

## Primary Lengthening of the Columella In Bilateral Clefts of the Lip

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Children with bilateral complete cleft lip and palate were treated by a two stage repair of the lip and nasal floor, including a small prolabial flap to lengthen the columella according to the technique of Skoog. Seventeen of these children, now at least 2 years of age were reviewed. In no case was normal length of the columella obtained, six children had obvious scars, in five the flap bulged at the base of the columella, and in four there was a displacement of the flap toward the lip. Three cases have already required a secondary forked flap. We concluded that the results of this procedure are inconsistent and do not justify the additional scarring.

**KEY WORDS:** Bilateral cleft lip and palate, columella lengthening

Over the last 20 years we have often used the forked flap method described by Millard (1958) to secondarily lengthen the columella in bilateral clefts. This method gave such good and durable results that it was a temptation to use it primarily. Indeed, a combination of the forked flap with bilateral cleft lip repair had been proposed by Millard in 1967, but later considered by him and others as likely to impair the blood supply of the small prolabium left in place. For this reason, Millard (1971) advocated banking the forked flap and using it several months later to lengthen the columella as in the Cronin procedure. Others, like McComb (1977), have isolated a primary forked flap and closed the bilateral cleft a few weeks later. This method, however, adds one stage, whereas with the Millard procedure delayed lengthening may be combined with palate closure. We have not used a banked forked flap because we feel that much columella lengthening must be lost by a two stage method. We also prefer to close the nasal floor over the maxillary arch during the primary surgery, when the cleft is broad enough to allow it, and this imposes a two stage lip repair.

For this reason, we were tempted by the

procedure described by Skoog in 1964 and advocated in his book (1976) after 12 years of experience. Skoog took the lateral part of the prolabium as a thin triangular superiorly



FIGURE 1. Skoog's prolabial flap to lengthen the columella primarily in a 2 stage repair.

