

A new method of secondary correction of the bilateral cleft lip nose

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Summary—A technique for the secondary correction of the bilateral cleft lip nose is described in this paper. It combines a V-Y advancement flap and Cronin's technique and has given satisfactory results in 15 cases without complications.

The characteristics of the bilateral cleft lip nose include deformities of the alar cartilage, a short columella and a wide nostril floor.

We are convinced that the optimum way to repair these deformities is by the direct exposure of the alar cartilage, lengthening of the columella and adequate narrowing of the wide nostril floor.

Cronin's method of repair is one of the most commonly employed. Simultaneously it effectively elongates the columella, advances the alar bases and revises the bilateral upper lip scar. Brown and McDowell (1941) advocated a method of columella lengthening by V-Y advancement of the upper lip.

We have used a combination of both techniques and have obtained satisfactory results in a large number of cases.

Method

A V-shaped incision is made in the centre of the upper lip extending to both sides of the columella and continuing as reverse U-shaped incisions along the desired position of the alar rim symmetrically.

Additionally, bilateral transverse incisions from both sides of the columella base to the alar bases are made and parallel incisions (at a distance of approximately 0.7 cm) are made in the nostril floors extending medially into the membranous septum (Fig. 1). The V-shaped flap is elevated for the exposure and manipulation of the alar cartilages (Fig. 2). The two bipediced nostril floor flaps are then freed from the underlying tissue and rotated medially (Fig. 3).

An intercartilaginous soft tissue flap is then elevated to complete exposure of the medial crura and domes of the alar cartilages. Both bipediced nostril

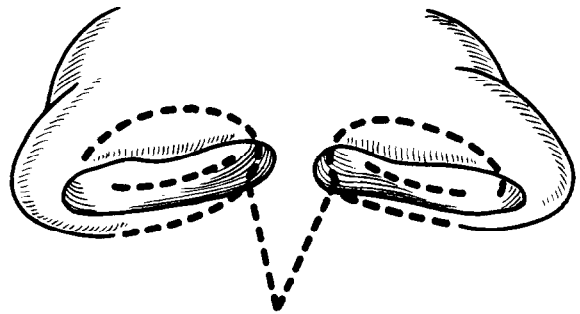


Fig. 1

Figure 1—The incisions.

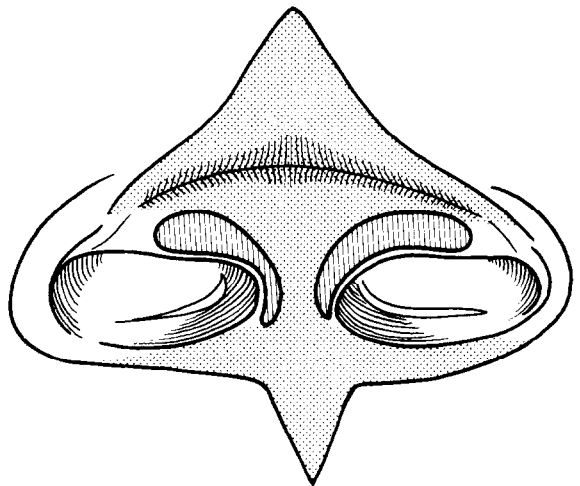


Fig. 2

Figure 2—The V-shaped flap elevated for the exposure and manipulation of the alar cartilages.

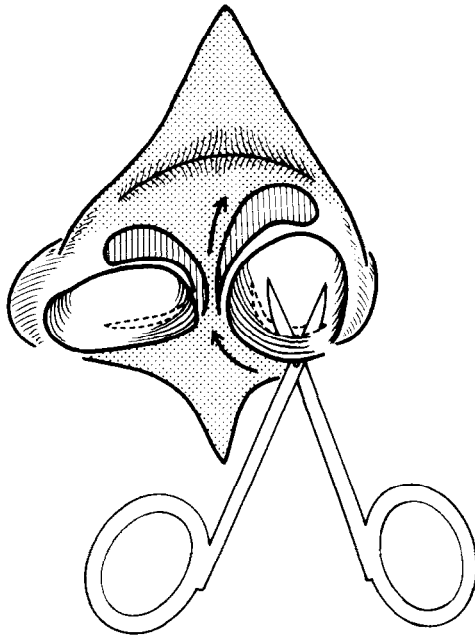


Fig. 3

Figure 3—Freeing of the bipediced nostril floor flaps.

