LOWER LIP RECONSTRUCTION AFTER EXCISION OF ADVANCED SQUAMOUS CELL CARCINOMA - CASE REPORT

RECONSTRUCȚIA BUZEI INFERIOARE POST EXCIZE DE CARCINOM SCUAMOCELULAR AVANSAT – PREZENTARE DE CAZ

Abstract

Introduction: Squamous cell carcinoma is the second most common skin cancer after basal cell carcinoma, arising most often as a result of cumulative sun damage, with an increasing incidence in many countries. This presentation case outlines the surgical treatment of patients with a cutaneous lower lip tumor, placing emphasis on how oncological safety concerns influence reconstructive considerations.

Methods: We describe the case of a 55 year old male patient, admitted in our department with a non-healing lesion covering 2/3 of the lower lip. The surgical treatment consisted of total tumor excision with adequate safety margins and lower lip reconstruction using a Karapandzic flap.

Results: Postoperative results were favorable and no local or general complications were encountered. Histopathologic exam revealed squamous cell carcinoma with tumor-free margins. Six months follow-up revealed no evidence of tumor recurrence.

Conclusions: Despite the size and invasion of the tumor on the lower lip, complete resection with adequate reconstruction was possible, postoperative scars being functionally and cosmetically acceptable.
Introduction

Head and neck cancers constitute 15% of all cancers, and one-third of these tumors arise within the oral cavity. Most oral cavity tumors are squamous cell carcinomas (90%). The patient usually presents with an ulceration and adjacent induration that helps to analyze the extent of tumor infiltration. SCC rarely occurs in normal skin or mucous membranes, but rather as a rapidly growing lesion on sun-damaged or actinically damaged skin.

More than 90% of lip defects involve the lower lip because the majority of lip carcinomas occur in this area. The reconstructive surgeon should choose a reliable technique and not to interfere with or compromise the oncologic aspects of patient care. Generally 4-6 mm safety margins are recommended. For less than 2 cm tumors a 4 mm safety margin may suffice, but for tumors larger than 2 cm a 6 mm safety margin is necessary.

The reconstruction of the lips involves great attention to both the cosmetic and functional outcome. Functional reconstructions intend to preserve sensation, motion, sphincter continence, and speech. The factors which influence lip reconstruction are the extent and location of the lip defect and the quality and quantity of adjacent lip and cheek tissues. Basic principles involved in lower lip reconstruction are careful approximation of the vermilion border and keeping all incisions in the cosmetic junctions or the relaxed skin tension lines.

Lesions less than 1/3 of the lower lip should be treated by wedge excision and primary closure. Lesions 1/3–2/3 of the lips should undergo lip switch or local advancement flaps, while lesions greater than 2/3 of the lip should be treated by local or distant tissue closures.

For near total lower lip defects, the Karapandzic flap remains the technique of choice, consisting in a perioral lip advancement flap that maintains sensory and motor function of the orbicularis oris muscle and perioral skin.

Methods

A 55 years old, male patient, presented to our Plastic Surgery Department for an ulcerated and painful skin lesion of the lower lip. The patient mentioned first noticing the non-healing lesion nearly two months earlier, with a fast evolution of acute pain, erosion and bleeding.

He had been a smoker for over 35 years and reported having a history of chronic sunlight exposure as a crane operator, a record of low alcohol consumption and an associated bipolar personality disorder. He also presented with an edentulous situation and poor oral hygiene. Patient was admitted in our hospital with the suspicion of squamous cell carcinoma of the lower lip.
Lower Lip Reconstruction After Excision of Advanced Squamous Cell Carcinoma - Case Report

Upon clinical examination we found a normal weight patient, with a good general condition, normal BP and no particular systemic findings. Local examination revealed an indurated painful tumor of 2.5 cm diameter in the central lower lip with rolled irregular borders, centrally granulating ulcer, partially covered with hematic crusts (figure 1). Clinically, no regional adenopathies were discovered. Head and neck CT revealed no sign of bone or soft tissue invasion or significant regional adenopathies.

After proper preoperative investigations, surgical treatment was decided. The operative time, under general anaesthesia, consisted of total tumor excision with an adequate safety margin of 6 mm. For the resulting lower lip defect, a Karapandzic flap was created. The flap was designed by making a curvilinear incision parallel to the lip margin and towards the alar base with the width of the flap equal to the height of the defect, preserving the labial arteries and buccal motor nerve branches. After complete dissection of the flap, the two segments were advanced and rotated to form the new lower lip (figure 2). The flaps were sutured together and onto the subjacent tissues (figure 3).

Postoperative management included rigorous daily oral hygiene and systemic antibiotic therapy.
with Cefuroxim and Metronidazol. After discharge, patient was referred to an Oncology Clinic.

**Results**

Histopathologic exam revealed squamous cell carcinoma moderately differentiated (G2), with no lymphovascular invasion and tumor-free safety margins.

The patient made an excellent postoperative recovery. No local complications like edema, hematoma or infection were encountered. The sensation and motor function were preserved. Nine months follow-up revealed no evidence of recurrence, with good aesthetic and functional results (figure 4).

**Conclusions**

It is important to realize that SCCs have significant chances of local and distant metastasis and mortality, particularly if recurrent (1). First surgery gives the best chances for recovery and consequently complete tumor excision is mandatory. Furthermore, continuous follow-up is important to detect recurrences and new tumors that may occur in time.

Lips are the primary aesthetic landmark of the lower central face, having an important role for facial expression, speech, and food intake (5). Lip reconstruction requires attentive surgical procedures for acceptable cosmetic and functional performance. Karapandzic flap is the mainstay treatment for defects of more than 2/3 of the lower lip.

The specific advantage of the Karapandzic flap is the preservation of the native neurovascular supply, maintaining a sensate lip with intact sphincter function (3). Another advantage is that it is a one-stage procedure. The postoperative results are functionally good, but the technique may lead to a reduced oral stoma circumference and rounding or distortion of the commissures. This case presentation serves to highlight the importance of selecting the proper reconstructive technique for extended lower lip carcinoma. Early recognition of SCC and an urgent referral to a plastic surgeon is critical for a good outcome.

**Bibliography**