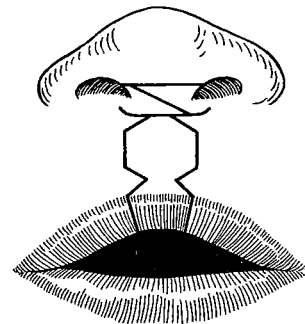


10. Interdigitations into the Sides of the Prolabium

FOLLOWING close upon the quadrilateral flap of Hagedorn, modernized by LeMesurier for unilateral clefts, had come the inferior triangular flap of the Tennison Z-plasty. The improvement in the cleft lip evolution had been a step from creating an artificial cupid's bow to preserving what bow was already present. In the prolabium of bilateral clefts there is *no residual cupid's bow*, so the surgeon is back in the position of trying to find the best way to construct one. The LeMesurier method, already established as a cupid's bow maker, probably had the edge over the Z method, which depended on nature's residual bow. Yet the purchase of a bow with quadrilateral flaps below the prolabium was not worth the price of the scars and a long lip.

Although I never heard directly that Tennison applied his inferior Z-plasty to bilateral clefts, it is quite possible he did so. Certainly other surgeons, infatuated with the Z in unilateral clefts, reveled in the chance to double it against the poor prolabium. Fortunately this principle did not add flaps below the prolabium but merely interdigitated flaps into its gaping sides and did not tend to cause vertical lengthening of the central segment. Rather it produced an odd pair of zigzags unreproduced anywhere in nature. Take, for instance, Skoog's design, which, while interdigitating medial flaps across the base of the columella, interdigitates lateral flaps in the spirit of Tennison into the sides of the prolabium. Maisels and Littlewood of Liverpool at the Rome Congress in 1967 commented on Skoog's approach:



Not only is the columella lengthening achieved by this method somewhat limited, but also it seems desirable to repair both sides at the same operation.

Bauer, Trusler and Tondra of Indiana stated in 1971:

We consider that lengthening the lateral borders of the prolabium by the Z-plasty type of closure has produced scars that are less noticeable than the straight-line scars. Also, the increased length in this area has produced more normal contour to the vermilion border.

Then Kolesov endorsed the Indiana interdigitations with slight modifications for his Russian rendition.

Yet their arguments for this line of union seem quite illogical. A zigzag scar runs against natural skin lines, and lengthening the sides of the prolabium and leaving the center short explains the common occurrence for them of a central notch (whistling deformity) requiring secondary surgery.

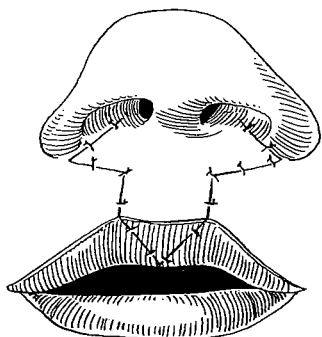
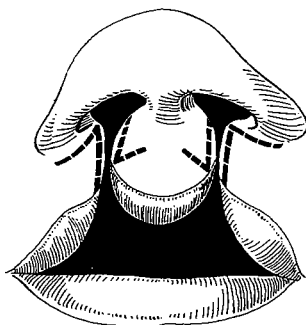
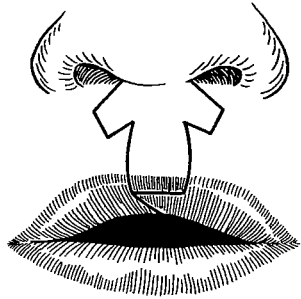
A probe into China by Gaston Schwarz of Montreal in 1974 was answered by a plastic surgeon in the Peking Medical College:

Since 1963, we have been using . . . the Tennison principle for bilateral harelip.

Several of the world's best cleft lip surgeons had a go with this approach but eventually became disenchanted.

