Reconstruction of the lower lip with Camille Bernard's technique after excision of infiltrative basal cell carcinoma

Reconstrução do lábio inferior com técnica de Camille Bernard após excisão de carcinoma basocelular infiltrativo

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ABSTRACT

Lip tumors account for 15% of head and neck neoplasias. When the defect is greater than one third of the lip, the Camille Bernard's flap is suitable for the reconstruction of the lower lip. The present study describes a case with a satisfactory outcome, where functional, aesthetic, and sensory preservation of the lower lip was obtained by using this technique in its surgical reconstruction, following excision of a locally advanced tumor.

Keywords: *carcinoma, basal cell; reconstructive surgical procedures; lip neoplasms.*

RESUMO

Os tumores labiais correspondem a 15% das neoplasias de cabeça e pescoço. O retalho de Camille-Bernard é indicado para a reconstrução do lábio inferior, quando o defeito é maior do que um terço do lábio. Demonstra-se caso com resultado final satisfatório, tendo-se obtido preservação funcional, estética e sensorial, com a utilização dessa técnica para reconstrução cirúrgica do lábio inferior após excisão de tumor localmente avançado.

Palavras-chave: carcinoma basocelular; procedimentos cirúrgicos reconstrutivos; neoplasias labiais.

INTRODUCTION

Lip cancer is the most common malignant lesion of the oral cavity, corresponding to 15% of the tumors in that region.[1] There is a predominant involvement of the lower lip (with a ratio of 20:1 regarding the upper lip).[1] Surgery is the treatment of choice, with the reconstructive technique varying according to the size of the resulting defect.[1,2] Various reconstructive techniques are used when there is a large loss of lip area.[1,2] The Camille Bernard flap was first described in 1853 for repairs ranging from a third to a half of the lower lip.[1,3] Although this technique is of a more conservative nature, several modifications have been incorporated since its first description by Bernard, with an aim at always achieving favorable results in oral function and plasticity.[3]

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CASE REPORT

A 64-year-old woman sought care at the Dermatologic Surgery Outpatient Clinic of the Hospital Universitário Getúlio Vargas, Manaus (AM), Brazil, complaining of a nodule in the mentum region that presented progressive growth for four years. The patient described a surgery to excise a tumor in the same location, 10 years before. She denied undergoing other surgical interventions. The examination revealed a2.5 X 1.5 cm pigmented nodule of blackish color, pearlescent glitter on the surface, and well-defined borders in the labiomental region. It was surrounded by an infiltration area, affecting the left section of the lower lip, with involvement of the labial commissure. The cervical lymph nodes were not palpable at the time of the examination (Figure 1).

After an incision biopsy and histological confirmation of basal cell carcinoma with infiltrative cystic nodular involving the underlying musculature, a surgical treatment was planned for repairing the lower lip—including the left labial commissure — to be followed by reconstruction using the Camille Bernard flap. This would be carried out in a single surgical time, under local anesthesia.

This flap modality was indicated due to the great local mobility of the skin in the affected site. A Burow's triangle (with the vertex in the nasolabial rima and the base parallel to the horizontal axis of the lip) was resected. The excision of the triangle preserved the mucous membrane, which was used to reconstruct the lower lip's vermilion.

The flap procedure had an uneventful post-operative period, with correction of the aesthetic defect (which comprised more than 30% of the lower lip) being achieved without any sensory, speech, chewing, or swallowing movement dysfunctions. There was no loss of the oral opening, resulting in a satisfactory aesthetic and functional outcome, and good symmetry in the horizontal leveling of the lip (Figure 2). The patient is undergoing clinical follow up every six months and has not presented recurrences or lymph node metastases one year after the surgery.

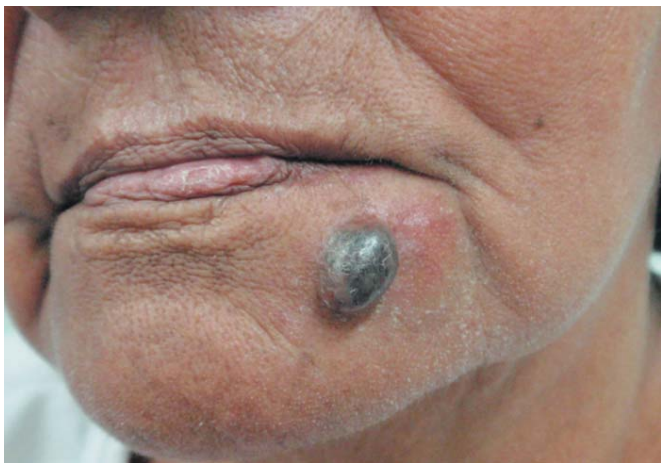

Figure 1: Pre-operative pigmented nodule with adjacent infiltrating area affecting the lower lip and commissure

