Revision Rhinoplasty

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KEYWORDS

• Revision • Rhinoplasty • Facial plastic surgery

KEY POINTS

- Revision rhinoplasty is a challenging surgical operation.
- The surgeon dedicated to mastering rhinoplasty should understand not only the technical challenges but also the psychological impact this surgery has on patients.
- Communication with patients is key to a successful surgery.
- Listening to patients ultimately leads to more satisfactory outcomes. We can learn much from listening to our patients.
- Remember function is as important as aesthetics in rhinoplasty.

INTRODUCTION

Revision rhinoplasty is one of the most challenging operations the facial plastic surgeon performs given the complex 3-dimensional anatomy of the nose and the psychological impact it has on patients. The intricate interplay of cartilages, bone, and soft tissue in the nose gives it its aesthetic and function. Facial harmony and attractiveness depends greatly on the nose given its central position in the face. In the following article, the authors review common motivations and anatomic findings for patients seeking revision rhinoplasty based on the senior author's 30-year experience with rhinoplasty and a review of the literature.

ASSESSMENT OF PATIENTS WITH REVISION RHINOPLASTY

Every rhinoplasty surgery is performed with the intent of improving appearance and nasal breathing and achieving a satisfactory outcome. Despite our best efforts, rhinoplasty revision ranges in the literature from 5.0% to 15.5%.[1] At a certain level, all patients who are seeking revision surgery experience disappointment with their original surgery. The possibility of a dissatisfied patient is very real. Being prepared to treat patients seeking revision rhinoplasty is part of the facial plastic surgeon's practice. Additionally, as a surgeon becomes more experienced and established in the community, more patients seeking revision rhinoplasty will come to his or her practice. A facial plastic surgeon should prepare thoughtfully for these challenging cases.

Analyzing a nose preoperatively to prevent the need for revision requires careful assessment of the anatomy. Surgical maneuvers should be planned to produce the desired effects in a durable fashion that will remain satisfactory through the long process of healing and many years after the initial surgery. Surgeons should take into account that subcutaneous fat of the nose thins with aging and grafts placed in the nose of a teenager may show in later adult years. Modern rhinoplasty has shifted away from reduction rhinoplasty to techniques that reshape and support the nose. In reduction rhinoplasty, weakened cartilages collapse and twist under the strong forces of scar contraction that over time, sometimes decades later, gives an unappealing external appearance to the nose and cripple breathing. Support is particularly important in revision rhinoplasty where strong scar contractions are present. Experience will help the rhinoplasty surgeon with these

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intraoperative decisions to establish the size and shape of cartilages and grafts that will provide the desired outcome.

In a recent retrospective review of an established rhinoplasty practice, Dr VanderWoude and colleagues identified risk factors for postoperative dissatisfaction and need for revision rhinoplasty. Postoperative complications, a history of nasal fracture, and lack of anatomic correlation were risk factors for dissatisfaction.[1] Postoperative infections, displaced nasal stents or casts, and scarring led to poor healing and negatively impacted the patients' outcomes. Traumatic crooked noses are well recognized as a technically challenging rhinoplasty group. In a prospective study by Cingi and Eskiizmir[2] in Turkey, patients with deviated noses undergoing rhinoplasty experienced decreased satisfaction and worse postoperative quality of life as compared with patients with straight noses. Technical and, perhaps more importantly, psychological aspects impact these differences. In the study, the outcomes of patients with deviated noses were judged equally successful to the nondeviated noses by peers and surgeons. The patients did not agree with other examiners.

Psychological aspects are often quoted as the most difficult aspect of revision rhinoplasty by experienced surgeons.[3] In order to have a successful surgery, the surgeon must understand what motivates patients to seek revision. Specific alterations to the nose or concerns with nasal obstruction and nasal breathing should be discussed. Accurate and open communication will help define the operative goal. Communication is crucial for the doctor and patients to have a satisfactory outcome. It is important to note that often the patients and the surgeon differ in their evaluation of the nose. Studies have shown rhinoplasty surgeons will identify many more abnormalities than what the patients themselves point out. Rhinoplasty surgeons are trained to look at noses critically. In a recent study, the surgeon identified approximately 40% more nasal deformities than the patients.[4] The surgeon must recognize the patients' concerns and make it a priority to address them. Gaining the patients' trust depends on the physician being able to understand the patients' concerns and expectations and project realistic outcomes. Evaluating the nose together, with the use of a mirror or photography, facilitates communication. Consider using computer simulations, either 2-dimensional or 3-dimensioal, if it will improve communication.

Establishing realistic goals for surgery is key in achieving satisfaction. It is necessary to differentiate and recognize patients' perceived and truly inadequate results. A quest for a perfect nose can have high risks with minimal benefits and should be addressed before moving forward with surgery. The anatomy of the particular nose and face might have limitations that preclude a specific outcome. Every patient has a unique facial structure and nose with certain traits, such as cartilage shape, strength, and skin thickness and quality. With each trait come certain advantages and disadvantages that will require different handling in surgery. Patients with thick skin that requires more grafting and increased projection to enhance definition are often hesitant to choose this option for fear of a big nose. Successful surgeons are able to discuss these issues with their patients and manage expectation. Finally, identifying patients with depression and body dysmorphic disorder (BDD) can help prevent unhappy patients. The incidence of BDD can be as high as 13% of the patients seeking cosmetic surgery.[5] Do not be afraid to turn patients down or refer them to another surgeon.

COMMON MOTIVATION FOR PATIENTS SEEKING REVISION RHINOPLASTY

Rhinoplasty surgeons continue to try to understand the type of defect that leads to revision rhinoplasty. In the following section, the authors review studies that have looked at common complaints and findings in patients with revision rhinoplasty. Patients seeking revision rhinoplasty often have different concerns than those of patients seeking primary rhinoplasty. Adamson and colleagues performed a retrospective review of primary (308 surgeries) versus revision (92 patients) rhinoplasty during 9 years of their practice.[6] The most common concerns for patients with primary rhinoplasty were a dorsal hump (50%), large nose (44%), bulbous tip (44%), and nasal obstruction (33%). In contrast, patients with revision rhinoplasty complain of persistent deviation (38%), nasal obstruction (36%), bulbous tip (33%), and large nose (25%). Complaints that had a dramatic increase in revision surgeries compared with primary surgery were tip asymmetry (22%), dorsal sloop (11%), wide nostrils (19%), columellar show (11%), and alar retraction (4%). Stigmata of prior rhinoplasty leading to unnatural results, such as those discussed earlier, were often mentioned as causes for revision surgery. In a different study, Guyron and colleagues analyzed 100 consecutive revision rhinoplasties to identify the most common causes of revision.[4] The most common causes for revision were nasal obstruction (65%), dorsum asymmetry (33%), nostril asymmetry (18%), and tip asymmetry (14%). In the study, septoplasty was performed in 71% of