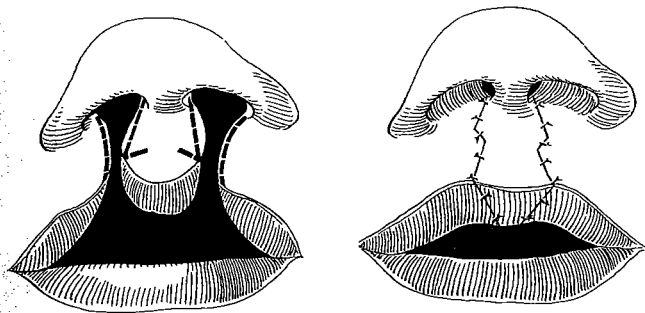
GOOD INTENTIONS

The Allentown team of Marcks, Trevaskis and Payne in 1957 proposed a campaign: "Be Kind to the Prolabium," suggesting preservation of the prolabium in its entirety, including the skin vermilion ridge, and not prescribing introduction of skin inferior to its lower border in the hope that the scarred and distorted prolabium would ultimately be a thing of the past. At least they realized that the length or width of the prolabium was no factor whatsoever as it will increase in size in all dimensions. In their opinion its eventual hair ruled it undesirable for the columella. They presented possible designs, one of which was a Tennison-type approach adapted to bilateral clefts with radical interdigitations.



As this adhered less to their campaign slogan with more violation of the prolabium, in the end it found less favor with them than their other more conservative design.

a misplaced merry Xmas



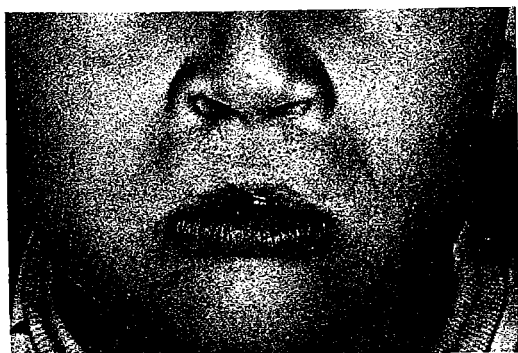
AN IMPROVEMENT ONLY

In 1972 Broadbent and Woolf with Mormon honesty evaluated their application of the Tennison design to both sides of bilateral clefts. They reported:

It preserved a more normal vermillion ridge; gave consistently better length to the lip, and saved bilateral triangles of tissue medial to the peaks of the cupid's bow—including the vermillion ridge on the central prolabium. The latter avoided much of the horizontal tightness and resulting flatness of the lip. . . . Still existing were an adherent prolabium, a flat nose with flaring nostrils, some inequality in lip length and persistent irregularities in the vermillion ridge and mucosa. The Christmas tree lip scar now looked as though it had a two-legged stand under it, carefully encircling a small diamond of prolabium mucosa in the area of the central tubercle. A whistling deformity and a flat central lip often resulted.



Here is a similar example of the same method performed in a great eastern seaboard center bearing the trademark that was described by Broadbent and Woolf.



And another, except that this Christmas tree scar had its top chopped off by the transverse nasal base incision used in the Carter-Cronin columella-lengthening procedure. The narrowing of the alar bases during the partial columella lengthening presents pig's-ears in the lip below the alar bases. These mounds plus the lateral muscle bulges and the lateral flap interdigitations into the sides of the prolabium accentuate the absence of muscle in the prolabium.



It was easy to see that Cronin's final evaluation of the inferior triangular flap in bilateral clefts came painfully to him:

Adaptation of the Tennison type incisions to the bilateral lip has produced some very nice results for me. It tends to give a nice protrusion to the central vermillion. The scars, however, seem to be more noticeable than when the procedure is applied to the single cleft lip. If revision is necessary, it may be a little more difficult than a straight line repair.



There are other modifications of the interdigitations into the sides of the prolabium as that of Orticochea which not only make no effort to imitate philtrum columns but present a maze of irreversible scars.

THE Z IS OUT

The original advantage of preserving a portion of the cupid's bow with a Tennison Z is not valid in bilateral lip clefts. The natural

lines of the philtrum do not zigzag transversely back and forth across Langer's lines. Lengthening the sides of the prolabium offers no true advantage except to break the contracture of the so-called straight-line scar. Yet the advancement of mucosa and muscle past the skin closure posteriorly and the mucosa inferiorly, as in the method I propose, achieves a Z-plasty of layers in hidden planes leaving only the skin apposition as a curving line. On its own, the skin will show minimal threat of contracture, if any. Thus, it is far better to resist the temptation to "scramble the egg" by interdigitating skin flaps into the central sides of the prolabium just for the thrill of executing a familiar Z technique. Rather, let the sides of the prolabium come together with those of the lateral lip elements naturally in the general line of philtrum columns. Revisions and columella construction will be much easier.

*It takes the
worry out
of waiting*