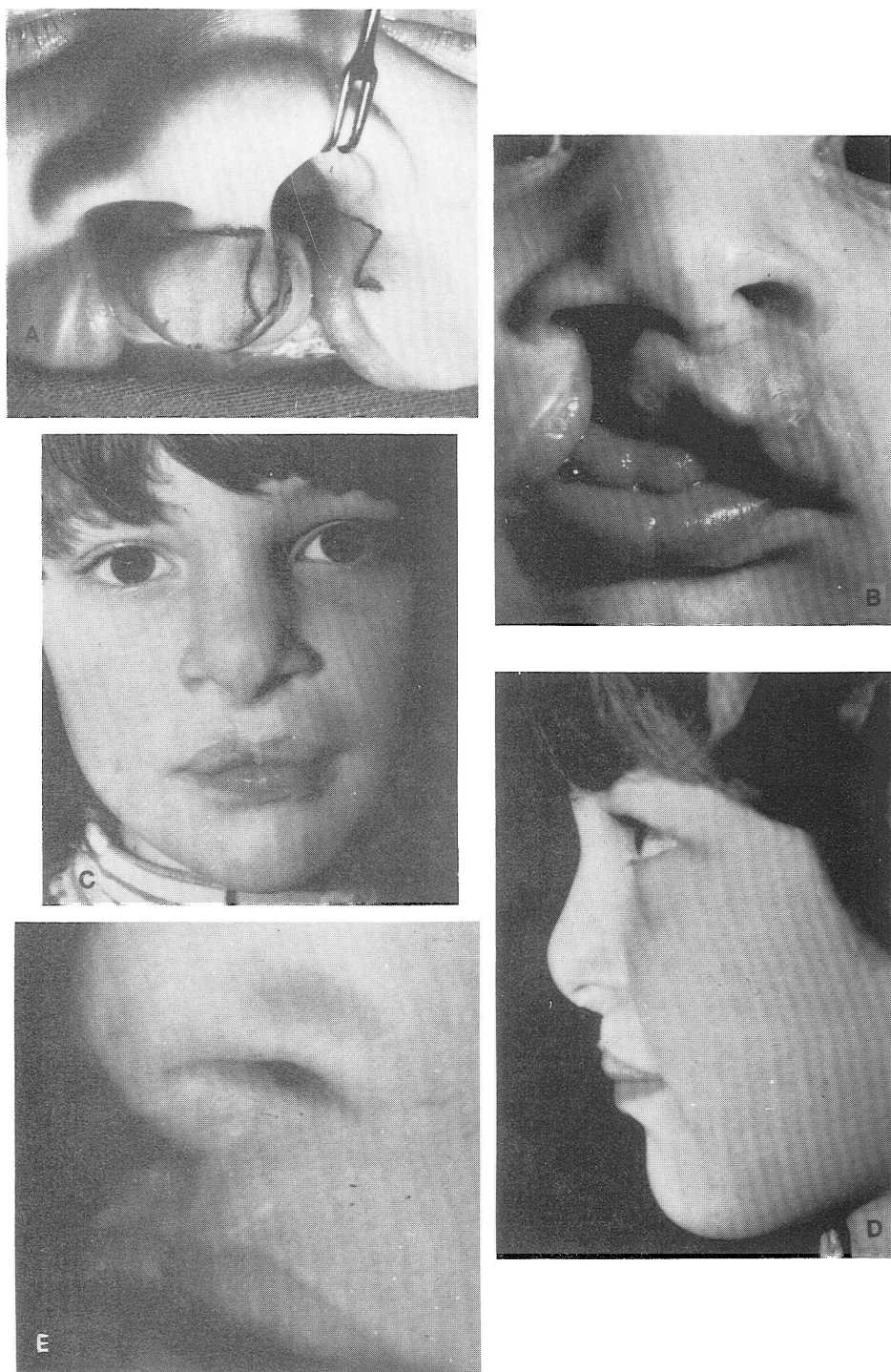


FIGURE 2. A—bilateral cleft with a long prolabium. B—after left side closure with prolabial flap to columella. C, D & E—at 6 years. Prolabial flaps in the desired position, lengthening the columella to a nearly normal size.

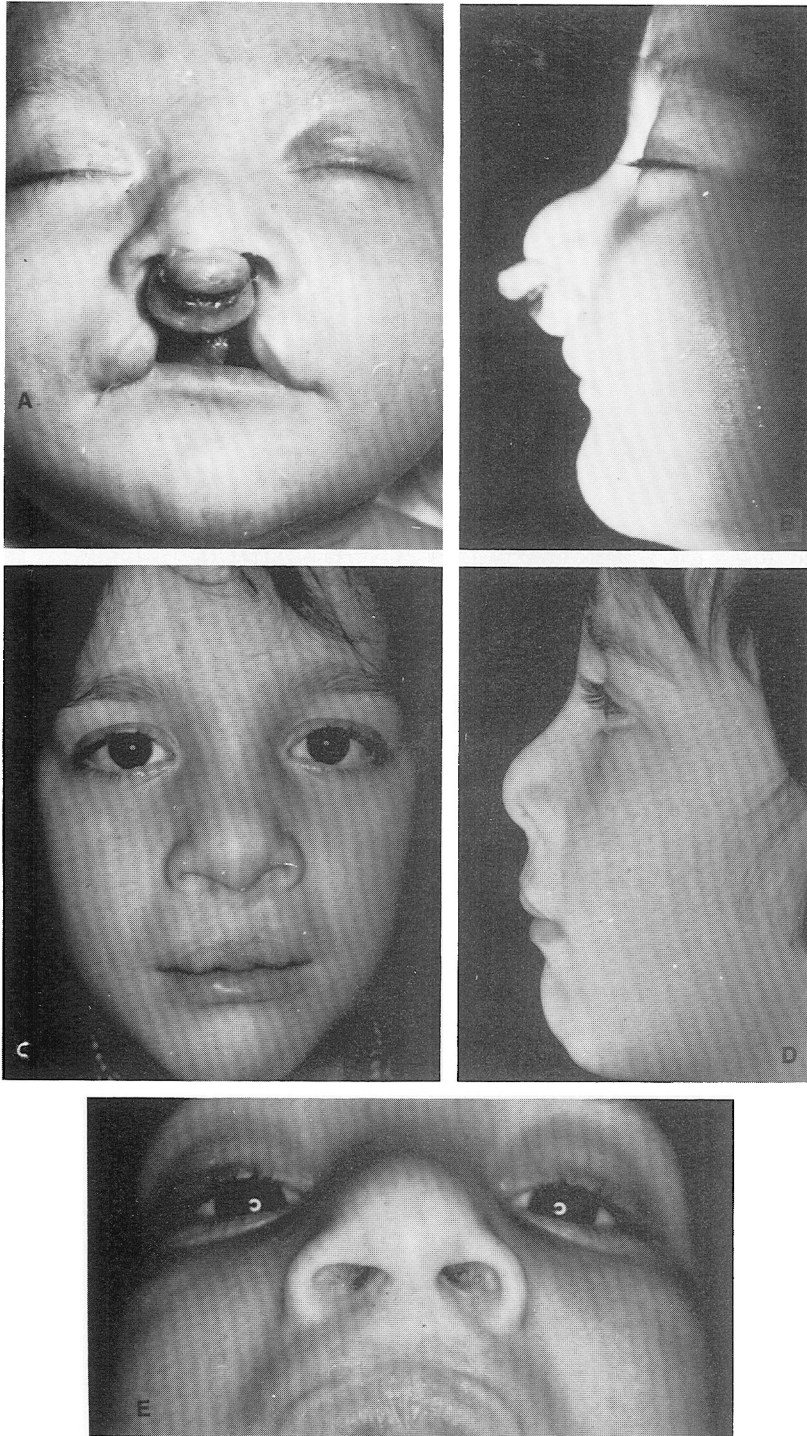


FIGURE 3. A & B—bilateral cleft with a small prolabium. C, D & E—at 5 1/2 years. Prolabial flaps slightly displaced to the lip and moderate columella lengthening.