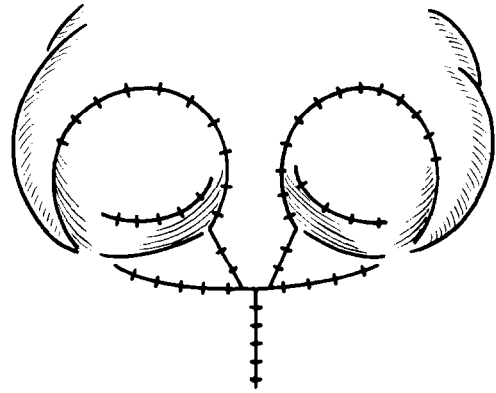


Fig. 5

Figure 5 - The final suture lines.

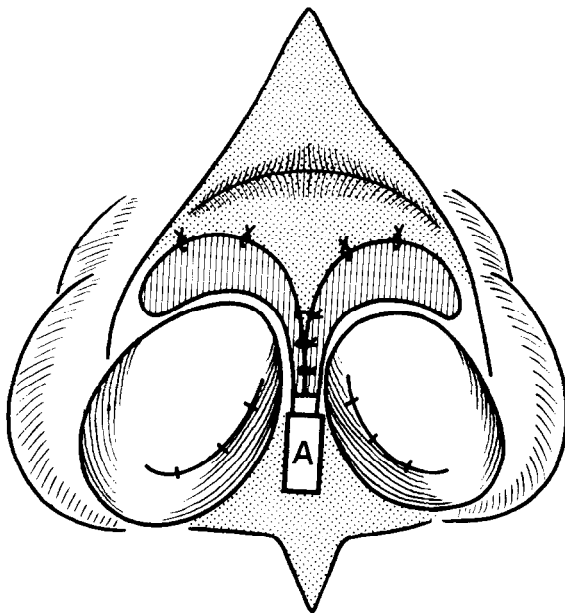


Fig. 4

Figure 4.—Repositioned alar cartilages sutured with 4-0 nylon, columella lengthening and narrowing of the nostril floor have been obtained simultaneously by approximation of both bipediced nostril floor flaps. "A" represents the conchal cartilage graft to support the columellar base.

floor flaps, including the medial crura of the alar cartilages, are approximated.

The deformed alar domes are then repositioned and held by several sutures of 4-0 nylon.

Columellar lengthening with adequate narrowing of the nostril floors can be obtained simultaneously using this technique, but as the medial crura are displaced anteriorly there is no cartilaginous support of the columellar base. To give support, a conchal cartilage graft of approximately 0.3 x 0.5 cm is taken from the postauricular area, rolled on itself and placed between the lower end of the medial crura and the anterior nasal spine (Fig. 4).

The elevated skin and intercartilaginous soft tissue flaps are replaced and the V-shaped skin flap sutured, taking care to avoid a 5 point closure at the columellar base.

Any redundant upper lip skin can be adjusted by appropriate closure of the V-shaped skin defect (Fig. 5).

Photographs of three representative cases are shown in Figs 6-11.

Discussion

The technique of Brown and McDowell (1941), Cronin (1958) and Millard (1958) are among the most popular for the secondary correction of the bilateral cleft lip nose. Cronin's method is the best for repairing a wide nostril floor and lengthening the columella simultaneously, but the alar cartilages cannot be repaired under direct vision. On the

