1981 YEAR BOOK OF PLASTIC AND RECONSTRUCTIVE SURGERY

McCOY / BRAUER
HAYNES / HOEHN
MILLER / WHITAKER

The YEAR BOOK of

Plastic and Reconstructive Surgery

1981

Editor

FREDERICK J. McCOY, M.D.

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1. Congenital Anomalies

Cleft Lip and Palate

1–1 **Minimal Cleft Lip Revisited: Clinical and Anatomical Correlations.** Frederick R. Heckler, Larry G. Oesterle, and Michael E. Jabaley studied eight patients with minimal cleft lip, defined as a lip cleft that extends into but not past the vermilion, with a minor defect in the mucocutaneous border and a nostril deformity (Fig 1–1). The patients' age range was 7 months to 37 years. Rotation-advancement cleft lip repair was carried out in all cases, with removal of a single full-thickness section of upper lip extending over the entire vertical height of the lip.

All patients had some dental deformity, but this did not correlate with the severity of the nasal deformity or the amount of vermilion notching. All patients had evidence of cleft lip nasal deformity; the area of the nostril sill and

Fig 1–1.—Patient with minimal cleft lip, demonstrating vermilion notch, minor defect in mucocutaneous border, narrow ridge of tissue extending from vermilion to nostril, and nostril deformity. (Courtesy of Heckler, F. R., et al.: Cleft Palate J. 16:240–247, July 1979.)

(1–1) Cleft Palate J. 16:240–247, July 1979.

nasal floor were most markedly affected. Continuity of orbicularis muscle fibers across the cleft locus was seen in all cases, but muscle fiber disarray was seen at the potential cleft line. Fiber misdirection and disarray were most evident in patients with the most severe cleft lip nasal deformities, in whom a furrow formed from the vermilion to the nasal floor on puckering the lips. The degree of orbicularis muscle abnormality was not related to either the severity of the dental defects or the size of the vermilion notch.

The minimal cleft lip might more accurately be termed a minimal cleft of the primary palate. Use of the rotation-advancement technique has allowed simultaneous correction of the lip deformity, nasal deformity, and muscle abnormality. The abnormal segment of muscle underlying the lip crease should be excised. This will permit reconstitution of the dynamic oral sphincter by approximating the adjacent, normal orbicularis muscle bundles.

▶ [This is a nice study of the findings in the patient with a minimal cleft.—R.O.B.] ◀

1-2 **Construction of the Cupid's Bow.** Thomas Ray Vecchione (Univ. of California, San Diego) presents a procedure for the creation of a cupid's bow in patients in whom repair of cleft lip and palate has left an unnatural appearance of the upper lip. The major components in such a creation are the central concave white roll, the philtral dimple, the peaked philtral ridges, and the defined tubercle. Ten patients, aged 7–26 years, were operated on using this method.

TECHNIQUE.—Local anesthesia of the upper lip is obtained with 1% lidocaine with epinephrine 1:200,000. The proposed cupid's bow is marked on the upper lip. Each peak is placed 4 mm from the midline. An 8×4 mm crescent of tissue is excised from the anterior vermilion just below the proposed new cupid's bow (Fig 1–2). A 7-mm incision is made just at the moist-dry vermilion junction, and the resected crescent of vermilion is sutured in place as a composite graft with 6-0 nylon interrupted sutures. This mound of tissue creates a midline augmentation, which suggests a tubercle. The dissection is carried subcutaneously into the region of the proposed philtral dimple and beneath the white roll. The scar and orbicularis muscle are resected. The white roll is

(1–2) Plast. Reconstr. Surg. 65:830–833, June 1980.

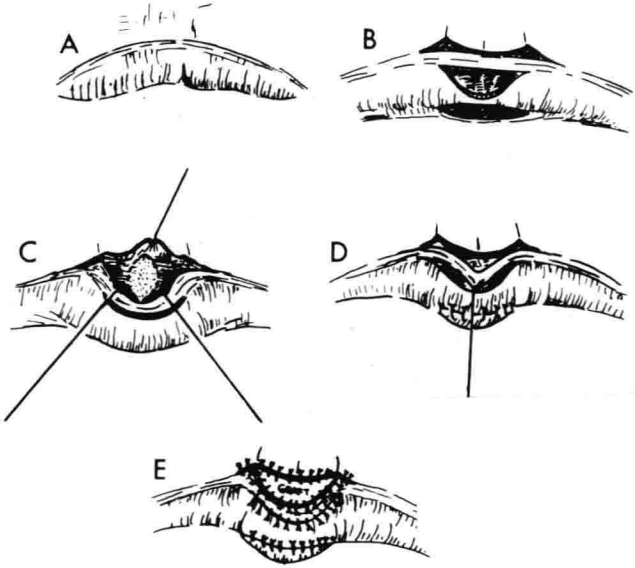

Fig 1–2.—A, smooth sweep of upper lip (white roll) is the result of some older methods of cleft lip repair. **B,** resection of cupid's peaks and central vermilion with an incision for new tubercle is demonstrated. **C,** central philtral dimple is achieved through resection of muscle and scar just above central undulation. White roll has been dissected as a bucket handle and is retracted inferiorly. **D,** resected central vermilion is sutured as a composite graft to new tubercle position. **E,** full-thickness graft (preauricular or submental) is sutured to depth of new philtral depression, and white roll is sutured to its new position. (Courtesy of Vecchione, T. R.: Plast. Reconstr. Surg. 65:830–833, June 1980.)

then a "bucket handle" and is sutured to the remaining lower vermilion with 6-0 nylon interrupted sutures. The lateral, upper white roll is mobilized and sutured to the new cupid's peaks. A full-thickness skin graft is then taken from the preauricular region and sutured into the new cupid's bow. One central tacking suture is brought through to the upper buccal sulcus to hold the graft to the depth of the depression at the central portion of the philtrum.

