

## *28. Details of Closing a Complete Bilateral Cleft and Banking the Fork*

AN asymmetrical bilateral cleft of the lip with one side incomplete and the other complete has been converted into a symmetrical bilateral cleft complete on both sides. No tissue, however, has been discarded. With the asymmetrical cleft now symmetrical we can proceed as with the more common, true, complete bilateral cleft. It is better for clarity to repeat the measurements and markings.

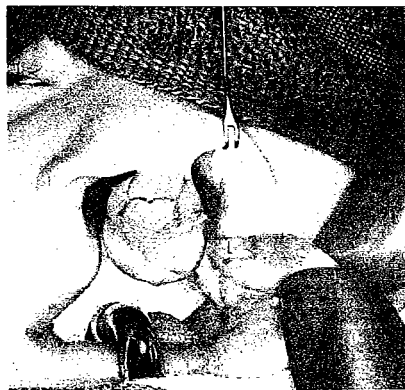
The two arches of the cupid's bow are measured at 3 to 4 mm. from the center of the mucocutaneous junction of the inferior border of the prolabium. Then a slightly greater distance than one arch is measured along the mucocutaneous ridge of the lateral element as soon as the vermilion becomes reasonably full-bodied. The lateral paring of flap b must not extend laterally beyond the normal range of commissure-to-cupid's-bow-peak distance of 18 to 22 mm. set at point x.

Further upward paring of the lateral edge should extend to create a side equal in length to the vertical height of the pared prolabium measured from its mucocutaneous junction to the lateral base of the columella. This creates matching skin edges for exact approximation.

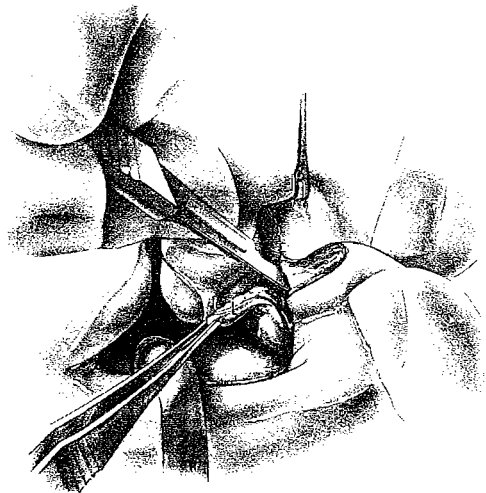
When paring the left lateral cleft edge, one marks the attenuated vermilion of the upper portion as flap l. This flap l is being

pared up to its base on the alveolus. The dotted line marks the vestibular incision for release of the alar base. The paring continues laterally, developing flap b, which is composed of full-bodied vermilion edged with the mucocutaneous ridge. Remember, the limit of the lateral extension of the paring is at point x, leaving normal commissure-to-peak-of-bow distance. The lip element and alar base are released from the maxilla with the incision extending into the vestibule. As the lip and alar base move in and forward, the vestibular defect opens and flap l is used to fill this raw area and reduce subsequent contracture.

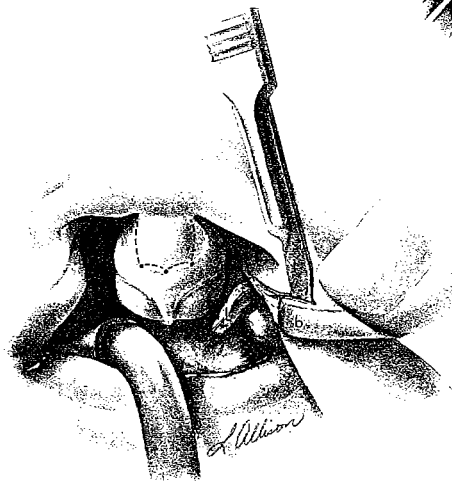
Of course, the right side is handled like the left including the paring of flap l, the freeing of the lateral lip element from the maxilla, release of the alar base by extending the lateral incision into the vestibule and finally the paring of flap b.



The attenuated upper cleft edge vermilion on the lateral lip element is marked as flap l.



