

Secondary Rhinoplasty

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Abstract. A secondary rhinoplasty can and should be performed when the primary procedure is unsuccessful. There are many reasons for failure of a primary rhinoplasty, some unrelated to the surgeon's skill or the nasal anatomy, such as inflammation or epistaxis. Improper healing of parts of the nose may result in defects, as will improper application of surgical technique. A secondary rhinoplasty should be performed only after a careful examination of the entire nasal area, including a soft-ray radiographic examination of the osteocutaneous profile. We performed this secondary procedure in 70 patients between 1963 and 1978.

Key words: Rhinoplasty — Secondary procedure — Postoperative complications

The aesthetic corrective rhinoplasty requires serious consideration of the procedures necessary to achieve a favorable aesthetic and functional result and to ward off the risk of unsuccessful outcomes. An accurate preoperative profiloplastic examination should be performed for any rhinoplasty. The optimal nose dimensions should be assessed with a view to harmonize the nose with the other facial features that make individuals different from one another, such as the forehead, chin, and cheekbones. In other words, an anthropometric study of the face should be completed.

Causes of Rhinoplasty Failure

There are many causes of failure in nasal correction surgery. Some result from events unrelated to the surgeon's skill, such as epistaxis and inflammation.



Fig. 1. Twelve examples of nasal deformities following a primary rhinoplasty. There are many causes, which are described in the text.

Others relate to inappropriate use of surgical procedures, and a third group relate to defects resulting from the improper healing of various nasal components. Primarily, these defects are of the integument, consisting of deep and diffuse adhesions to the perichondrium and periosteum, retractions, shrinking deformities, or thickening deformities, the most important of which is what French authors call "bec de corbin."

Problems in surgical procedure result in bone and cartilage defects. Bone defects involving nasal bones may result from a faulty reduction technique or from an incorrect fracture line. Bone defects affecting the bony sidewalls of the



Fig. 2. Patient before (A and B) and after (C and D) secondary rhinoplasty.

nose may result from a faulty lateral osteotomy that may be insufficient, performed at the wrong height, or in the wrong direction. A faulty osteotomy of the anterior nasal spine may result in a defective retraction of the columnella. Finally, bone defects affecting the midline of the nose as rhinoscoliosis may be associated with an improperly reduced or corrected deviation of the osteocartilaginous septum. Cartilage defects include those affecting the quadrangular cartilage as a result of either an excessive resection of the upper or anterior rim or a limited resection of the upper rim. This creates what could be called a “real bec de corbin,” as it is due to the protrusion of the upper rim of the quadrangular cartilage over other lateral cartilages. Faulty and asymmetrical performance of excisions may result in defects of the triangular lateral cartilages, while a faulty reductive rhinoplasty may create serious deformities of the alar cartilage. Such deformities are difficult to manage and correct

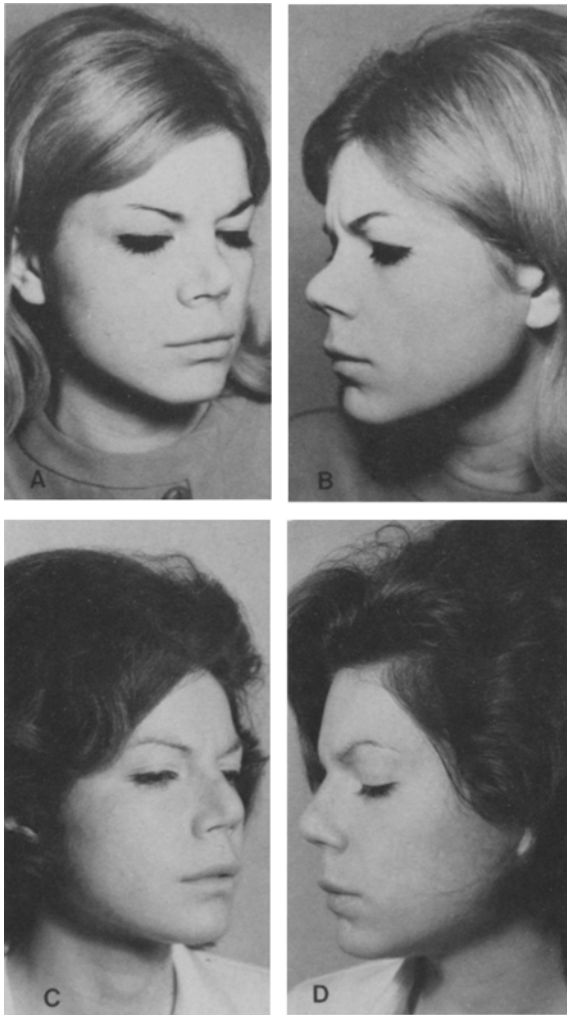


Fig. 3. Patient before (A and B) and after (C and D) secondary rhinoplasty.

secondarily. Finally, several conditions may cause defects in the outer skin and the vestibular mucosa, including adhesions, skin retractions, excess scar tissue in the vestibulum accompanied by retractions, altered alar harmony, and vestibular stenosis with secondary impairment of breathing.

