Bilateral V-Y advancement flaps with pincer modification for re-creation of large philtrum lip defect

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Abbreviation used:
AF: advancement flap

SURGICAL CHALLENGE

Large defects of the philtrum involving the mucosal and cutaneous epithelium (Fig 1) are difficult to repair and may lead to long-lasting cosmetic deformity. M-plasties, V-Y and horizontal advancement flaps (AFs), seagull flaps, and skin grafts are all repair options. M-plasties and seagull flaps are used for short, mostly cutaneous defects. AFs may blunt natural philtrum columns, whereas grafts are often obvious.[1-4]

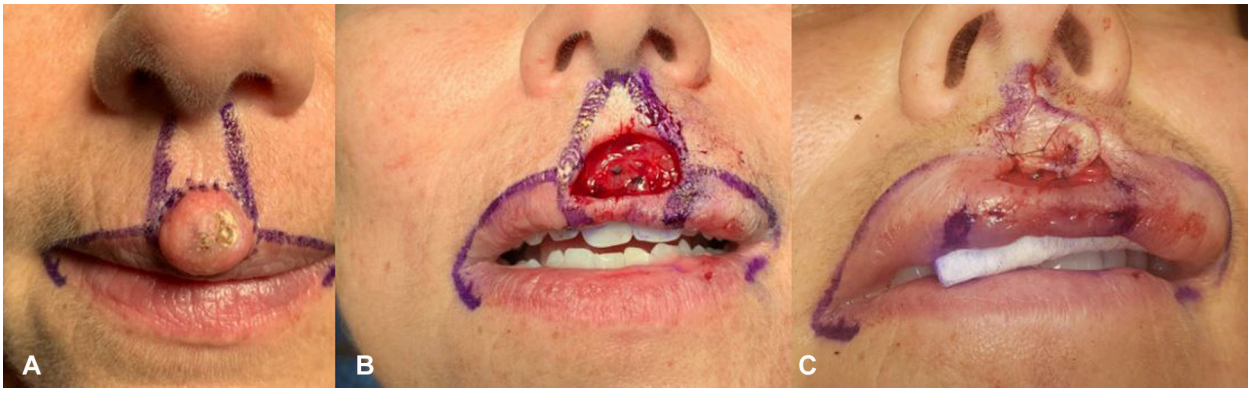

Fig 1. A, Large keratoacanthoma squamous cell carcinoma obliterating the philtrum. **B**, Wide and deep defect of the philtrum involving cutaneous and mucosal epithelia after complete tumor clearance with 3 stages of Mohs micrographic surgery. **C**, Formation of the pincer V-Y modification originating from the columella for additional length. Lateral pincer flaps are folded over each other to create a teardrop shape.

SOLUTION

Bilateral vertical V-Y AFs are used for central lip reconstruction.[1-4] For tall/wide defects of the philtrum (Fig 1, *B*), the superior V-Y may not have enough length to preserve the normal lip height and may not recreate the Cupid's bow, especially if the mucosal V-Y has to be pulled higher.

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The pincer modification, described by Dr David Brodland, allows for curling of lateral flap edges into a teardrop shape to recreate the natural concavity of the philtrum and Cupid's bow.[5] Joining this modification superiorly, an inferior-based V-Y can recreate the mucosal defect and recreate the philtrum crest points of the cutaneous-vermilion junction.

The pincer V-Y can begin on the columella for additional length, lateral edges should be folded medially in a teardrop shape, and the initial sutures for the mucosa junction can be placed in the lateral foci of the teardrop (Fig 1, *C*). The mucosal V-Y is advanced superiorly to the pincer flap. If muscle is missing, it should be sutured together, and only a partial mucosal incision should be made to avoid graft creation (Fig 2, *A*). The resulting modified combination re-creates the volume loss and normal philtrum shape (Fig 2, *C*).

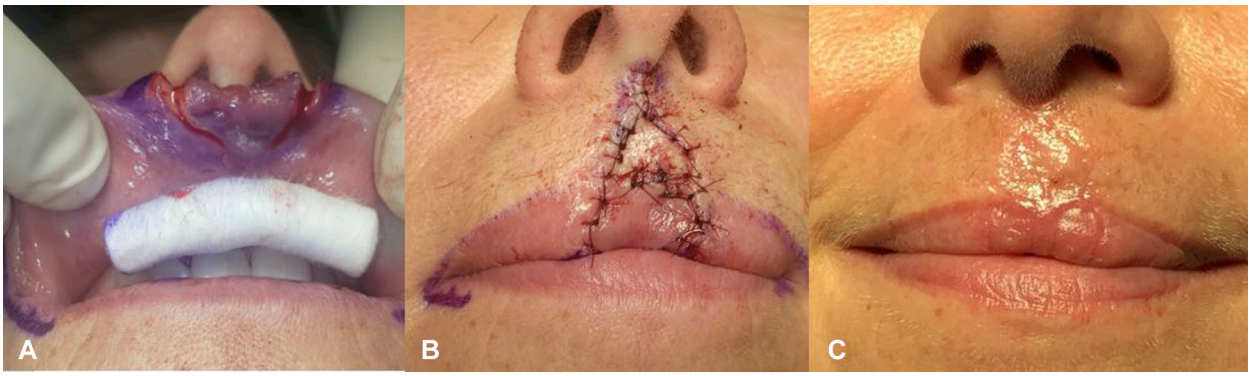

Fig 2. **A**, Due to full-thickness loss of mucosa and muscle in this area, only a partial incision of the mucosal epithelium is made to preserve some attachment. **B**, Final repair. **C**, 5-week follow-up with appropriate restoration of philtrum crests, lip volume, and Cupid's bow.

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