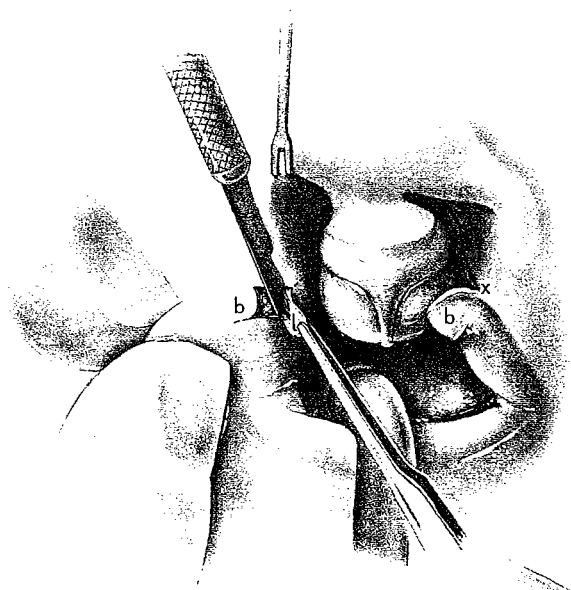
The lateral lip edge has been pared of flap l. Vestibular incision marked for release of alar base.



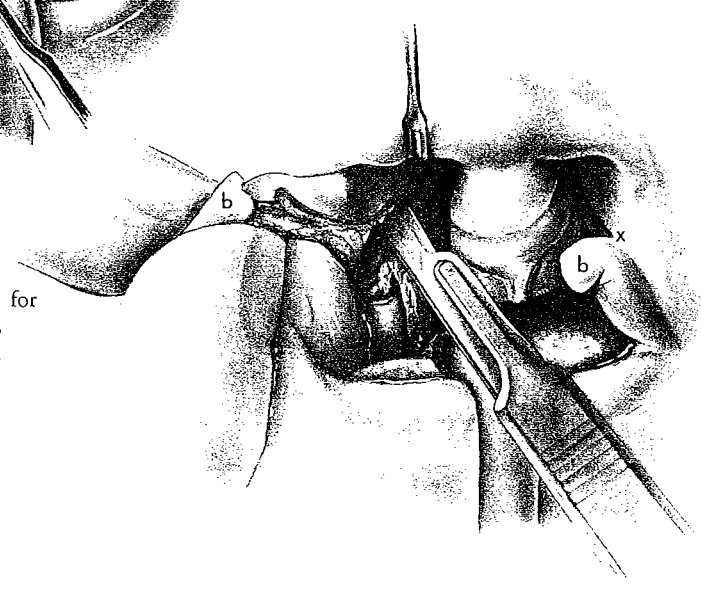
Flap l based on alveolus is hanging free. Vermilion flap b with mucocutaneous ridge is being incised.



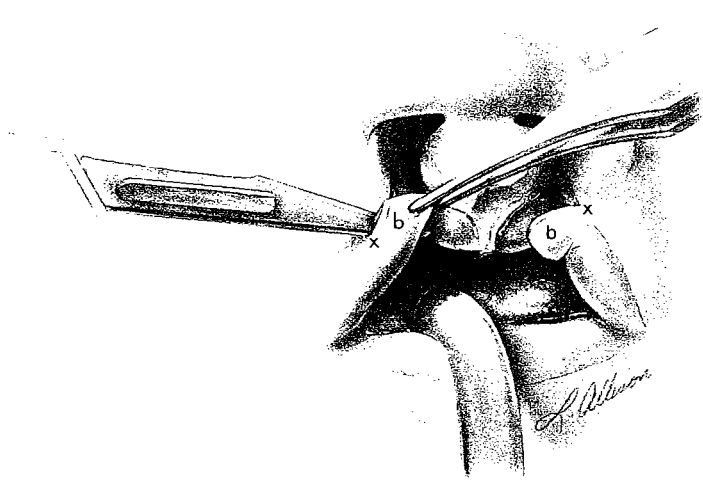
The left alar base has been released from its attachment to the maxilla and the defect will be filled by flap l.



Paring the right upper vermilion flap 1 to a superior base on the mucoperiosteum of the alveolus.



Extending the incision for releasing the lateral lip and alar base from the maxilla along the intercartilaginous line in the vestibule.



Flap b, as on the left, is cut slightly longer than half the cupid's bow so the excess will pile up in the center join to form a tubercle.