When a primary rhinoplasty is affected by one of these conditions, a disharmonious, defective, and irregular nose results, one we refer to as a secondary nose. Figure 1 shows 12 patients with defects resulting from a primary rhinoplasty.

Secondary Rhinoplasty

Based on our experience, in 5% of patients, some minor irregularities, appearing during the first months following surgery, lessen spontaneously



Fig. 4. Patient before (A and B) and after (C and D) secondary rhinoplasty.

within 6 months without requiring any surgical correction. On other occasions, however, the correction of minor irregularities will require a secondary revision, at least 6 months after the primary operation, to correct small defects that could be irreversible. We believe that these occurrences can be noticed by any surgeon who has had an excellent professional education and carries on an intense surgical activity. Serious unsuccessful outcomes are observed in patients operated on by surgeons who lack a deep knowledge of plastic surgery techniques, with limited experience and poor dexterity in the rhinoplasty procedure.

When should surgical procedures be adopted to cope with the negative results observed? A specific methodology cannot be codified because the condition of each patient will suggest the appropriate corrective procedure.



Fig. 5. Patient before (A and B) and after (C and D) secondary rhinoplasty.

When a patient with a serious secondary nasal deformity comes to us for a corrective rhinoplasty, we carry out a thorough clinical examination to gain insight into the causes and circumstances leading to the unsatisfactory result. Then a soft-ray radiographic examination of the osteocutaneous profile and a photographic examination are performed. We also observe the nose during quiet and forceful breathing and inspect the nasal vestibulum to detect any synechiae, adhesions, and scar tissue bands. Then we inspect the nasal bones to check for bone splinters in an anomalous position, possible irregularities of the dorsum due to an incomplete apposition of the bony sidewalls and possible protrusion of the bony septum, or indentations due to excessive hump removal, insufficient osteotomies, or bone deviations with asymmetry. Particular attention is paid to the clinical examination of the cartilaginous portion of the lower

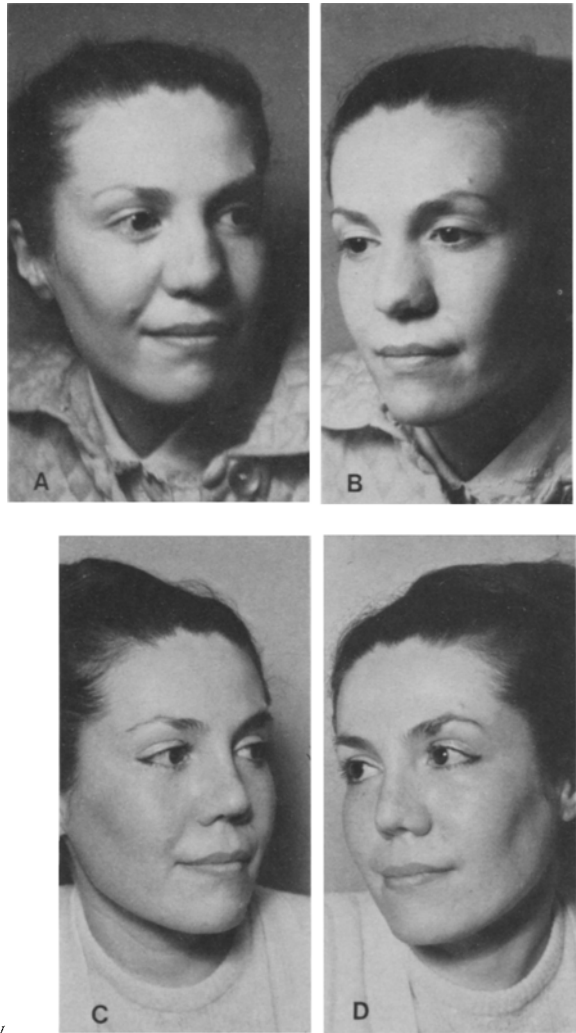


Fig. 6. Patient before (A and B) and after (C and D) secondary rhinoplasty.

third of the nasal pyramid, as well as to the presence of a “bec de corbin” deformity, be it real or cicatricial, skin thickening, nose tip asymmetry, irregular alar rims, and the columella.

