

OPEN RHINOPLASTY: VERSATILITY OF THE TECHNIQUE

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Aim: to study the advantages of application of external technique in the different rhinoplasty procedures.

Methods: 200 Patients were subjected to open rhinoplasty technique. The indications were; combined nasal and septal deformity, broad nasal tip, low nasal tip, saddle nose deformity, bifid nasal tip and cleft lip nose deformity. The different procedures performed in this study were; septorhinoplasty, narrowing of the nasal tip, augmentation rhinoplasty, lengthening of the columella & insertion of columellar strut.

Results: the good exposure allowed in open approach made the surgical procedures performed under direct vision. None of the patients developed wound dehiscence or tip necrosis. No patient developed hypertrophic scar or need scar revision. There were no considerable reported complications related to this external approach and the results were satisfactory.

Conclusion: The open rhinoplasty technique is a versatile approach for variety of rhino plastic procedures as: severely deformed nasal bones, severe septal deviation saddle nose deformity, deformed nasal tip and congenital nasal tip deformity. Also, it is a simple, reliable and rapid technique for gaining access to both nasal architecture and soft tissue of the nose without significant cosmetic or surgical risk.

Keywords: External, multiple indications, nasal deformity.

INTRODUCTION

There are two fundamental problems in rhinoplasty: (a) surgeons get little and sometimes no training in sculpturing; and (b) they usually cannot see what has been sculptured. Open rhinoplasty solve the second problem.⁽¹⁾ The technique of external rhinoplasty has enjoyed a renaissance over the last decade.^(2,3)

The external rhinoplasty transcolumellar incision does not compromise nasal tip blood supply unless extensive tip defatting or extended alar base resection has been performed.⁽⁴⁾ In addition to the transcolumellar scar, the incision seemed to be of a more concern to the surgeon than the patient. By 6 weeks after surgery, the trnscolumellar scar is barely visible.⁽⁵⁾ A variety of incisions has been employed: straight line, stair step and inverted or upright V incisions.^(5,6) But in our study, the V-shaped incision was used.

PATIENTS AND METHODS

Two hundred patients underwent external rhinoplasty operation between January 2003 and February 2005. The

age ranged between 8-51 years (mean age 25.3) Females were 107 and Males were 93. The indications for use and the procedures that have been done are illustrated in Tables 1,2.

Table 1. Different Indications for External rhinoplasty.

Indications	No.	(%)
1. Nasal bones and septal deformity	131	(65.5%)
2. Broad nasal tip	32	(16.0%)
3. Low nasal tip	20	(10.0%)
4. Saddle nose deformity	12	(6.0%)
5. Cleft lip nose deformity	4	(2.0%)
6. Facial cleft with bifid nasal tip	1	(0.5%)

Table 2. Different procedures used.

Procedure	No.	(%)
1. Septo-rhinoplasty	131	(65.5%)
2. Narrowing of the nasal tip	32	(16.0%)
3. Augmentation Rhinoplasty	12	(6.0%)
4. Lengthening of the Columella, insertion of Columellar strut and suspension or approximation of the lower lateral cartilages	25	(12.5%)

Technique: General endotracheal anaesthesia was used. The transcolumellar V-shaped incision was marked at the base of the columella. After subcutaneous infiltration of 1/200,000 adrenaline at the sites of the incisions, the incision was continued through the subcutaneous tissue to the level of the medial crura of lower lateral alar cartilages and connected to the marginal alar incisions on each side. In cases of cleft lip nose deformity, the V-shaped incision started at the upper part (beginning of the philtral dimple). The dissection was carried out under vision subcutaneously over the cartilages, then subperiostally till the root of the nose (nasion), thus elevating a viable flap. Dissection was extended laterally over the outer surface of the nasal bones enough to enable removing the hump if needed, otherwise minimal lateral undermining was done with proper haemostasis using bipolar coagulation. This is the standard external approach. Further surgery is performed according to the procedures needed.

In cases of humpy nose and deformed nasal bones removal of nasal hump was carried out under direct vision whatever its size, after that, out and in fracture of the nasal bones were done using standard technique. Also, rasping of the nasal bones could be done if needed. In cases of septorhinoplasty or in cases of severe septal deviation, it was easy to expose the septal cartilage through the external approach. One of the reasons that the septum is more easily dealt with from the dorsal approach, is that the dorsal mucoperichondrium is usually loosely attached to the cartilage, whereas the anterior mucoperichondrium is intimately attached to the cartilage.⁽¹⁾ Also, direct vision allows to see a good part of the septum. Either scoring or resection could be done. Sometimes transfixion of the septal cartilage to the nasal spine by 2/0 vicryl suture could be done.