## PREPARING THE PROLABIUM

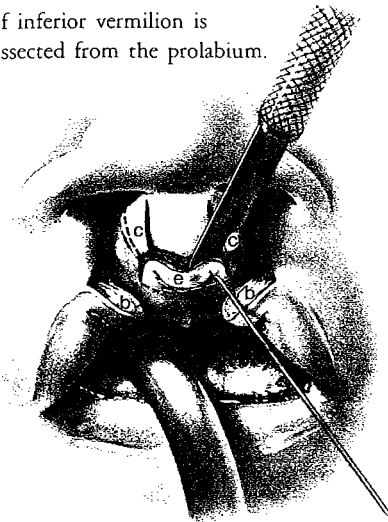
In order to shape a philtrum and to set aside future columella tissue, the prolabium must be "drawn and quartered."

The objectionable inferior vermilion of the prolabium is turned down as a cuff (e) to serve as hidden lining to the central free border of the lip. Enough base attachment to the prolabium must be maintained for flap e's viability.

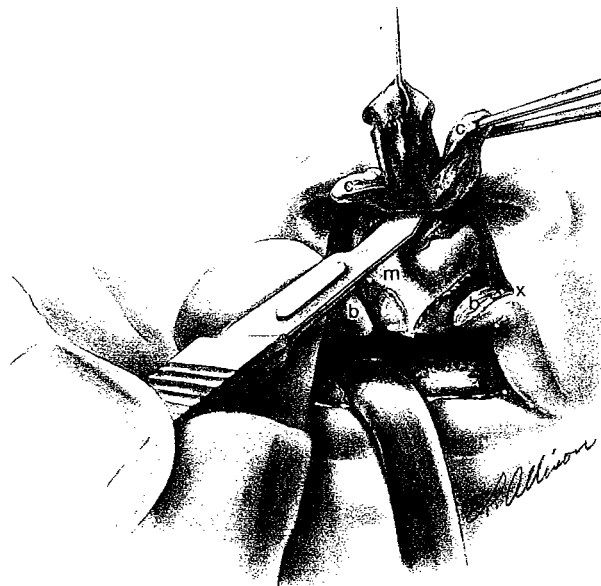
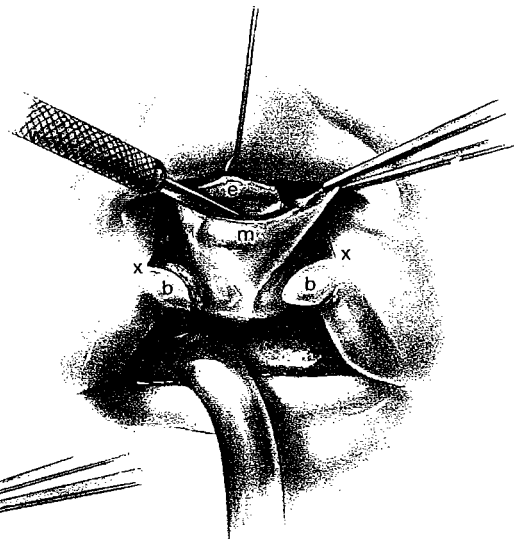
A 3 mm. edge of vermilion along the sides of the prolabium should be retained as a fringe on each fork to supply better cover during the banking. It will also provide extra tissue in a hidden position for the new columella. When this posterior edge is sutured to the membranous septum during the final advancement of the forked flap, it will be out of sight. All extra mucosa m is left attached to the premaxilla to assist in the formation of the posterior side of the upper labial sulcus.

The three fingers of prolabium, the central philtrum with its vermilion cuff e and the two lateral forks with their vermilion edge are dissected from their attachments to the premaxilla up to the nasal spine.

Flap e of inferior vermillion is being dissected from the prolabium.

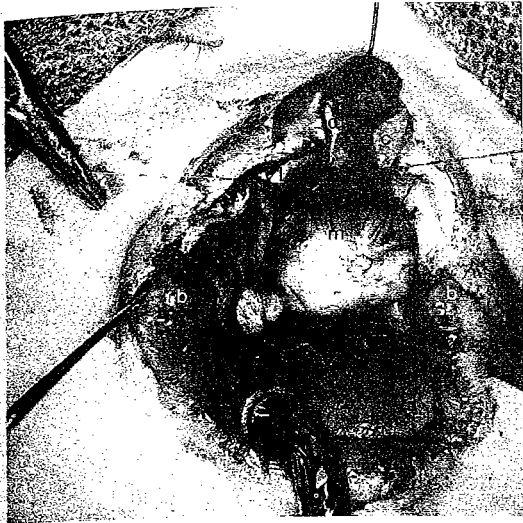


The dotted line marks the future division of the prolabium from the premaxilla. Enough intact mucosa must be left above this line to vascularize flap e.



