

A New Method for Correction of Cleft Lip Nasal Deformities

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Nasal defect in a repaired unilateral cleft lip presents a great problem to the plastic surgeon. Although there is a large amount of literature on surgery of the cleft lip nose (1-10), none of these leads to uniformly perfect results.

Straith (5) reported an operation in 1946. It consisted of using two flaps at the web between the columella and rim of the nostril. A skin flap sutured to the alar side and a mucosal flap sutured to the columella. A cartilage graft is then placed in the tip for better contour.

The disadvantage of this operation is the need for cartilage grafts and the recurrence of the deformity in some cases. Accordingly, I devised the following method, the principle of which is the use of the excess tissue from the nostril rim as a dermal flap to avoid the use of cartilage graft and mobilization of both medial and lateral crura in an upward and medial direction to obtain symmetry of the nostrils and to prevent recurrence of the deformity.

Technique

Skin marking as shown in Figure 1-A. An incision is made in the skin along line 3-4 which split the free border of the cleft nostril, and line 2-3 which raises the flap (F) (Figure 1-B). Deep undermining is carried out to separate the skin and subcutaneous tissue above from the cartilage and mucosa below. A probe is introduced through the nostril at point 5 and the nostril is pushed in an upward and medial direction (direction of the arrow in Figure 1-B) to advance point 5 to point 2, which lies on the same level as point 1 on the normal side. This position is fixed in place with a transfixed mattress suture of chromic catgut that pass from the vestibule and medial crus (near its junction with the lateral crus) of the normal side to the medial crus and vestibule of the cleft side, then back to the normal side where it is tied (Figure 1-C). The epidermis was then removed from the flap (F). A curved needle threaded with 4-0 polyethylene suture is then passed through the skin in the most depressed area of the dome on the cleft side. It is then passed out through the wound, to the tip of the dermal flap and back through the wound to the skin at a point near its entrance. The two ends are then tied to each other on a piece of folded

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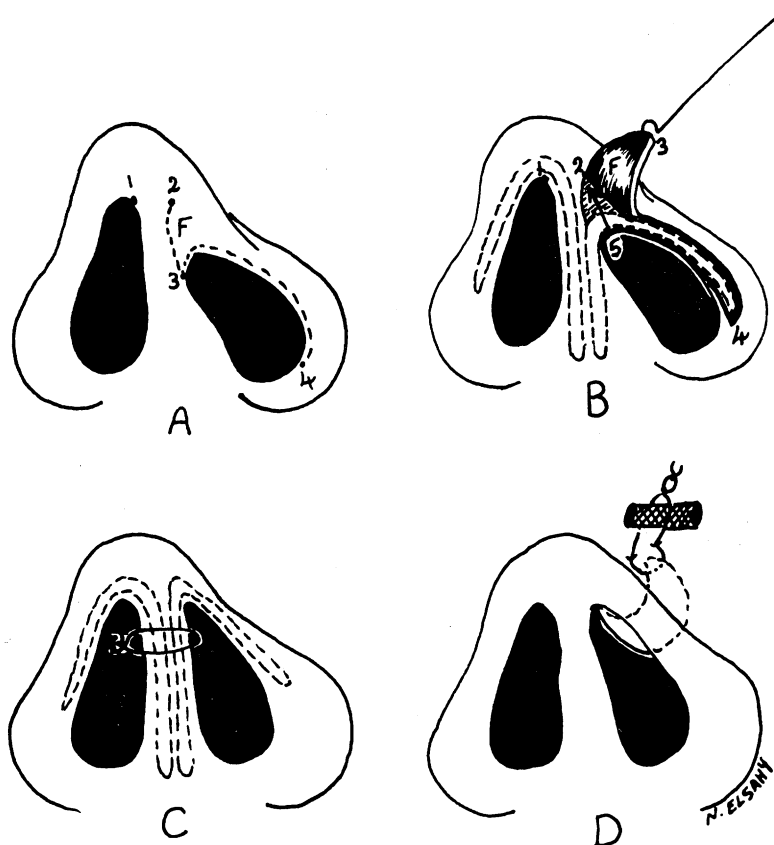


FIGURE 1-A. 1. Highest point of the nostril at the base of the columella on the non-cleft side. 2. Same site on the cleft side. Line 2-3: Marks the future edge of the columella on the cleft side. Line 3-4: Splits the free edge of the ala on the cleft side.

FIGURE 1-B. F. Reflected skin flap. 5. Site of the junction between the medial and lateral crura before mobilization to point 2.

FIGURE 1-C. Suture transfixes the two medial crura.

FIGURE 1-D. Reflection and advancement of the dermal flap for correction of the contour of the nasal tip.

jelonet which acts as a cushion to protect the skin (Figure 1-D and Figure 2). A small cut at each corner of the flap facilitates its reflection and advancement upward. The wound is then closed with 5-0 polyethylene sutures and coated with Neosporin ointment. A nasal pack is then inserted in the nostril of the cleft side and left in place for five days to maintain the correct shape. All sutures are removed on the sixth post-operative day.