based flap, and rotated it into a transverse incision at the base of the columella (Figure 1). The same procedure was repeated two months later, when the other side was repaired. He obtained "relatively normal length and configuration of the columella supplied by the prolabial flaps" although he did not provide a detailed study of his results. No other report of Skoog's method was found in the literature.

From 1975 to 1980, the Skoog prolabial flaps were used in 20 children with bilateral complete clefts, all operated by the same surgeon (M.L.). The technique was as follows: closure of the first side at 4 months with a prolabial flap extending along the whole base of the columella; closure of the nasal floor with vomeronasal flaps; closure of the lip with a straight line repair if the prolabium was large enough, and with a 2-3mm wide Ten-

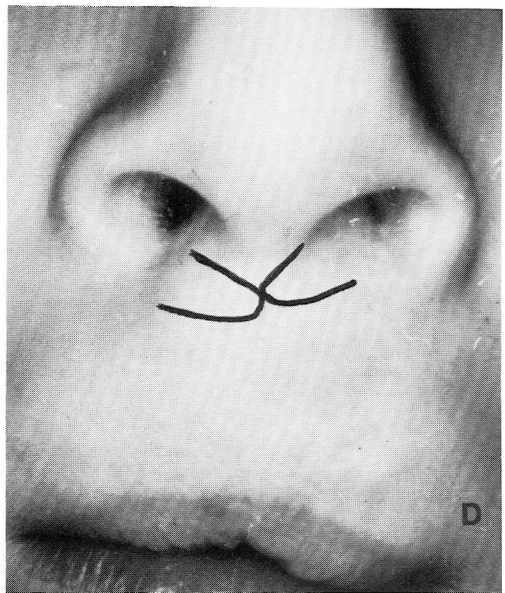
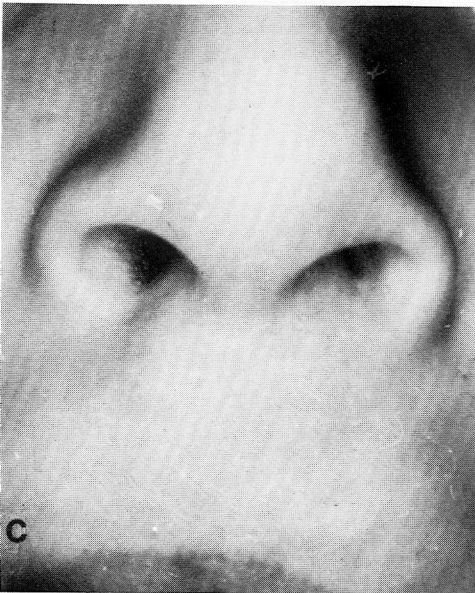


FIGURE 4. A—bilateral cleft with a small prolabium. B—at 2 years, the columella flaps are displaced downwards, and the lip is too long. C & D—at 4 years, showing the place of the prolabial flaps.