The tripartite prolabium philtrum with its mucosal cuff and the two forks are being dissected from the premaxilla leaving the peripheral mucosa m for cover of as much alveolus raw area as possible.

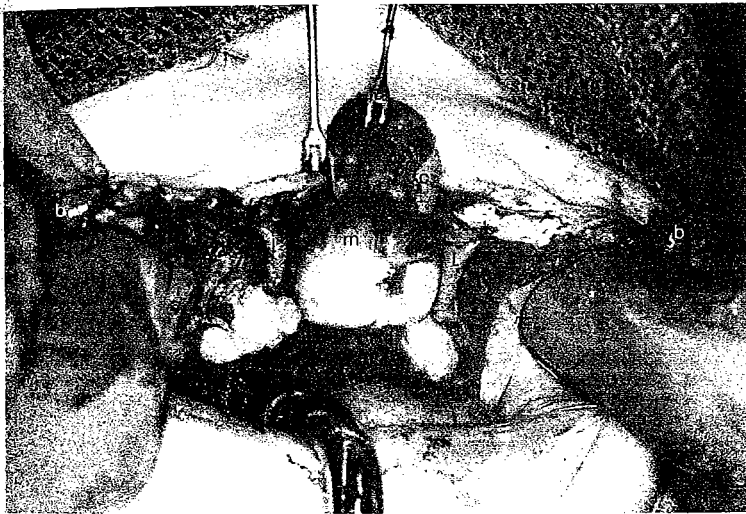
First one flap is released and then the other is sutured into the raw area created by release of the lateral lip elements and alar bases from the maxilla. The extension of the releasing incision in the lateral vestibule up along the intercartilaginous line crosses and relieves the web of tightness. Introduction of flap 1 into this gap to whatever extent required bypasses the need of a vestibular Z or skin graft now or later. Not only are both alar bases free to move forward and inward but in the wake of their movement lining flaps ensure that they maintain the gain.



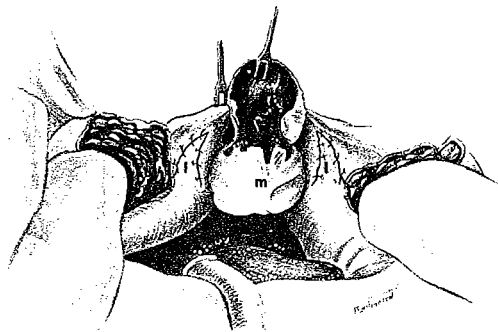
Flap 1 (Rt) is being sutured into the alar base releasing defect.



The same is being done on the left.



Both 1 flaps now line their respective vestibular defects.

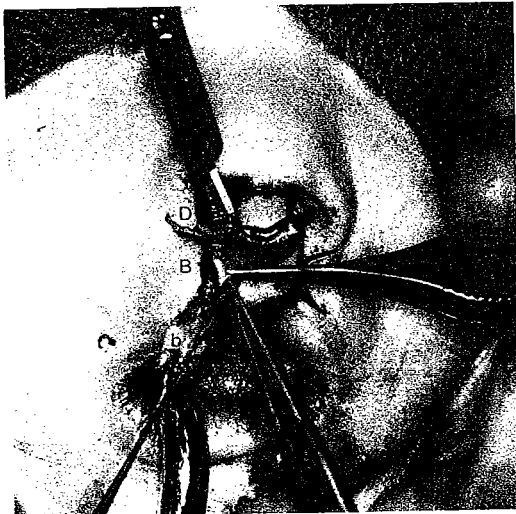




Trimming the left lateral skin edge.



Scoring the division of the left alar base from the lateral lip element.



Tidying the right skin edge of the lateral element.