Discussion

This method has been performed on the patient shown in Figure 3-A. Two weeks post-operatively, the nostrils were almost symmetrical and the contour of the nasal tip was greatly improved (Figure 3-B). Six months follow-up showed no recurrence of the deformity (Figure 3-C). The suc-

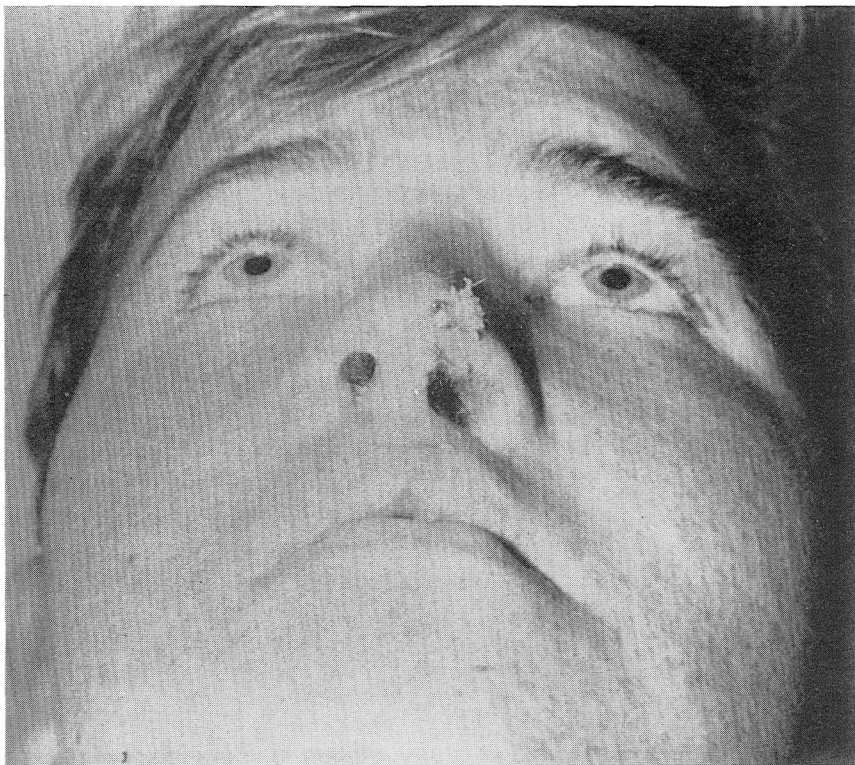


FIGURE 2. Dermal flap filling the defect and tied over a jelonet cushion.

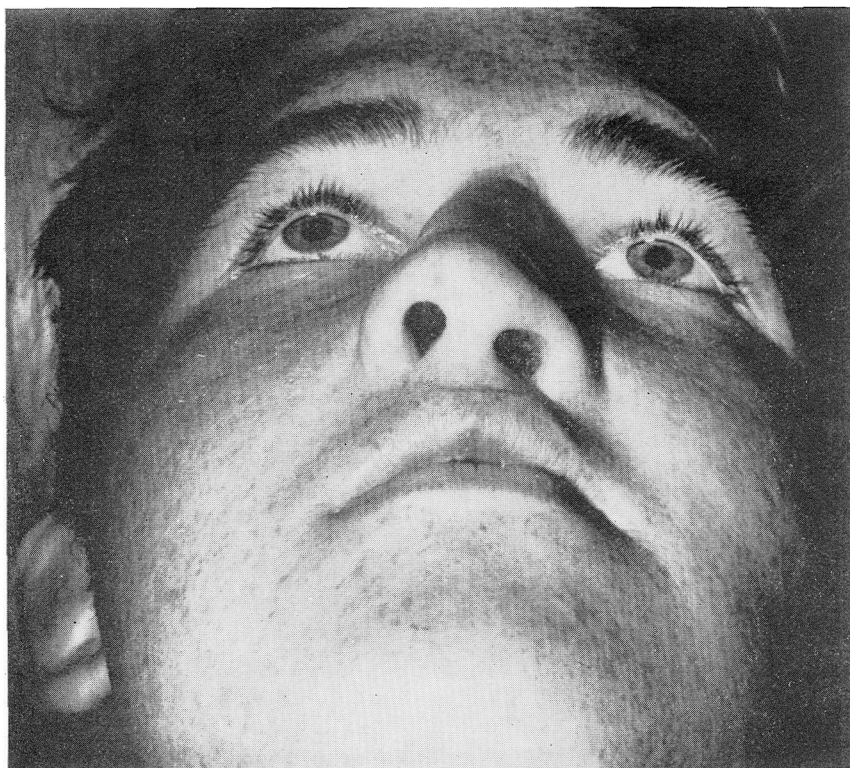


FIGURE 3. A. Nostril deformity associated with unilateral cleft lip. B. Two weeks after repair using the method described. C. Six months post-operative—no recurrence of the deformity.

