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Upper Lip Reconstruction after Oncologic Resection by a Sliding Advancement Cheek Flap with Buccal Mucosal Eversion

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Sir:

The objective of lip reconstruction is to achieve both functional and esthetic competence in mastication, phonation, facial expression, and facial balance. Upper lip defects can often be reconstructed using an advancement/rotation flap with Burow's triangle excision and a crosslip flap such as the Abbe flap or Estlander flap.[1–5] Martin et al[3] reported that plastic surgeons' first choice for reconstruction of upper lip defects was the cheek advancement flap, followed by the Abbe flap. Excellent esthetic and functional consequences for the reconstruction of large upper lip defects have yet to be established.

A 71-year-old man presented with a 5-month history of an ulcer in the right upper lip. The patient had visited a dental clinic and was clinically diagnosed with a decubital ulcer caused by contact between the canine teeth and right upper lip. Clinical examination at our institution revealed a 33×17-mm wedge-shaped ulcer with surrounding indurations involving the right upper lip region. The patient underwent a biopsy of the lesion under local anesthesia to achieve a pathological diagnosis, and histopathological examination revealed moderately differentiated squamous cell carcinoma. The patient underwent excision of the tumor mass, total neck dissection, and reconstruction of the right upper lip under general anesthesia.

The upper lip reconstruction was performed using 2 sliding advancement cheek flaps and buccal mucosal eversion. A curvilinear region involving Burow's triangle was designed

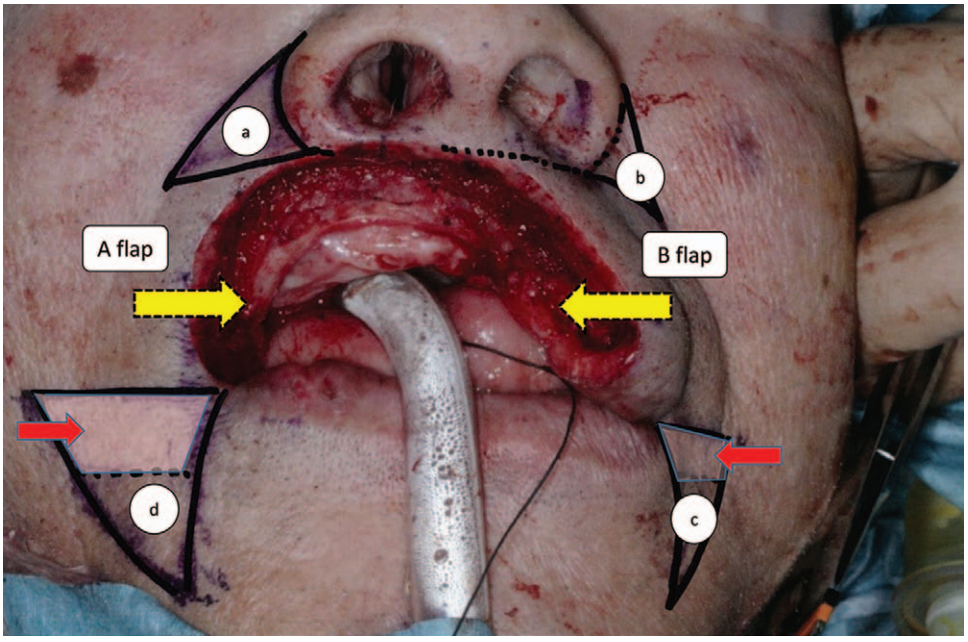

Fig. 1. Squamous cell carcinoma of the upper lip reconstructed with an advancement cheek flap. Preoperatively planned marking for bilateral cheek advancement with Burrow's triangle of the nasal ala and lower lip (removed at a, b, c, and d regions) for a large defect after resection of the upper lip carcinoma. The upper lip reconstruction was performed using the 2 sliding rotations and an advancement cheek mucosal flap (A and B flaps). The upper vermilion reconstruction was accomplished with buccal mucosal eversion (*red arrow* regions).

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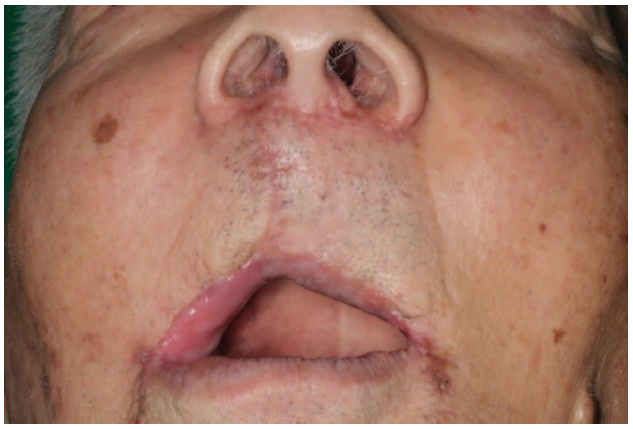

Fig. 2. One-year postoperative view. Note the presence of the upper vermilion recruited by buccal mucosal eversion. The patient was able to close the upper and lower lips and masticate using dentures.

along the bilateral alar base of the nose and cheek skin crease to allow for sliding of the advancement cheek flap. The length of the lower incision line was planned to be equal to that of the horizontal defect. Next, wide full-thickness resection was performed to a horizontal diameter of approximately 50 mm around the malignant tumor and involved almost three-fourths of the upper lip. After resection of the triangular curvilinear region, the medial edges of each flap were inset with 3-layer closure to provide adequate oral sphincter function. The lower resections were performed through the subcutaneous tissue and muscle to the level of the mucosa. An inferior-based buccal mucosal flap was reversed at the anterior aspect of this incision onto the lower triangular region to create the lateral commissure and upper red lip. Upper vermilion reconstruction was accomplished with buccal mucosal eversion of the lower triangular region (Fig. 1).

The Abbe flap involves a 2-stage reconstruction with risk of relative microstomia, lower lip distortion, and vascular robustness when applied to large defects.[3,4] However, our single-stage procedure avoids the development of microstomia and allows for closure of the upper and lower lips and mastication using dentures (Fig. 2). Our surgical technique provides reliable reconstruction of large upper lip defects reaching on from the commissure to the nasal sill and the ala base. We recommend this surgical technique for repair of large defects measuring more than three-fourths of the upper lip.

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DISCLOSURE

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