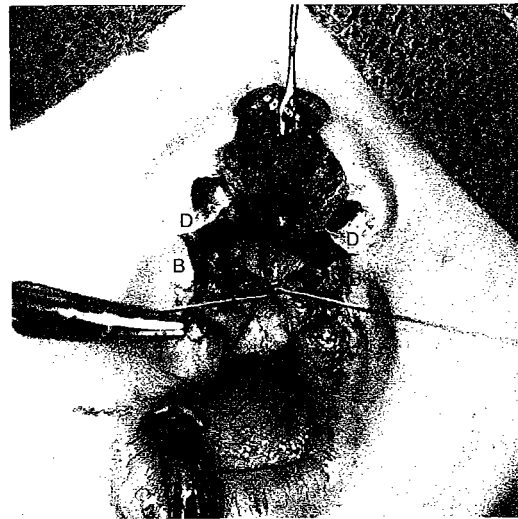
Dividing the alar base from the right lateral lip element.

The skin edge of the lateral lip element is tidied to match exactly the corresponding pared edge of the prolabium. Then the alar base is severed from the lateral lip element with a circumalar incision to make possible its greater medial rotation and permanent maintenance of this position independent of the lateral lip element.

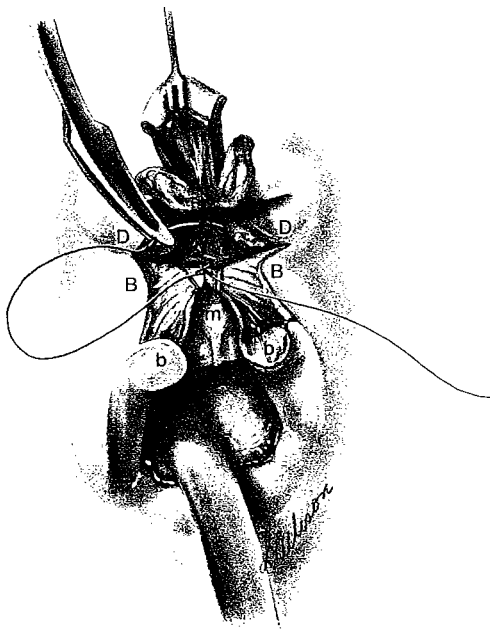




Freeing the skin along the cleft edge.



Bringing the posterior mucosa of the lateral lip flaps together.



Pinning the upper lip to the septum at the nasal spine.



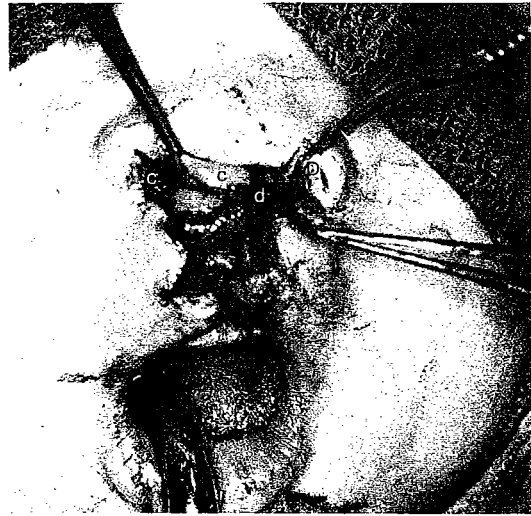
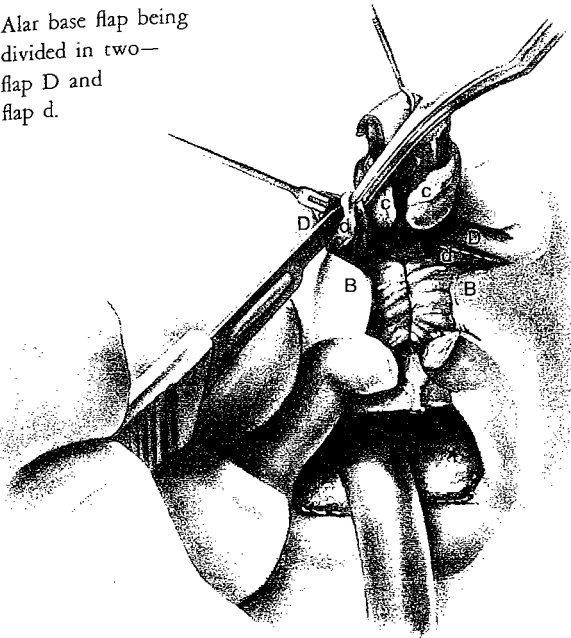
The muscles have also been approximated in the midline.

The skin edge of the lateral lip elements is freed 2 to 3 mm. to allow eversion in the skin closure. Then the lateral lip elements are sutured to each other across the cleft over the premaxilla and under the prolabium. First the posterior mucosa and then the muscles are approximated. The central upper portion of this join is fixed with a 4-0 chromic catgut (Ethicon #752G) to the septum at the nasal spine.