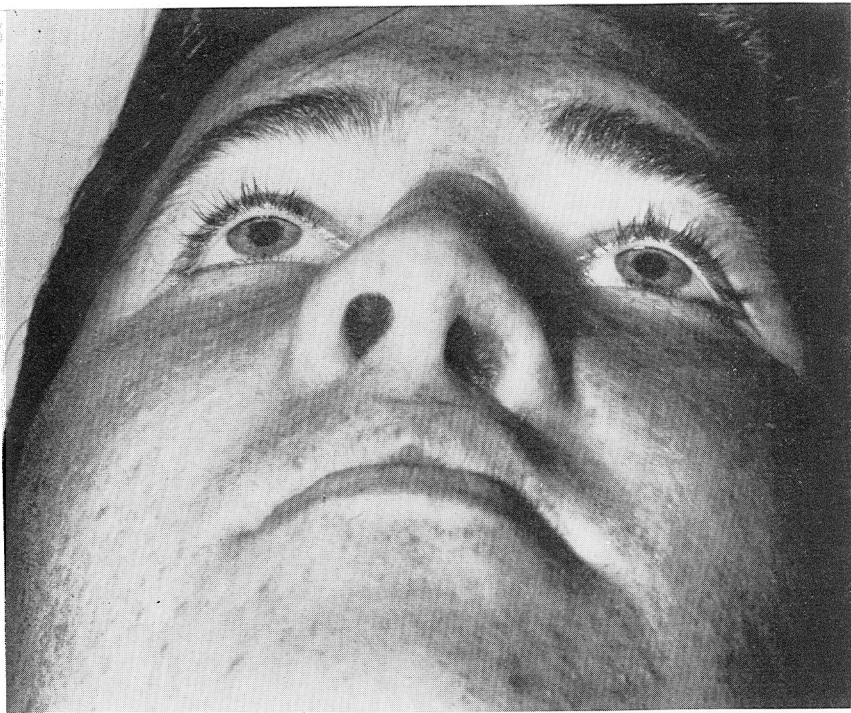


FIG. 3B

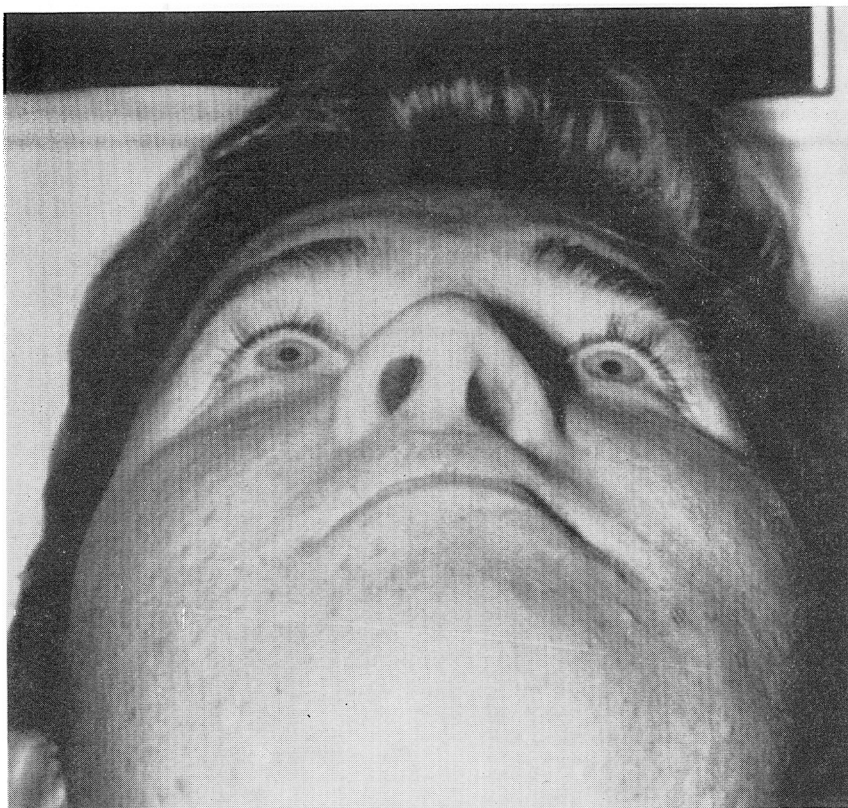


FIG. 3C

cess of this method is based on three facts:

1. Mobilization of the cartilage (without cutting) and mucosa in the direction described adds length to the longitudinally short nostril, and at the same time decreases the width of the horizontally wide nostril.
2. Using the dermal flap to correct the contour of the nasal tip, eliminates the difficulty in utilizing the cartilage graft and the possibility of its future absorption.
3. Simplicity and technical ease.

Summary

A new method for correction of nasal deformities associated with cleft lip is described. It consists of mobilization of the nasal cartilage and the use of a dermal flap.

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