics that I had already studied to optimize the final result. Also, compiling a pre-operative plan allowed me to proceed systematically, breaking the surgery down into many smaller tasks without losing sight of the end result. Moreover, having an experienced surgeon by my side without him interfering helped me, especially in the first operation, to keep calm. Finally, a critical analysis of the results with the identification of potential areas of improvement and the opportunity to perform the same surgery at a short interval gave me the chance to: consolidate the knowledge acquired in the first operation; perform maneuvers that I had omitted in the first operation (e.g., Pitanguy ligament reconstruction to define the supratip, dorsum reconstruction using spreader graft, spanning suture to provide tip rotation) or had not been necessary (septoplasty); and better manage the emotional side.

Conclusions

Rhinoplasty is a complex surgical procedure that requires considerable technical skills and a long learning curve. For young surgeons approaching this type of surgery, it can be an exciting but also intimidating experience. However, with proper theoretical knowledge, a methodical approach, and the ability to challenge oneself, it is possible to acquire the skills and confidence to excel in this complex but rewarding field.

Conflicts of Interest

None declared.

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