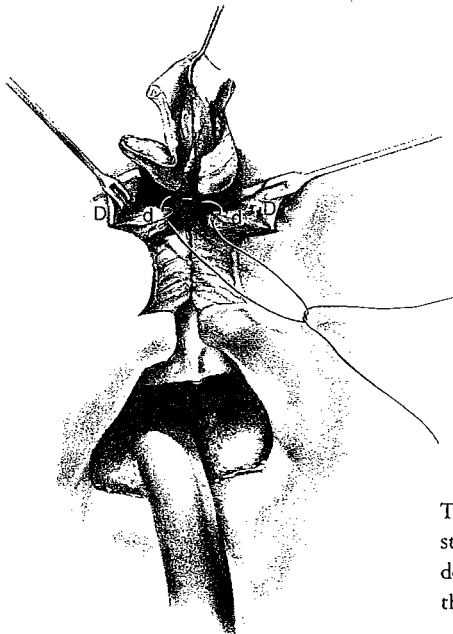
Each full-bodied alar base flap is divided into two flaps, one a skin flap D and the other a deeper, subcutaneous flap d. The subcutaneous alar d flaps are sutured with 4-0 Vicryl (Ethicon #V-494G) or 4-0 chromic catgut (Ethicon #752G) to each other and the septum just above the nasal spine. This suturing swings the alar bases into normal position and ties them there. Thus, the abnormal width of the nose and the flare of the alae are reduced primarily, leaving alar base skin flaps free to assist in forked flap banking.

Next the posterior mid-vertical slit in the prolabium, which has been cut to dermis, is caught with a 5-0 Vicryl (Ethicon #V-493G) suture that then takes a bite across the muscles. The tying of this suture dimples the philtrum.

Alar base flap being divided in two— flap D and flap d.



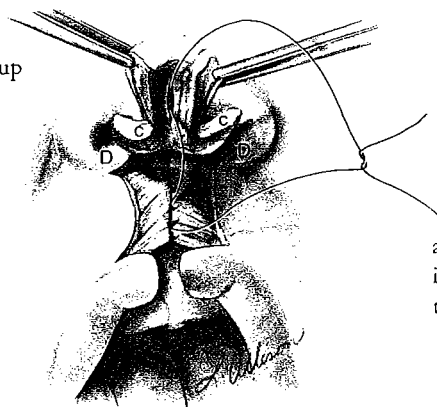
Skin flap D and subcutaneous flap d being demonstrated.



4-0 Vicryl suture pinning both subcutaneous d flaps to each other and the septum pulling the alar flare out of the alar bases.

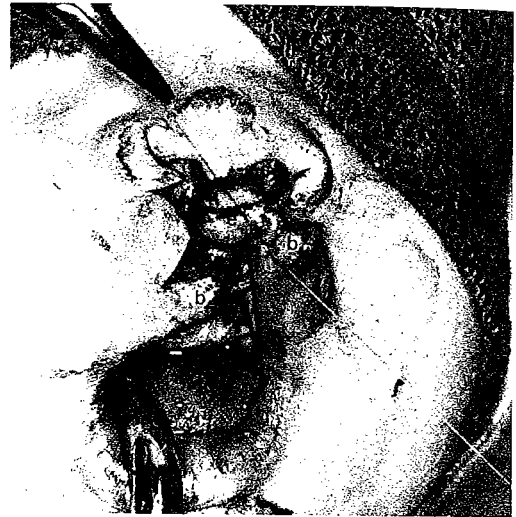


The dimple stitch picks up dermis in the slit



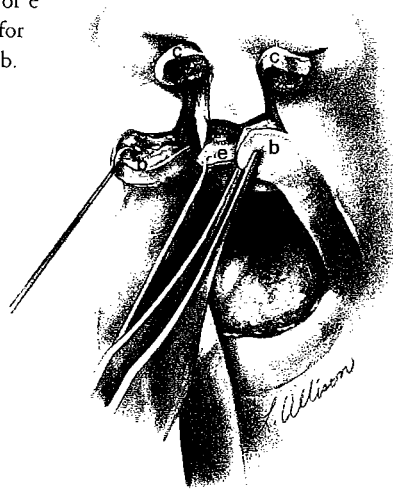
and sutures it down to muscle.

