Reconstruction of lower lip Using Schuchardt flap: A case report

Worapong Trivuttanon, Dr. Dr. Boworn Klongnoi, Department of Oral and Maxillofacial Surgery
Faculty of Dentistry, Mahidol University, 6 Yothee Rd., Rajathevi, Bangkok 10400, Thailand

Introduction

Functional and cosmetic reconstruction of upper and lower lip defects can present a considerable challenge to the reconstructive surgeon. The upper and lower lips represent a distinct anatomic unit that is a major feature of the lower one third of the face and they have great functional and aesthetic importance. Details of lip reconstruction can be found as early as 1000 BC; however, most modern techniques were developed during the nineteenth century and have continually evolved since that time.

The Schuchardt flap is an advancement rotational flap of cheek or lower lip that may be used for the corrections of lower lip defect of 40% to 50%. Incisions begin at the labiomental fold following aesthetic unit (figure 1) through the submental region on each side. Crescents around the labiomental folds are removed occasionally and submental triangles may be removed to correct for the advancement.

Case report

A 78-year-old female patient had been histopathologically diagnosed as squamous cell carcinoma at the lower lip with the size of 3x3 cm, and no involvement of the commissure (figure 2). The patient underwent wide excision, bilateral selective neck dissection (level I) and Schuchardt flap reconstruction (figure 3). The margin was free from tumor cell and lymph node metastasis was negative. A minimal wound dehiscence at left vermilion border involving labial and lingual surface was detected 10-day-postoperatively. This was managed by wound revision and surgically closure (figure 4) and 2- month follow up showed an excellent healing with very good esthetic and functional outcomes (figure 5).

Discussion and Conclusion

Defects between one-third and two-thirds of the lower lip are the most challenging ones to reconstruct with local flaps, and require careful surgical planning. Various reconstruction techniques, using the remaining lip or the adjacent cheek tissue, have been described for the repair of lower lip defects. With these techniques, microstomia, commissural distortion, functional insufficiency and sensorial loss might be observed.

In this case, the defect involved about 2/3 of the lower lip, extending from the central portion. According to the algorithm for reconstruction of lower lip defect (figure 6), in lower lip defect (1/2 to 2/3 of lip) the closure can be most readily achieved by a full thickness pedicle flap from the opposite lip (lip switch flap) or from the adjacent cheek. We selected the Schuchardt flap from its advantages superior to the Karapandzic flap restoring a continuous circle of functioning orbicularis oris muscle, which maintain oral competence with less microstomia and commissural distortion. The Abbe flap is another option that requires divisions of the pedicle and leaving the flap across the stoma for 2-3 weeks so this causes the patient's discomfort. Moreover, the pedicle taken from the central of upper lip for reconstruction compromises aesthetics due to lack of philtral columns of the upper lip.

The Schuchardt flap reconstruction is the best option for restoration of central defect 1/2 to 2/3 of the lower lip. This procedure tend to cause the tenser lip than the opposing one (the reconstructed lip to turn inward in edentulous patient) and lessen microstomia. Elderly patients will develop laxity of the stoma so there is minimal tense of the reconstructed lip as presented in this case.

Reference