Case Report

Surgical resolution of eclabium using a Limberg flap

Resolução cirúrgica do eclabio através do retalho de Limberg

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ABSTRACT

Basal cell carcinomas are the most common type of skin cancer. Recurring basal cell carcinomas have lower cure rates than the primary tumors. Recurring tumors are usually treated with re-excision using micrographic surgery or by controlling the margins through freezing. A case of recurring basal cell carcinoma with large dimensions is reported. After total exeresis and correction using a rotation flap and total skin graft, the area developed eclabium, an unattractive complication that was corrected in a second surgery using a Limberg flap. This study presents an alternative correction for eclabium, and emphasizes the importance of training dermatologic surgeons how to resolve complications.

Keywords: carcinoma, basal cell; surgical flaps; neoplasm recurrence, local; lip.

RESUMO

O carcinoma basocelular é o câncer de pele mais frequente. Quando recidivados, tumores desse tipo têm taxas de cura inferiores à dos tumores primários, razão pela qual é preconizado tratamento cirúrgico com re-excisão através de cirurgia micrográfica ou com controle de margens por congelação. Relata-se caso de carcinoma basocelular recidivado de grandes proporções que, após exérese total e correção por meio de retalho de rotação e enxerto de pele total, evoluiu com eclábio. Essa complicação inestética foi corrigida num segundo tempo através do retalho de Limberg. Apresenta-se alternativa para correção de eclábio e enfatiza-se a necessidade de incluir na formação do cirurgião dermatológico o aprendizado para a resolução de complicações.

Palavras-chave: *carcinoma basocelular; retalhos cirúrgicos; recidiva local de neoplasia; lábio.*

INTRODUCTION

Basal cell carcinoma (BCC) is the most common type of skin cancer, accounting for about 70% of the total number of cases. It occurs more frequently in fair-skinned individuals over 30, and is more common among women, especially those with a history of excessive sun exposure. [1]

BCCs are tumors composed of cells morphologically similar to those found in the basal layer of the epidermis and pilosebaceous units. Metastases are rare and present low mortality rates. This tumor's morbidity is related to the local invasion and destruction of adjacent tissue. BCCs are mostly located in the upper two-thirds of the face, and the most common clinical subtype is the papulonodular or nodulocystic BCC.[2]

Among the high risk factors for recurrence are: location in the central regions of the face (including the nasolabial fold, lips and nose) as well as in the temporal, periorbital, mentonian, mandibular, genital, acral and auricular pavilion; size ≥ 2 cm; poorly defined borders; specific histological subtypes (sclerodermiform, solid infiltrative, micronodular, metatypical); perineu-

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ral/perivascular involvement; and imunossupression.[2-4]

Treatment must be individualized. Surgical exeresis is the recommended method, since it allows the complete removal of the lesion and helps maintain functionality and achieve the best possible cosmetic result, while observing the oncological principles.

It is estimated that 30-50% of BCCs will recur after incomplete excision.5 Recurrent BCCs have cure rates lower than primary BCCs and require wider peripheral margins.2 In recurrent cases, re-excision with intra-operative control of the margins through freezing or Mohs Micrographic Surgery are the treatments of choice.[6-8]

METHODS

We describe a case of a large, recurrent sclerodermiform BCC that, after complete excision of the lesion and closure with advancement skin flap combined with total graft, developed eclabium, which was corrected in a second surgery with the use of a Limberg flap.

The patient, a 71-year-old woman, came to the clinic with a tumor characterized by an erythematous-whitish plaque of irregular and poorly defined borders, located in the right buccinator region (Figure 1). She had undergone several previous surgeries in the area, with a recurrence of the neoplasia.

The lesion was submitted for biopsy and diagnosed as recurring sclerodermiform BCC. The tumor was excised with a safety margin of 5 mm (Figure 2) and an intra-operative histological examination was conducted to evaluate the surgical margins affected by the infiltrating neoplasia, in three consecutive phases of congelation (Figure 3). When the margins were free of carcinoma in the third stage, we closed with a total skin graft after performing an advancement flap to decrease the area to be grafted (Figure 4).