All surgery was done in one stage; no complications were encountered; and a satisfactory improvement was achieved in all 10 patients. Follow-up for as long as 2 years demonstrated that the philtral dimple was present but somewhat shallow.

▶ [This appears to be a clever method of creating a cupid's bow when

the original surgeon has sacrificed all the elements for the bow.—R.O.B.] ◀

▶ ↓ The following three articles present different methods of correcting a deficiency in the upper lip vermilion. I have used Kawamoto's procedure presented in the first article to reduce an excess in the lower lip while augmenting the upper lip vermilion. This is a nice operation that works.

The operation described in the second article is not the routine switch flap but has merit for the type of patient presented. The third article details a V-to-Y advancement of prolabial mucosa to augment the prolabial vermilion. The one disadvantage of this procedure is the unsightly scaling area frequently left in these patients. Another method to correct this deficiency that removes this unsightly vermilion is the use of the pendulum flaps suggested by Kepatansky. This deficiency also could have been corrected at the primary repair by the use of lateral vermilion muscle flaps to augment the prolabial vermilion, as recommended by Cronin.—R.O.B.' ◀

1–3 **Correction of Major Defects of Vermilion With Cross-Lip Vermilion Flap.** Irregularities of the vermilion can spoil the appearance of an otherwise well-repaired cleft lip. Repaired lips with a major absence of vermilion tissue defy correction by simple means. Methods based on redistribution of the remaining vermilion or upper lip mucosa require adequate local tissue. A tongue flap does not give a good match, nor does the mucosa that lines the lower lip. Henry K. Kawamoto, Jr. (Univ. of California, Los Angeles) used a modification of the Gillies and Millard (1957) procedure to treat burn deformities of the lip in correcting major vermilion defects in the cleft lips.

TECHNIQUE.—A transverse incision is made along the lower edge of the vermilion of the upper lip on the deficient side and is carried into the superficial layers of the orbicularis oris in the area of the defect. A flap is developed along the free vermilion border on the other side of the lower lip as a longitudinal wedge, tapering near the commissure (Fig 1–3). If the bulk of the lower lip is excessive, a large wedge can be removed. The vermilion flap is rotated 180 degrees and inserted into the incision in the upper lip. Fine chromic gut sutures are used to secure the flap and to close the donor defect. The pedicle is divided after 7 to 10 days, and the horizontal excision is continued across the lower lip ipsilaterally to balance the two sides of the lower lip. The flap on the upper lip is trimmed to fit, and inset into a transverse incision made through any remaining defect of the upper lip.

This procedure is well suited to the repair of major defects of the vermilion. Its use for 2 years has given pleasing results. The normal orientation of the dry and wet parts of

(1–3) Plast. Reconstr. Surg. 64:315–318, September 1979.

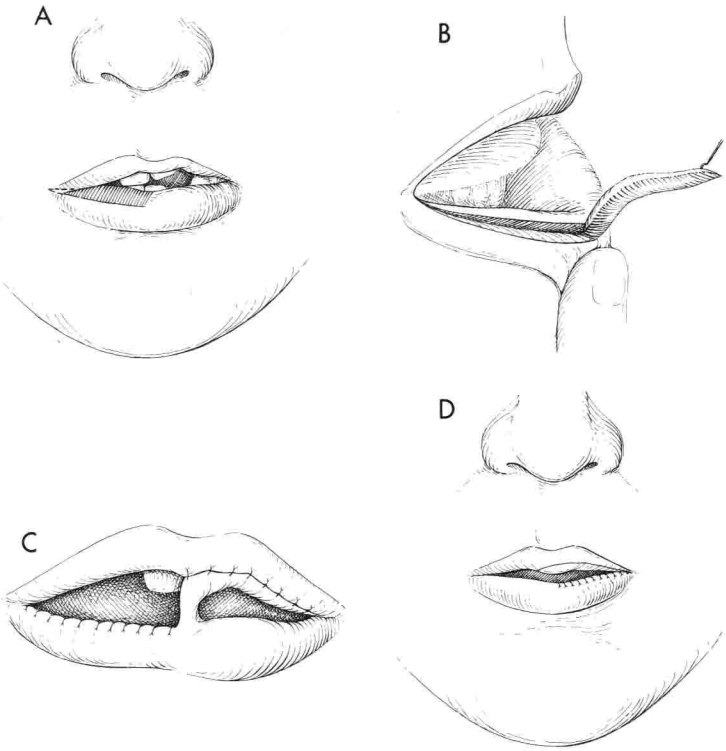

Fig 1–3.—**A,** large defect of upper vermilion. Flap to fill it is outlined on contralateral side of protruding lower lip. Tip of flap *(dashed lines)* is carried onto buccal mucosa beyond commissure. **B,** horizontal, tapering, wedge-shaped flap has been raised. **C,** cross-lip vermilion flap is rotated in place and secured. Note reduction in volume of lower lip. **D,** after division of pedicle and inset of flap, donor site is closed. (Courtesy of Kawamoto, H. K., Jr.: Plast. Reconstr. Surg. 64:315–318, September 1979.)

the vermilion is maintained, providing a nearly perfect texture and color match. Sizable defects can easily be filled in to obtain an upper lip with better contour and simultaneously reduce the fullness of the lower lip and produce a better balance between the two lips.

1-4 **Another Method to Repair Whistling Defect of Upper Vermilion.** When a whistling defect is localized to the vermilion, with the philtrum and cupid's bow uninvolved,

(1–4) Plast. Reconstr. Surg. 64:711–714, November 1979.