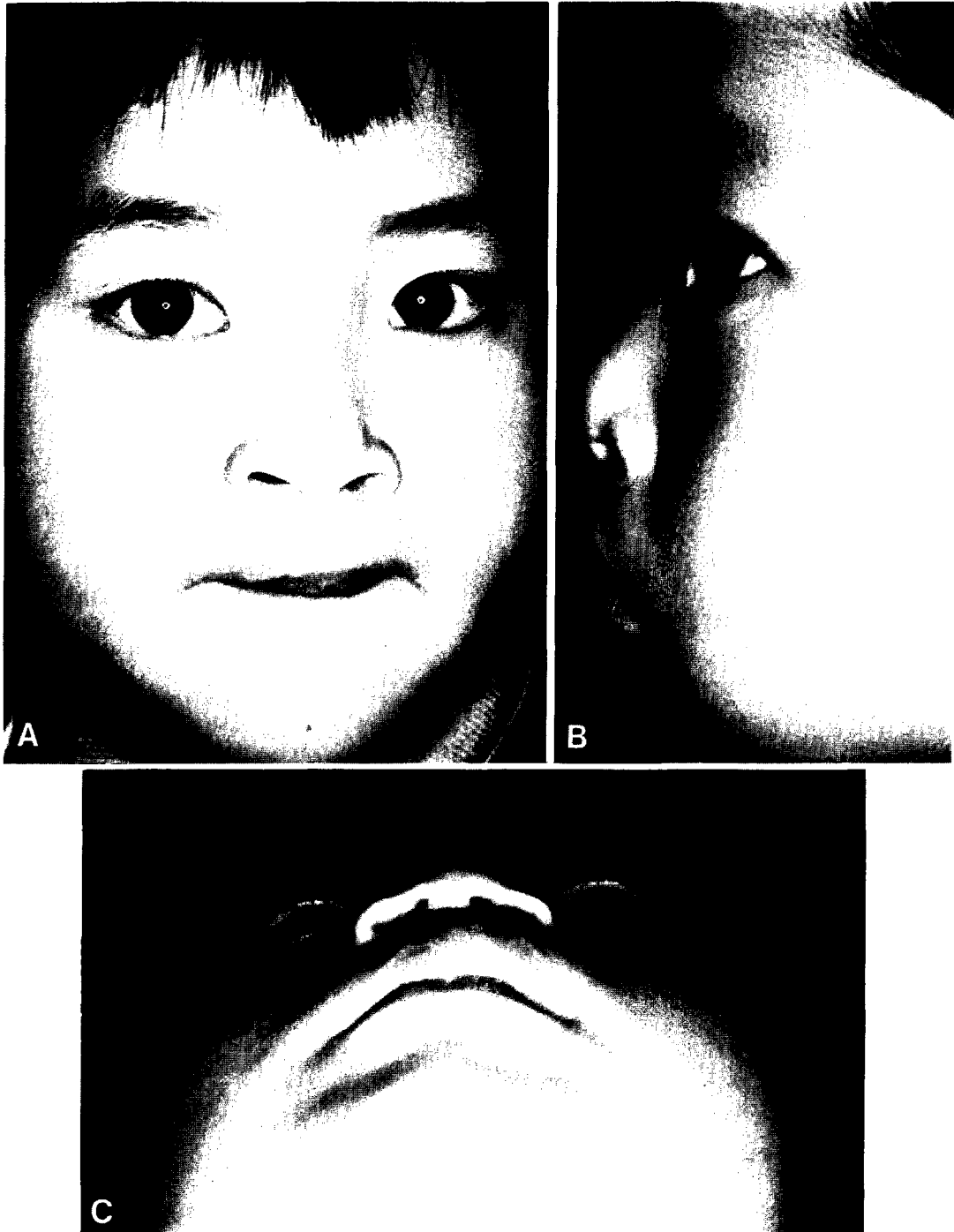


Fig. 6

Figure 6- (A, B, C) Five-year-old female child. Preoperative view of bilateral cleft lip nose.