In cases of augmentation rhinoplasty, the Medpor implant (Porex surg. INC.) in 8 cases and autogenous graft (harvested from the septal cartilage) in 4 cases were inserted and adjusted under direct vision. In cases of broad nasal tip or bifid nasal tip, approximation of the medial crura of the lower lateral alar cartilages in the midline was

done using two or three stitches of 5/0 PDS (polydioxanon white). In cases of low nasal tip, and collapsed caudal part of the septum, a cartilaginous columellar strut was inserted after creation of a pocket in the columella by holding the medial crura of the lower alar cartilages between hooks and dissection in-between using sharp fine scissors separating the crura. The columellar strut varied from 3 - 3.5 cm in length and 3-4 mm in width. It was either Medpor implant or autogenous cartilage harvested from the nasal septum. In addition, a Sheen graft (when needed) was fixed under vision using 5/0 PDS. In cases of cleft lip nose deformity and bifid nasal tip, a V-Y plasty was done achieving from 1.5-2 cm lengthening. In addition, a columellar strut was inserted to support the tip. After completion of the procedures, the wound was closed using 5/0 PDS or 6/0 Ethilon. Vaseline gauze nasal pack and nasal splint were used (XOMED).

On the same night, nasal pack was removed. Chloramycetin eye ointment was applied to the wound every 6 hours plus liquid paraffin nasal drops three times daily. The splint was removed after 5-7 days.

RESULTS

Reviewing the surgical outcome of 200 patients who had external rhinoplasty operation revealed that: the good exposure allowed in open approach made the surgical procedures performed under direct vision. None of the patients developed wound dehiscence or tip necrosis. No patient developed hypertrophic scar or need scar revision (Figs. 1-4). In cases of augmentation rhinoplasty, we did not have a patient where the columellar incision could not be closed easily or under tension. The ability to coagulate the bleeding points made a bloodless field through out the operation. In the case having facial cleft with bifid nasal tip associated with hypertelorism, both deformities couldn't be corrected on the same session, so that case will need correction of hypertelorism and revision of the nasal tip (Fig. 5).



Fig 1. Humpy nose pre and postoperative view.



Fig 2. Saddle nose deformity pre and postoperative view..



Fig 3. Collapsed nasal tip pre and postoperative view.



Fig 4. Cleft lip nose deformity pre and postoperative view.



Fig 5. Bifid nasal tip deformity pre and postoperative view.

DISCUSSION

The aim of rhinoplasty is to establish certain esthetic results while preserving satisfactory nasal function. As in all other procedures in aesthetic surgery, there is no magic formula in rhinoplasty, and it is important that the surgeon has detailed knowledge of the techniques and thinks in terms of balance not so much the volume is important as the harmony of volumes.

The external approach provides excellent exposure with direct view of the lower lateral cartilages and middle vault as well as several technical advantages. The normal anatomy can be restored and this is achieved most often by repositioning and precise placement and fixation of the cartilage grafts.⁽⁷⁾ The external (open) rhinoplasty approach for rhinoplasty has become the preferred method for many Rhino Plastic Surgeons.⁽⁸⁻¹²⁾ The primary virtue of the external rhinoplasty technique is exposure, and the primary concern with this technique is the columellar scar and postoperative nasal tip edema. In this technique, if the incision is properly closed, the scar becomes inconspicuous with time and the nasal tip edema will fully resolve within 3 months.⁽¹³⁾

In our study we do not have any patient needed scar revision or suffer from nasal tip edema for more than six weeks.

The technique is most useful in: severely twisted nose, major nasal deformities and septal perforation.⁽⁵⁾ Besides sequelae of naso-labial clefts have long been considered the major indication for external incision, the best indications are small nostrils, nasal tip asymmetries, major septal deviations, and difficult secondary rhinoplasty; however, the external approach can also be used in selected primary rhinoplasty procedures, especially where better exposure is needed.⁽⁷⁾ Also it is useful in cases of deformed nasal tip, saddle nose deformity and severe septal deviation and it's the best way to deal with the congenitally bifid nose. The external approach allows for greater surgical exposure and enables the surgeon to use both hands with binocular vision.

Also the ability to coagulate the bleeding points under direct vision diminished the blood loss during the procedure and the surgeon can work in a bloodless field throughout the operation.

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