Once the posterior mucosa has been approximated, mucosal turnback flap e and its base are incorporated in the inferior closure. Often only a small amount of e is required for lining and the rest can be scrapped. Now the bed along the inferior prolabium is open for the bilateral advancement of the lateral vermilion b flaps edged with a mucocutaneous ridge to form the cupid's bow.



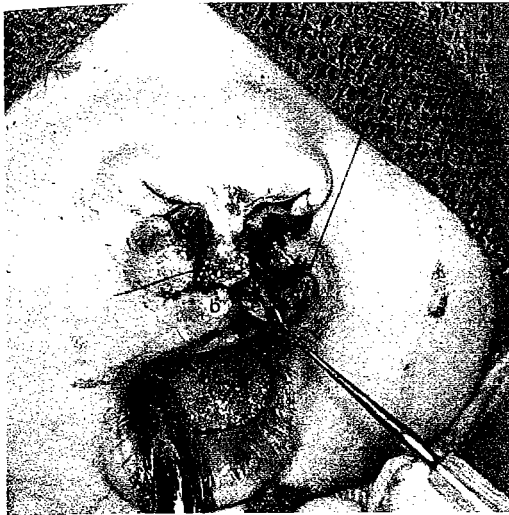
Incorporating the mucosa of flap e and its base for lining into the posterior inferior position of the center of the lip.

Turndown of e opens gap for lateral flap b.

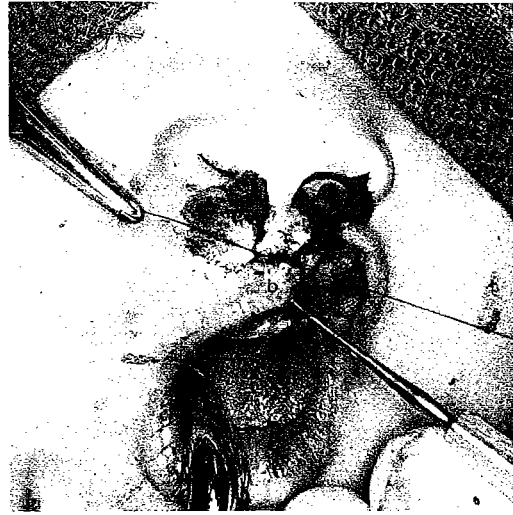


Left lateral flap b overlapping e to form one-half of the cupid's bow.

Suturing the skin of the prolabium to the lateral elements at key points with 6-0 silk (Ethicon #780G) sets up each peak of the bow. This allows each flap b to slide medially to overlap half of flap e and fill out the free border.



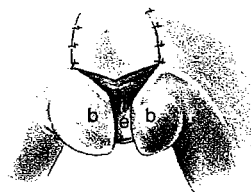
Key skin point of philtrum and lateral lip element are being sutured on the right at potential peak of bow.



Same on the left.

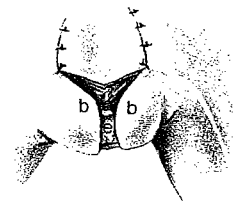


Excess of lateral vermilion b flaps pile up to form a full central tubercle.



Mucocutaneous "white roll" ridge on the lateral vermilion flap b can be brought under the prolabium

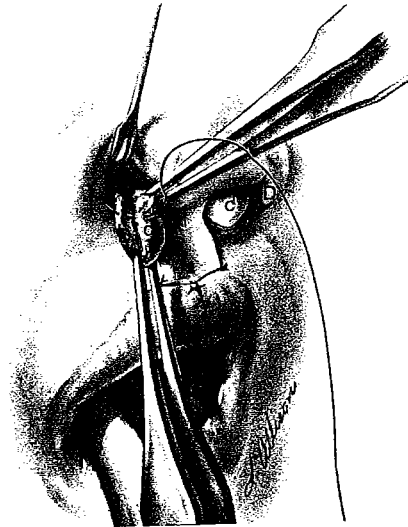
OR



if the prolabium mucocutaneous junction is well enough defined it can be maintained and only vermilion brought below it.

The mucocutaneous "white roll" ridge can be brought in on flap b. If the mucocutaneous ridge along the inferior border of the prolabium is raised and definite, it should be preserved and the ridge on the lateral mucosal flap can be trimmed off. When the mucocutaneous ridge accompanies the lateral vermilion flap, the surgeon is free to shape the double arch of a true cupid's bow along the inferior skin border of the prolabium.