When we must deal with lesions of the cutaneous layer of the nasal pyramid, characterized by marked adhesions or real scars that require an external surgical treatment (small excisions or Z-shaped plasties), the skin plasties are performed first. After a few months another operation affecting underlying bony and cartilaginous structures is performed.

If we believe that the primary rhinoplasty is likely to be improved through one or more secondary revisions, these are not carried out less than 12 months after the unsatisfactory primary operation.



Fig. 7. Patient before (A and B) and after (C and D) secondary rhinoplasty.

As a rule, we begin corrective nasal surgery with a revision of the osteocartilaginous septum and with a submucosal resection. This procedure helps us both to correct deviations, if any, that normally permit us to realign the nasal pyramid and secure cartilage pieces and struts to be used later on, and to integrate the dorsum. Chiefly, the procedure allows us to reconstruct the columella in the event of serious retraction resulting from a too radical resection of the anterior rim of the quadrangular cartilage.

After this initial operative step, the actual secondary rhinoplasty is initiated either through two vestibular incisions, or by means of a different approach if scar tissue is present, followed by a wide and accurate excision of any scar tissue present and exposure of residual cartilages and bony parts. Only now are



Fig. 8. Patient before (A and B) and after (C and D) secondary rhinoplasty.

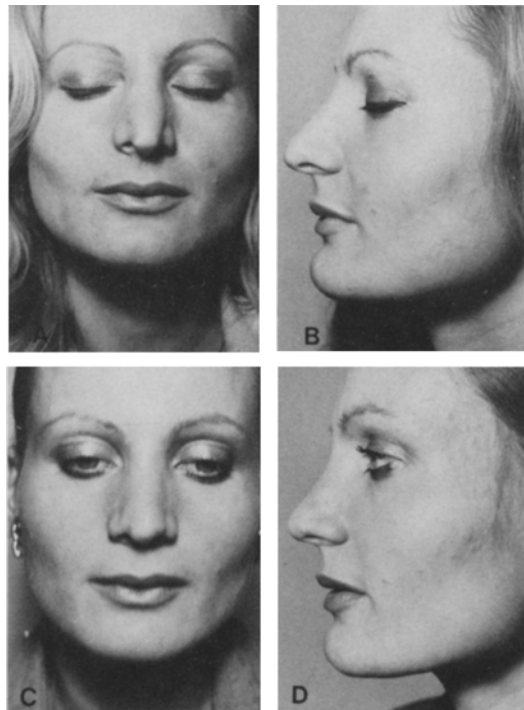


Fig. 9. Patient before (A and B) and after (C and D) secondary rhinoplasty.



Fig. 10A. Preoperative view of patient undergoing secondary rhinoplasty. **B.** Postoperative view.



Fig. 11A. Preoperative view of patient undergoing secondary rhinoplasty. **B.** Postoperative view.

we able to assess the damage done, the resulting deformity and, in starting the secondary nasal revision, to determine the most appropriate method for the particular patient.

Based on our experience, quite often for the corrective treatment of these negative rhinoplasty outcomes the use of septal cartilage proves helpful. These pieces of cartilage generally are inserted on the dorsum, particularly in cases of insufficiency or after the removal of a “bec de corbin” deformity, or into the columella at different levels when markedly retracted, shortened, or deformed columellae are to be corrected. We are against using artificial materials like silicone in nasal pyramid surgery and avoid them whenever possible. As a rule, we never use artificial grafts in the columella because they are known to cause

inflammation followed by rejection. In the past, we have infrequently used silicone pieces on the dorsum in special cases, but we have abandoned that procedure.

Postoperatively, an accurate and more protracted intranasal packing is mandatory for these secondary rhinoplasties. A lighter and less compressive plaster of Paris cast is maintained for 10–12 days. Generally we use coagulants and antibiotics, and at times, a cortisone treatment is adopted for 5–6 days starting from the fourth postoperative day. Secondary medications following removal of the cast require particular attention and follow-up must continue for some weeks.

Results

From 1963 to 1978, we have treated about 70 postoperative nasal deformities of varying degrees. Incidence has increased during the past 5 years. Several patients are shown in Figs. 2–11.

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