The Use of Submental Island Flap for Total Lower Lip Reconstruction: A Case Report

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Facial Plast Surg 2016;32:238–239.

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Abstract

Total lower lip reconstruction was performed in a 72-year-old man following a squamous cell carcinoma resection. To obtain an optimal functional result and to avoid any additional facial scarring, a submental island flap was used in a one-stage procedure. After 2.5 years of follow-up, the patient is very satisfied with the shape and function of the lower lip.

Keywords

- submental island flap
- lip defect
- reconstruction

Reconstruction is more complex when it is the whole lower lip that needs to be repaired. The procedure should seek to restore competence, to avoid food leakage, and enable the patient to recover normal feeding.[1] The lip is a complex anatomical structure which includes a muscular layer, lying between a mucosal layer and the overlying skin.[2] Several reconstructive procedures have been described including local flaps harvested from the cheek.[3] We describe a case of total lower lip function reconstruction by submental island flap (SIF).

Case Description and Results

A 72-year-old man presented with an extensive recurrent squamous cell carcinoma of the lower lip, with extension laterally on the vermilion border of the commissure on both sides. There was no clinical detection of regional or distant metastases.

The surgical defect created by excision of this tumor results in a defect of the lower lip, with both oral commissures (►**Fig. 1**).

After measuring the defect, a spindle-shaped flap in the submental region (15 × 6 cm) was outlined in a horizontal fashion. Attention should be paid to place the anterior border of the skin paddle at least 1 cm behind the mandible to hide the scar. The length of the short axis of the skin paddle allows primary closure of the donor site defect. The flap raising was started from the ipsilateral side of the pedicle in the subplatysmal plane (►**Fig. 1**). The dissection was performed

Fig. 1 Surgical defect after tumor resection and submental island flap preparation.

Issue Theme Congenital Deformities of the Face, Head, and Neck; Guest Editor, Travis T. Tollefson, MD, MPH, FACS

DOI http://dx.doi.org/10.1055/s-0036-1571810.
ISSN 0736-6825.

Fig. 2 The appearance of lower lip and neck incision after the wound closure.

carefully to identify and protect the marginal mandibular nerve. The findings of the frozen section of the submandibular and submental lymph nodes showed negative. The flap is then transferred and attached to the recipient site, and the donor site is closed primarily in layers (►**Fig. 2**).

The postoperative course was uneventful. The patient was discharged on postoperative day 7, and begun oral feeding. After 2.5 years of follow-up, the patient is very satisfied with the shape and function of the lower lip (►**Fig. 3**).

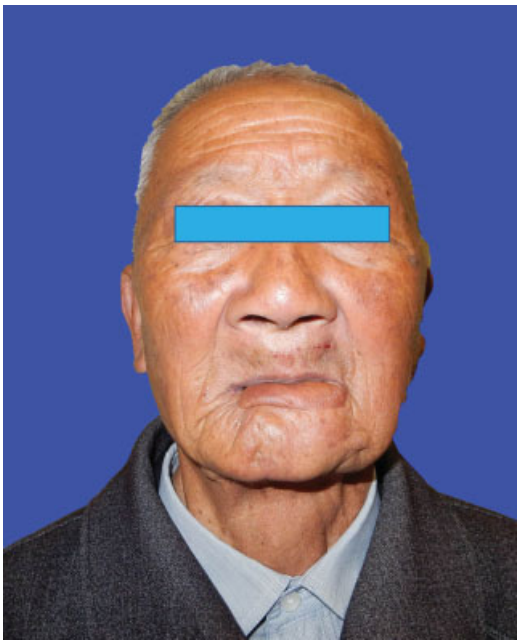

Fig. 3 The appearance with lip competence 2.5 years after operation.

Discussion

The lower lip plays a more critical role as an oral barrier and for prevention of sialorrhea than the upper lip. It is, however, quite difficult to rescue the function of a large lower lip defect. The use of regional flaps, such as double reverse Abbe flaps, Karapandzic flaps, and Webster-Bernard flaps, easily leads to extended facial scars, severe microsomia, and sialorrhea. Recently, large full-thickness defects of the lip have been reconstructed with a folded radial forearm flap. Ideally, the flap used in the reconstruction of the lip defect should be reliable; functional and cosmetically acceptable; and match with the recipient site in terms of color, texture, and thickness. The SIF, which has been recently introduced by Martin et al in 1993, meets all these criteria.[4]

An important issue of reconstruction of the lower lip defect is how to sling the reconstructed lower lip to prevent sialorrhea. The reconstructed lower lip suspension was performed by using the ipsilateral anterior belly of the digastric muscle. Thus, the intact of the anterior belly not only increase the possibility of enough blood supply but also can complete dynamic suspension.[5]

The SIF represents a reasonable alternative to other flaps in elderly patients to repair total defect of lower lip, which has good satisfied result of function and cosmetic restoration.

References

1 Fernandes R, Clemow J. Outcomes of total or near-total lip reconstruction with microvascular tissue transfer. J Oral Maxillofac Surg 2012;70:2899–2906

2 Lengelé BG, Testelin S, Bayet B, Rubenfeld B. Total lower lip functional reconstruction with a prefabricated gracilis muscle free flap. Int J Oral Maxillofac Surg 2004;33:396–401

3 Wechselberger G, Gurunluoglu R, Bauer T, Piza-Katzer H, Schoeller T. Functional lower lip reconstruction with bilateral cheek advancement flaps: revisitation of Webster method with a minor modification in the technique. Aesthetic Plast Surg 2002; 26:423–428

4 Martin D, Pascal JF, Baudet J, Mondie JM, Farhat JB, Athoum A, et al. The submental island flap: a new donor site. Anatomy and clinical applications as a free or pedicled flap. Plast Reconstr Surg 1993; 92:867–873

5 Faltaous AA, Yetman RJ. The submental artery flap: an anatomic study. Plast Reconstr Surg 1996;97:57–60; discussion 1–2