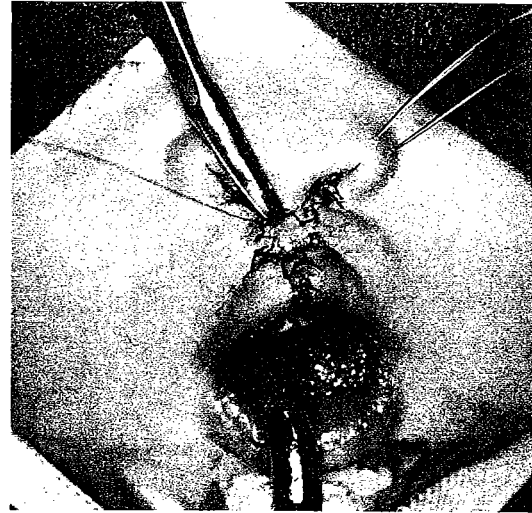
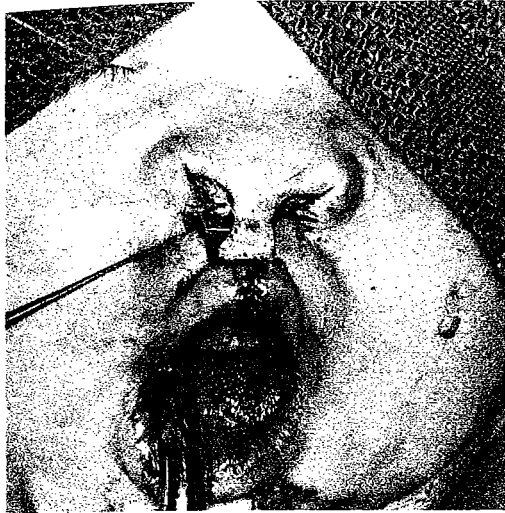
The extra length of flap b beyond the length of half the cupid's bow is designed to present an excess of vermilion tissue which piles up in the center join to form a full tubercle.



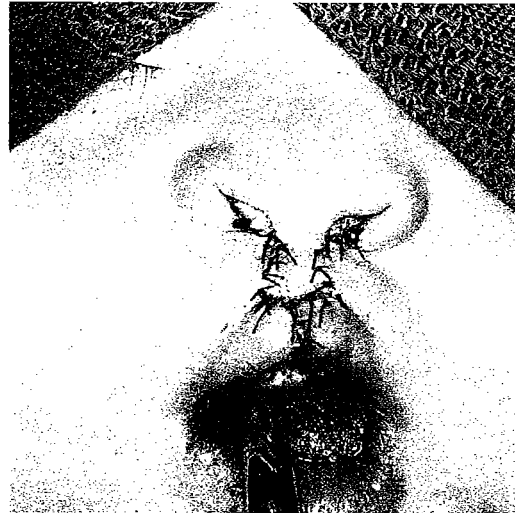
Banking the forks is achieved by suturing each alar base flap D to its respective fork and closing off all raw areas.



Now the forks are banked by suturing the alar base skin flap D to the corresponding prolabium fork, tip to tip and sides to sides. This creates two bizarre skin pyramids, better thought of as "praying hands," which usually fold back into the nostril floor almost out of sight. If all raw areas are closed, although the flaps seem to settle and shrink, the tissue is there and our prayers answered when the time comes for its advancement during columella lengthening.



The remaining closure is achieved with fine catgut to the subcutaneous tissues and silk to the skin.



Final suturing is achieved with 5-0 chromic catgut (Ethicon #792G) and 6-0 (Ethicon #790G) in the subcutaneous tissue closure of the lateral lip and prolabium. Then 6-0 silk (Ethicon #780G) approximates the skin edges. The pyramid "bank" plugging the nasal aperture settles into the nasal floor without serious airway obstruction.

## WHISKER BANKING

Although the "praying hands" position is good, I have tended to use the whisker position in many of the complete clefts. The bilateral circumalar incisions, which release the alar bases from the lateral lip elements and allow advancement of the flaring alar bases, also provide an opening in the subalar area for banking the forks. The advantages are not only the complete coverage of the fork's raw area but also the visible position of the banked material, which is easily reelevated and shifted like any forked flap into the columella. This at present is my favorite banking method for all cases.