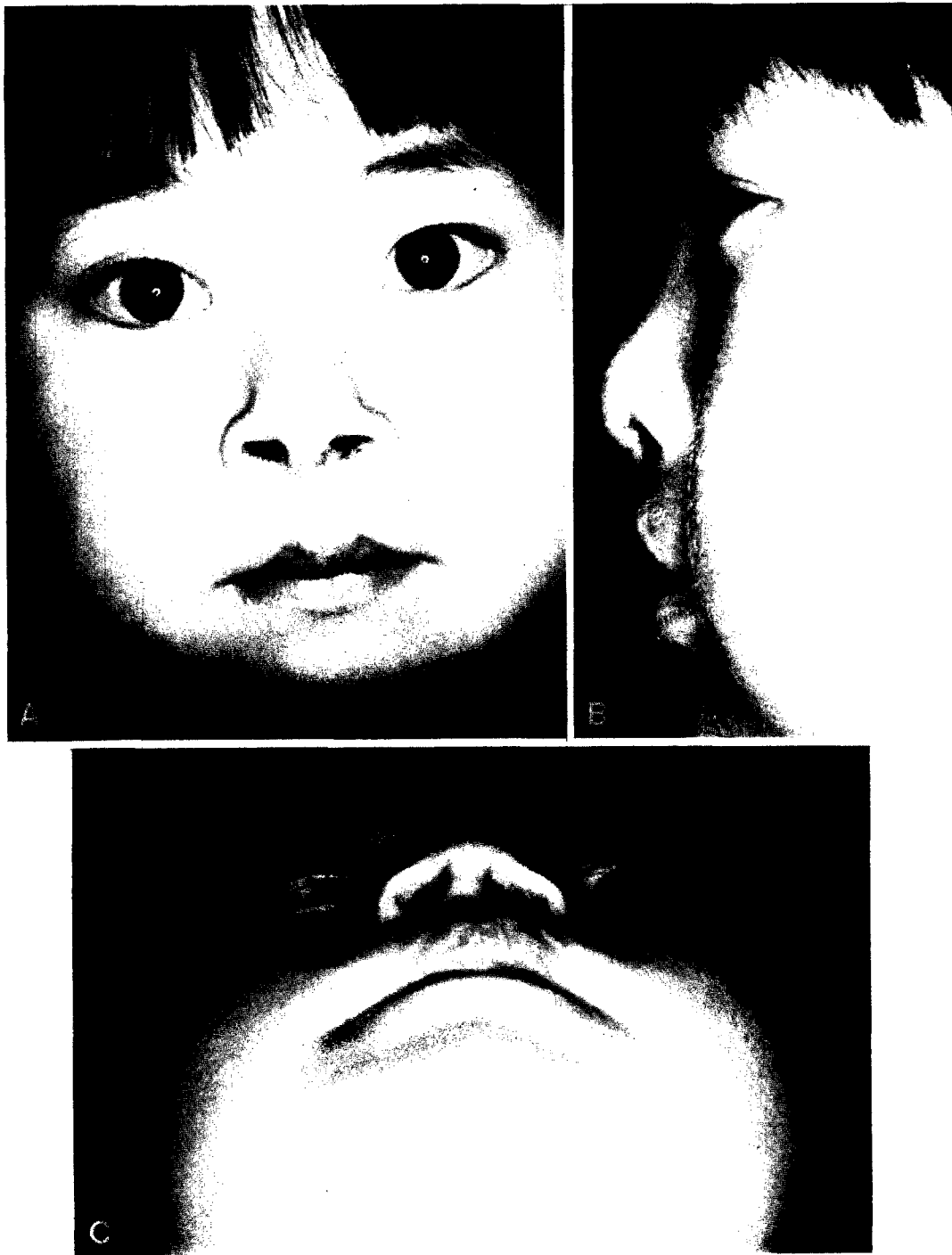


Fig. 7

Figure 7—(A, B, C) Four months postoperative view of the same patient.

