Open Journal of Stomatology, 2013, 3, 344-346 **OJST**
http://dx.doi.org/10.4236/ojst.2013.37058 Published Online October 2013 (http://www.scirp.org/journal/ojst/)

One stage reconstruction of large lower lip carcinoma, with local flaps

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Received 29 July 2013; revised 29 August 2013; accepted 15 September 2013

ABSTRACT

Squamous cell carcinoma (SCC) of the lower lip is a frequently diagnosed malignant pathology in the maxillofacial region. It is a slow-growing cancer, and can be diagnosed and treated easily and effectively; however, early treatment is important because its mortality rate is 10% - 30%. Reconstruction for a large lower lip defect is surgically challenging, especially reconstruction with local flaps. Here, we present a 52-year-old male with a large T3 SCC, which started 13 years before this treatment and involved nearly all of his lower lip, oral commissure and upper lip. It was reconstructed by local flaps with good aesthetic and functional results. The lip was reconstructed with a combination of a Karapandzic flap on one side and a contralateral Webster cheek advancement, using a functional neck dissection on the tumor side and supraomohyoid neck dissection contralaterally. Histopathology results of the neck were negative for metastasis. We were satisfied with the aesthetic and functional results of the neck.

Keywords: Lower Lip Reconstruction; Local Flap; Lip Cancer; Metastasis

1. INTRODUCTION

Squamous cell carcinoma (SCC) of the lower lip is one of the most frequently diagnosed malignant pathologies in the maxillofacial region. After skin cancer, lip cancer is the second most frequent cancer in the maxillofacial region [1,2]. Those with T1 and T2 lesions have better prognoses [3]. As lower lip SCC is slow-growing, it can be diagnosed and treated easily and effectively; however, its early treatment is important because its mortality rate is 10% - 30%.

The recommended protocol regarding clinically negative necks of patients with lower T1/T2 carcinomas is "wait and see" [4]. However, the treatment protocol for patients with T3/T4 carcinomas is tumor excision with neck dissection, as metastases are more likely. Precise diagnosis of malignant pathologies in the maxillofacial region, and evaluation of possible metastasis in susceptible lymph nodes of the neck are critical in choosing the best treatment for those patients and predicting their prognoses [5-7]. Reconstruction of a large lower lip defect is surgically challenging, particularly in maintaining oral competence and preventing sialorrhea [8,9]. Few cases of SCC that involved both lips and oral commissure reconstructed with local flaps have been reported.

2. CASE PRESENTATION

A 52-year-old man came to our department with a large tumor that involved almost all of his lower lip, right oral commissure and part of his right upper lip. He reported the tumor to have started 13 years previously as a small lesion on his right lower lip, which had slowly enlarged. He reported no symptoms such as pain, or hemorrhage. He had not visited a physician, but had used an ointment made by an "alternative doctor" for a short period of time 4 years before. As the mass began to grow more quickly six months previously, he decided to visit our department.

At admittance, physical examination showed a large T3 lip mass that involved nearly all of his lower lip, right oral commissure and part of his right upper lip (**Figure 1** and **2**). Regional lymph nodes were not palpable.

Results of an incisional biopsy showed SCC, Grade I. A neck ultrasound showed a positive lymph node (17 mm × 7.5 mm) in the right submandibular region. We did not biopsy the lymph nodes seen in ultrasound. Panoramix results for bone involvement and native lung

X-rays were both negative.

We performed a radical excision of the total lower lip, leaving only 0.5 cm of the lip on the left side, right commissure and almost half of the upper lip. We also resected the basis of the mandible, as it was very close to the tumor (**Figure 3**).

We performed a modified neck dissection at the right side, and supraomohyoid neck dissection on the left side (**Figure 4**).

For the lip reconstruction we used local flaps, with a Webster cheek advancement flap on the right side (**Figure 1**) and Karapandzic on the left (**Figure 2**), with good aesthetic and functional results. Histopathology results of the dissected tissue in the neck were negative for metastasis. Despite the long history of the disease, we found no positive cervical lymph nodes. The early postoperative period continued without complications, the wound appeared to be healing by first intention (**Figure 5**). Six weeks after surgery, the patient underwent radiotherapy. A clinical examination showed no sign of recurrence or palpable lymph nodes after 4 months (**Figure 6**).

3. DISCUSSION

Squamous cell carcinoma is one of the most common malignant tumors; however, SCC that involves near-total upper lip, lower lip and oral commissure is rarely seen [8].

Figure 1. Webster cheek advancement flap planning on right side.

Figure 2. Karapandic flap planning on left side.