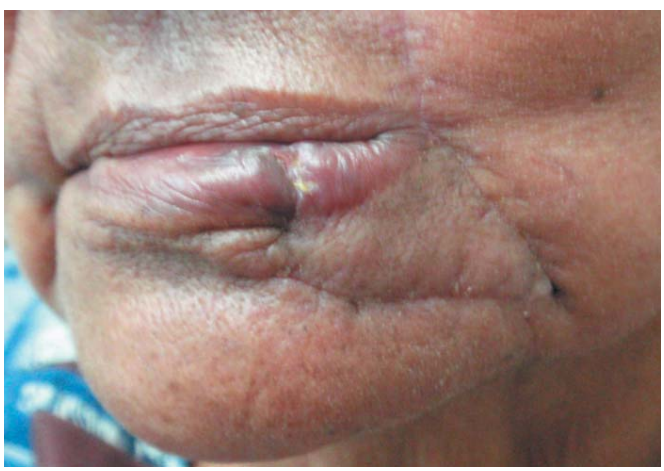

Figure 2: Late post-operative. Reconstruction with good accommodation of the advancement flap

DISCUSSION

Tumors of the lips correspond to 20% of the malignant tumor occurrences in the respiratory and upper digestive tracts, usually affecting the lower lip.[1] There is a higher incidence in the fifth, sixth, and seventh decades of life, predominantly in fair-skinned and male patients at a ratio of 5:1. For women the lower incidence seems to be related to their use of cosmetics and other predisposing factors such as less exposure to the sun.[1,2,4] It is a rare condition in people of African heritage, children, and adults under 40 years old.[1,2,4]

Chronic exposure to the sun, smoking, and alcoholism stand out in its etiopathogeny.[1] Regarding histological aspects, approximately two thirds of tumors of the lips are well-differentiated epidermoid carcinomas.[1] Basal cell carcinomas originate in the cutaneous face of the lips, and affect the vermillion and/or mucous membrane by proximity.[1] Cervical lymph metastasis occurs in 6% to 12% of cases.[1,3,4]

Primary tumors of the upper or lower lip, whose surgical margin does not exceed one-third of the lip's length,[1,2] can be treated through a simple surgical excision technique and primary closure. Nevertheless, larger lesions require vascularized flaps in order to maintain an aesthetic with symmetry and appropriate contours, competence of the oral cavity, and the preservation of the vascular-nervous aspect.[4,5]

The surgical techniques used for the treatment of lesions in the lower lips are: tangential excision (lip shave), excision in a "V" shape with or without tangential excision in the remaining of the vermillion, Karapandzic and Estlander techniques, and reconstruction with a lateral Camille Bernard advancement flap.[4-6] The latter applies when the surgical margin exceeds one third of the lip[4] and consists of the Burow's triangle(s) resection(s) in the nasolabial region, aimed at repairing the defect after the wedge excision of the tumor, involving skin, subcutaneous tissue and muscle.[3] If the surgery is carried out bilaterally, the Burow's triangle's base must correspond to at least

one half of the defect on each side and, if carried out unilaterally, to at least two-thirds of the resulting defect.[3] For the restoration of the lip, the mucous membrane is preserved (sutured directly to the skin), ensuring competence of the oral cavity, the reconstruction of labial comissure, and aesthetic satisfaction.[3,5] In addition, the procedure can be performed in a single surgical event, allowing an early return of the patient to his or her social life.[3,5]

In the original 1853 description, excision of triangles was made across the entire thickness.[3] Variants of this technique were described later on.[3] The first changes occurred in 1958, with the publications of Freeman, which proposed the removal of only the skin and subcutaneous tissue of the lateral triangles, preserving the orbicularis muscle and aiming for greater mobility. In 1960, Webster recommended the sectioning of the orbicularis muscle, preserving the buccinator muscle, and[3] in 1977, Converse and Wood-Smith suggested the preservation of the mucous membrane for the repair of the upper lip. In 1996, Konstantinove proposed an improvement of the aesthetic outcome through a downward incision in the commissure, with the suture following the skin's natural incision lines.[3]

The prognosis of malignant tumors in the lips is regarded as good when compared to other tumors of the oral cavity, whenever the case is dealt within all oncologic principles for such pathology.[1] Factors associated with poor prognosis are: lesions greater than 2cm; little histological differentiation; locations in the commissure or upper lip; and presence of lymph node metastases and perineural invasion.[2]

The choice of technique should be individualized and appropriate for each tumor type, defect size, location, skin elasticity, and general conditions of the patient. Hence, the authors conclude that the described technique and its variants achieve satisfactory results in the reconstruction of the lower lip after major oncologic resections, being a good alternative for the repair of the lip region. ●

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