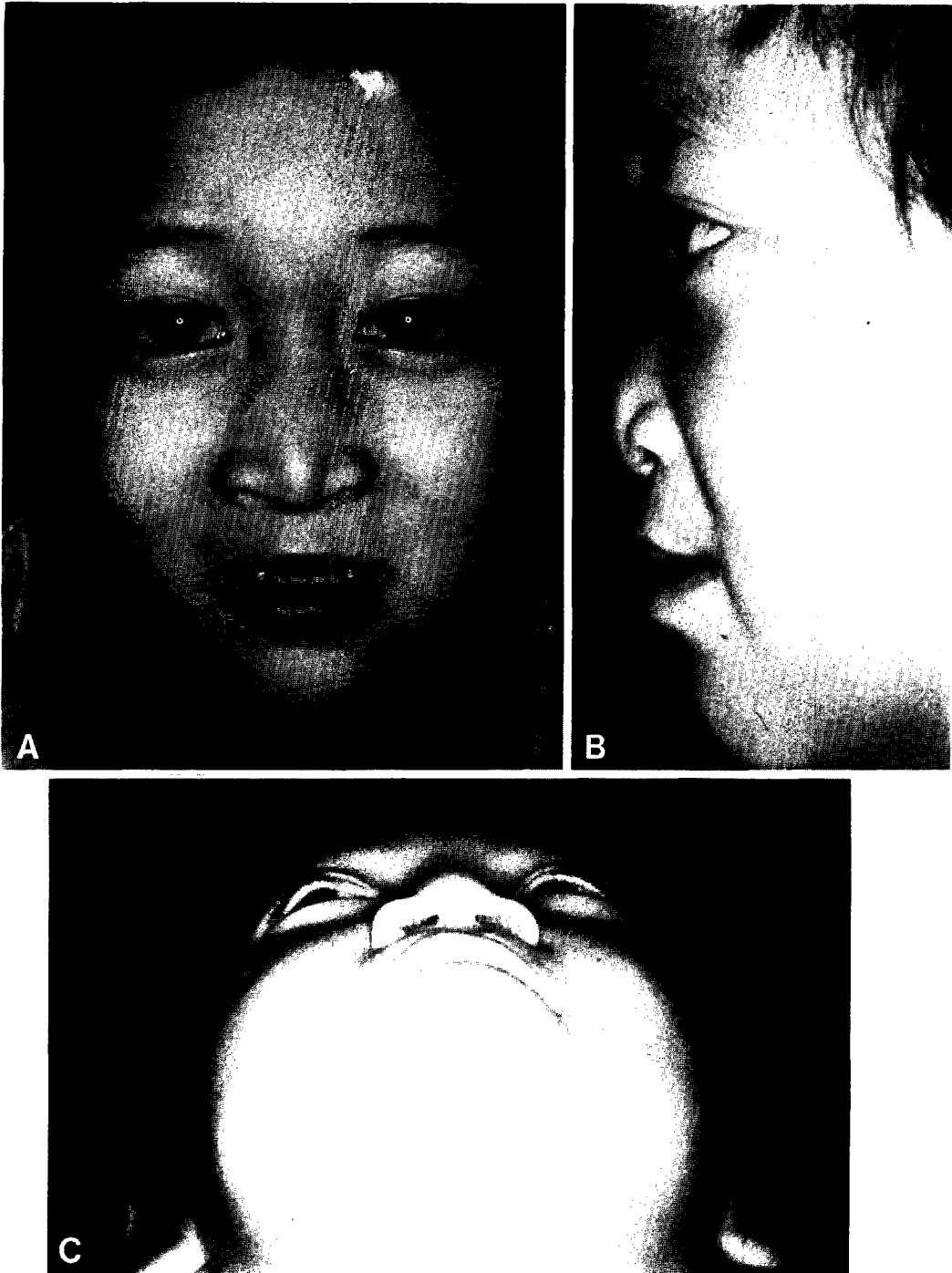


Fig. 8

Figure 8—(A, B, C) Six-year-old male child. Preoperative view of bilateral cleft lip nose.



Fig. 9

Figure 9-- (A, B, C) Six months postoperative view of the same patient.