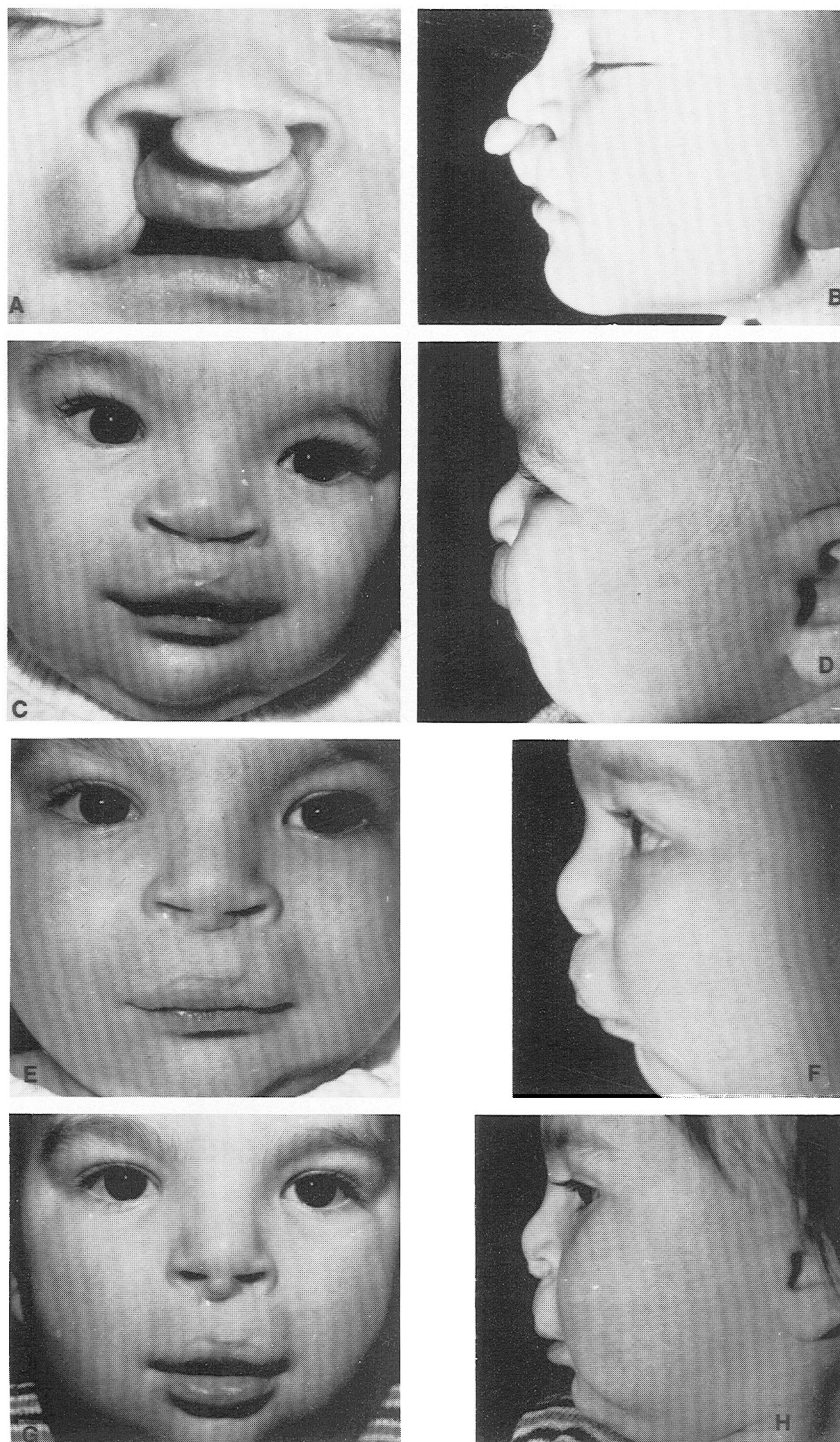


FIGURE 5. A & B—bilateral cleft with a large prolabium. C & D—at 18 months, the columella is still very short. E & F—one year later, the prolabial flaps bulge at the base of the columella. G & H one year later, the bulging has increased.

nison flap if it was very small (five cases). During the first procedure, china ink was tattooed on the sides of the nostril and the peak of the Cupid's bow of the second side. These small spots were removed during the second side operation, at 6 months of age, but they facilitated the drawing of the incision of that side and allowed a symmetrical repair.

In two cases a unilateral bridge was present, reducing the deficiency of the columella on that side. Prolabial flaps were performed bilaterally in all other cases. During the second stage, they were placed on the columella side of the first prolabial flap.

We have followed the 20 children operated by this method, but only the 17 who are now older than two years will be presented.

## Results

All the prolabial flaps healed primarily, and none disappeared with growth, even the very small ones taken from minute prolabium. All have been growing with the child, but not all at the same rate.

Examining the 17 children, now aged two to six years, our results were rather disappointing. In no case was the columella a true normal length. Seven were somewhat short (Figures 2-3), eight were definitely short, and two were very short. Already three children have required secondary forked flaps.

Moreover, the scars were eye catching in six children. In four, the flaps displaced progressively downwards, contributing to an unpleasant long lip appearance (Figure 4). In five

other patients, the small prolabial flaps have curiously been growing more than the adjacent tissues, and are now bulging at the base of the columella (Figure 5). This could not be related to the original size of the prolabium; that is, of prolabial flaps. It was also noticed that the later size of the prolabium is not related to its original size, some short prolabia giving long lips and some long prolabia giving short lips.

## Conclusions

From our experience with the prolabial flaps it is concluded that the results they can produce are not sufficient to justify the scars they add to the usual cleft lip repair. Moreover, even when used by the same surgeon, they do not give consistent results, being sometimes and unpredictably too bulky or displaced to the lip during growth.

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