

A simple method for lower lip reconstruction after trauma using an advancement mucosal flap from the remaining lip

Ming-Yueh Liu, Stamatis Sapountzis, Mun-Yau Choong, Tzong-Shiun Li

Division of Plastic Surgery, Department of Surgery, China Medical University Hospital, China Medical University, Taichung, Taiwan

Correspondence to: Tzong-Shiun Li, Division of Plastic Surgery, Department of Surgery, China Medical University Hospital, China Medical University, Taichung, Taiwan, R.O.C. Yude Road, Taichung City, Taiwan
Tel.: 886 4 22052121
Fax: 886 4 22030777
e-mail: li.tsa2@msa.hinet.net

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Abstract – The traumatic injury of lower lip is a frequent clinical condition, and quite often, the soft tissue loss makes the reconstruction of lower lip's defect a challenging procedure. Many methods have been described to reconstruct these defects; however, most of them lack simplicity and require advance experience in flap surgery. In this report, a simple technique is presented for lower lip reconstruction following traumatic injury using an advancement mucosal flap from the remaining lower lip. With this method pleasant cosmetic result can be achieved.

The Burow's operation for lower lip reconstruction is generally indicated for small defects; however, in larger wounds with soft tissue loss, the use of local flaps is mandatory. The traumatic injury of the lower lip varies from simple laceration to more severe soft tissue loss that can include the mucosa, muscle, and skin. Several flaps (transposition, rotation, island flaps) have been described for lower lip reconstruction after traumatic injury when the defect is more than 1/3 of the lip and cannot be closed primarily (1,2). Even though there is no standard method for lower lip reconstruction after trauma, because of the frequent injury of the adjacent tissues, reports draw attention that the use of tissue from the remaining lip offers the best cosmetic result (3,4).

In this report is presented a simple method for lower lip reconstruction following traumatic injury, using a local mucosal advancement flap.

A 31-year-old man presented to the emergency department with severe injury of the lower lip, the chin, and the gingivobuccal fold as a result of a traffic accident. The defect of the lower lip was more than 1/3 of the lip accompanied by partial loss of the orbicularis oris muscle. Because of the soft tissue loss, the primary closure of the defect was not advisable, and a local advancement flap was designed to cover the defect. After surgical debridement of the injured area, a rectangular mucosal flap from the remaining lower lip was raised and advanced anteriorly to cover the

defect. The length/width ratio of the flap was 2/1 to ensure adequate blood supply. Vicryl sutures 5-0 were used and removed on the 6th postoperative day. The cosmetic result 3 weeks (Fig. 1) after the procedure was quite pleasant, and the function of the lip was normal.

The reconstruction of lower lip following traumatic injury can be a quite challenging procedure when there is soft tissue loss. The use of local flaps is able to prevent from discrepancy in tissue quality and mismatch of the adjacent tissue color (5,6). However, many local flaps lack simplicity and can be performed only by experienced surgeon in flaps. This report presents a simple way to reconstruct the lower lip following traumatic injury using a rectangular advancement mucosal flap. The presented method is quite safe and can prevent from secondary complications such as microstomia, facial and commissure distortion (7–13). This is because of the advancement of the flap in an anterior vector rather than a vertical, as it happens in V-shaped excisions and reconstruction of the lip. According to our experience, this flap can be used when the width of the mucosa between the defect and the gingivobuccal sulcus is at least two times larger than the width of the defect. This can ensure the tension-free closure and a satisfactory result. Otherwise, disrespect to this principle can lead to posterior distortion of the lip resulting in functional impairment of the lower lip and an unacceptable cosmetic result.

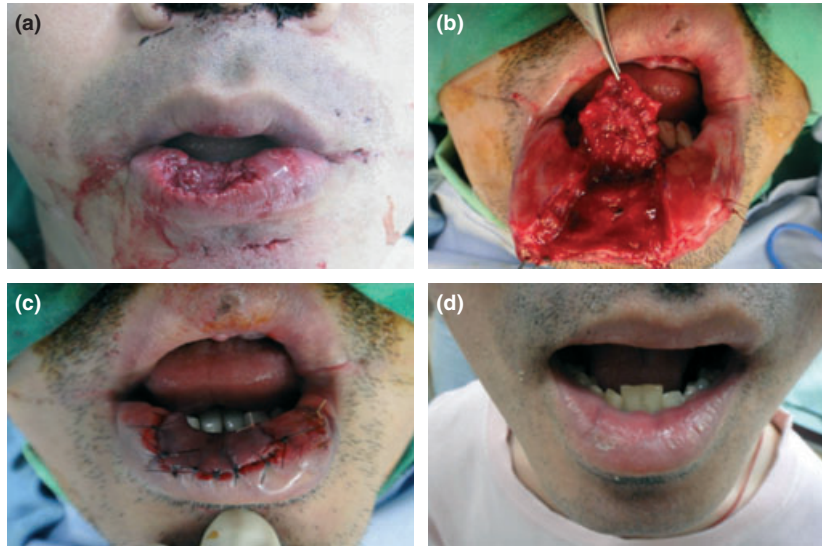


Fig. 1. (a) Patient sustained severe injury of the lower lip, chin, and gingivobuccal fold. (b) Intraoperative photograph taken while transposition of the advanced flap. (c) Early appearance after lower lip reconstruction using advancement flap. (d) Result 3 weeks after the operation.

In conclusion, the proposed technique for lower lip reconstruction with local mucosal advancement flap seems to be a safe, easy, and not time-consuming method. In addition, because of its simplicity, this method can be performed also by surgeons non-experienced in flaps or resident surgeons in emergencies.

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