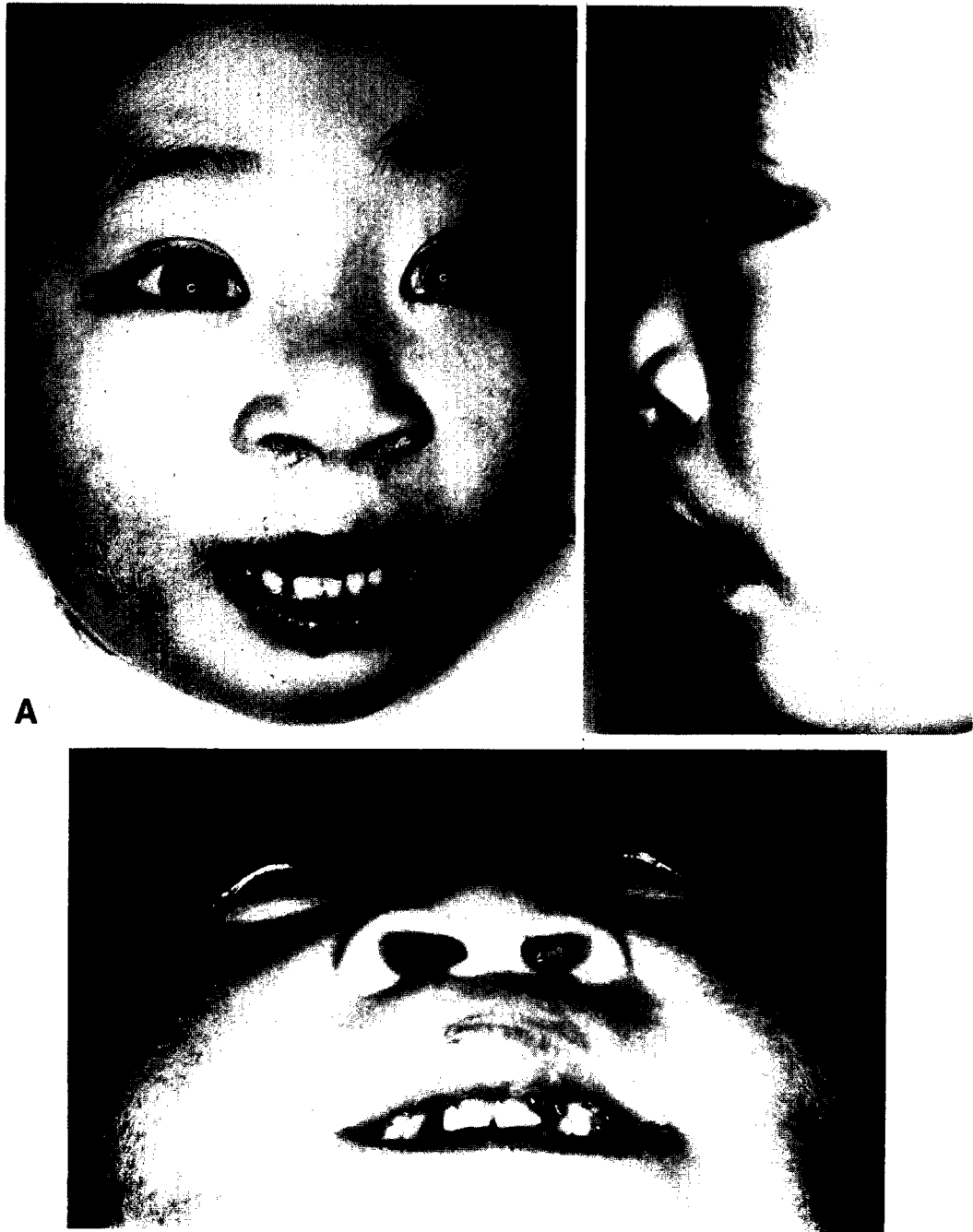


Fig. 10

Figure 10—(A, B, C) Four-year-old female child. Preoperative view of bilateral cleft lip nose.