Lip cancer is usually diagnosed early because it is visible. There are few case reports with large lower lip carcinomas. Squamous cell carcinoma can grow rapidly and spread along the orbicularis oris muscle and across the oral commissure to the opposite lip. Advanced cancers require multimodal treatment. No gold standard for reconstruction of both upper and lower lips has been established [8]. Procedure selection for surgical reconstruction of lip defects depends on the location and extent of the defect, and the surgeon's preference [10]. Management of lip defects usually involves reconstruction with the remaining opposite lip but no existing studies describe simultaneous reconstruction of both upper and lower lips. Achieving both oncologic and reconstructive goals of lip reconstruction in large defects that involve both upper and lower lips is difficult. Some authors prefer lip reconstruction using free tissue transfer, which is an attractive option when the lip defect is associated with loss of other aesthetic units and/or mandibular bone loss. Their opinion is that use of local tissue for subtotal lower lip restoration creates problems such as microstomia, and facial and commissure distortion [11].

In the case presented here, we were satisfied with the aesthetic and functional results. After two weeks (**Figure 5**) and after four months (**Figure 6**), we were pleased with opening of the mouth of the patient; also there were no palpable lymph nodes on the neck. Advantages of using local flaps in cases like this is less surgery time, less donor site morbidity, less expensive operation. The

Figure 3. After tumor resection and osteotomy.

Figure 4. One day after operation.

Figure 5. Two weeks after operation.

Figure 6. Four months after surgery.

last one is important especially for the developing countries.

4. CONCLUSION

As carcinoma of the lower lip is a slow-growing, relatively unaggressive cancer, it can be diagnosed and treated easily and effectively. However, early treatment is important because its mortality rate is 10% - 30%. Early-stage lesions have very good prognoses. The reconstructive techniques are various, depending on the size and location of the loss of substance. In our case we achieved good results using local flaps in one stage reconstruction of both upper and lower lip.

REFERENCES

[1] Baker, S.R. and Krause, C.J. (1980) Carcinoma of the lip. *Laryngoscope*, **90**, 19-27. http://dx.doi.org/10.1288/00005537-198001000-00002

[2] Dos Santos, L.R., Cernea, C.R., Kowalski, L.P., Carneiro, P.C., Soto, M.N., Nishio, S., *et al.* (1996) Squamous cell carcinoma of lower lip: Retrospective study of 58 patients. *Sao Paulo Medical Journal*, **114**, 1117-1126.

[3] Salihu, S., Sejfija, O., Gjinolli, F., Prekazi, M., Heta, N., Berisha, S., *et al*. (2008) Ten-year survival with squamous cell carcinoma of lower lip. *Journal of Cranio-Maxillofacial Surgery*, **36**, S130.

[4] Current guidelines (2013) http://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf http://quizlet.com/4874974/head-and-neck-cancer-staging-and-nccn-guidelines

[5] Snow, G.B., Patel, P., Leemans, C.R. and Tiwari, R. (1992) Management of cervical lymph nodes in patients with head and neck cancer. *European Archives of Oto-Rhino-Laryngology*, **249**, 187-194. http://dx.doi.org/10.1007/BF00178467

[6] Brown, A.E. and Langdon, J.D. (1995) Management of oral cancer. *Annals of The Royal College of Surgeons of England*, **77**, 404-408.

[7] Giovani, M., Tartaglione, G., Rahimi, S., Mafera and B., Pagan, M. (2007) Lymphoscintigraphy and radio guided sentinel node biopsy in oral cavity squamous cell carcinoma: Same day protocol. *European Archives of Oto-Rhino-Laryngology*, **264**, 163-167.

[8] Burusapat, C. and Pitiseree, A. (2012) Advanced squamous cell carcinoma involving both upper and lower lips and oral commissure with simultaneous reconstruction by local flap: A case report. *Journal of Medical Case Reports*, **6**, 23. http://dx.doi.org/10.1186/1752-1947-6-23

[9] Tzeng, K.-B., Chien, W.-H., Lin, Y.-C., Yen, J.-H., Chen, I.-C. and Tang, Y.-W. (2012) One-stage reconstruction of large lower lip defect and oral competence with free composite anterolateral thigh-tensor fasciae latae flap. *Formosan Journal of Surgery*, **45**, 63-68.

[10] Cupp, C.L. and Larrabee Jr, W.F. (1993) Reconstruction of the lips. *Operative Techniques in Otolaryngology*: *Head and Neck Surgery*, **4**, 46-53. http://dx.doi.org/10.1016/S1043-1810(10)80106-X

[11] Daya, M. and Nair, V. (2009) Free radial forearm flap lip reconstruction: A clinical series and case reports of technical refinements, *Annals of Plastic Surgery*, **62**, 361-736. http://dx.doi.org/10.1097/SAP.0b013e31818b4515