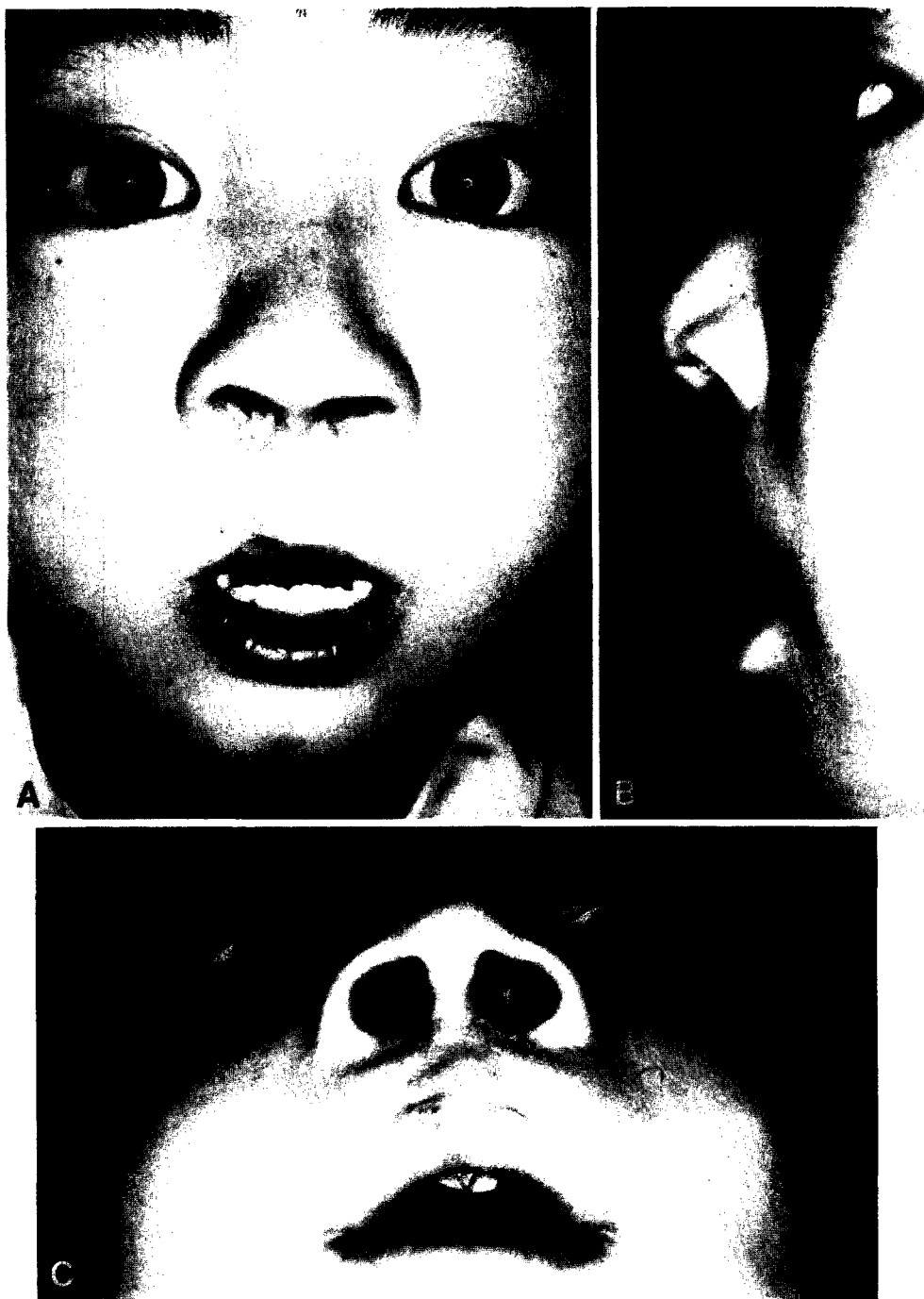


Fig. 11

Figure 11—(A, B, C) Four-and-a-half years postoperative view of the same patient.

other hand, V-Y advancement of the columella is effective for the correction of separated and deformed alar cartilages but cannot repair a wide nostril floor. This new combined method does both effectively. Cronin described that the redundant upper lip skin produced by his method could be adjusted by excision of the two existing lip scars and Millard uses the existing scars in his secondary forked flap method in which he can obtain independent control of columella lengthening and advancement of the alar base. However, elongation of the columella of oriental people does not require so much tissue and, if the lip scars are not unsightly, we hesitate to cut them again. Our method has the merit of allowing adjustment of the upper lip, leaving only a small mid-line scar.

References

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- Millard, D. R. Jr.** (1958). Columella lengthening by a forked flap. *Plastic and Reconstructive Surgery*, **22**, 454.

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