Figure 1 – Erythematous-whitish plaque with central cicatricial atrophic area and poorly defined borders, located in the right buccinator region

Figure 2 – Marking for the excision of the recurrent tumor, with a 5 mm margin

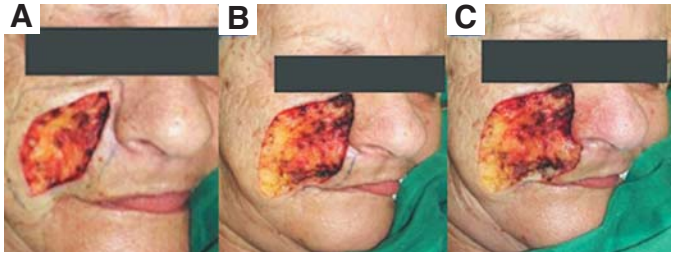

Figure 3 – A. Appearance of the surgical defect after resection with margins of 5 mm. **B.** After the first expansion of compromised margins **C.** After the second expansion (final appearance of the surgical defect)

Figure 4 - Immediate post-operative appearance of the advancement flap and graft with Brown's dressing

RESULT

Three months after treatment, the patient presented eclabium (eversion of the lip), which was corrected in a second surgical procedure by using a Limberg flap.

We chose this type of flap to correct the eclabium in order to remove the less attractive area of the graft, position some of the necessary incisions over the nasolabial fold, to camouflage scars, and to avoid misalignment of the upper lip with the maximum tension of the closure of the wound, releasing the first from retraction and allowing its return to the normal position (Figures 5, 6 and 7).

Figura 5 - A and B. Note the eclabium of the upper lip's right portion, the unattractive area (due to the previous graft) to be excised and the outline of two options for the rotation of the Limberg flap

Figure 6 - Note that option B was chosen for the rotation of the Limberg flap, since its vector was in the superior-inferior direction, helping to traction the lip downwards

Figura 7 - Detachment of the Limberg flap

Figura 8 - Final result (15 days, three months and two years after treatment)

DISCUSSION

About 2% of BCCs are sclerodermiform. This subtype is infrequent, has poorly defined limits, is infiltrative, is often locally aggressive and has high recurrence rates, thus requiring more elaborate and difficult reconstructions.[3]

After the total excision of the tumor, the patient had a large, complex surgical defect that was very close to important regions of the free margins of the face, such as the lower eyelid, the nasal ala and upper lip. Thus, we opted for reconstruction with advancement flap combined with a graft. In the follow up, however, the emergence of eclabium was observed, which could have improved spontaneously over time with the simple and natural movement of the lip muscles. Nevertheless, the current standards regarding the cosmetic and functional results after the reconstruction of facial defects are very high, requiring meticulous planning and execution to achieve results that are satisfactory for both the surgeon and the patient.

The primary closure of many skin defects is not possible; using adjacent portions of skin is of paramount importance in performing a satisfactory repair. The upper lip is an important aesthetic part of the face, and its reconstruction is a major challenge for the dermatologic surgeon.

The rhomboid flap, classified as a transposition flap, was described by Limberg in 1946. It is regarded as an important tool for the dermatologic surgeon, and can be used virtually anywhere on the body, especially in rhomboid defects with angles between 60 and 120 degrees. This is due to the simplicity of its shape and the high reliability with which it can be used to reconstruct cutaneous defects. Scars resulting from this flap are fairly predictable, and generally cause minimal distortion to nearby structures. The higher tension of closure is in the donor site, while other sections of the wound have minimal tension. These features are important when it is necessary to avoid distorting neighboring structures.9 The rhomboid flap is frequently described in the literature for facial reconstructions.10

CONCLUSION

In this study, we have verified the importance of mastering the techniques of locoregional skin flaps and grafts for the reconstruction of post-surgical defects resulting from the removal of neoplasias. In the case described, we have also confirmed that the Limberg rhomboid flap can be a very effective alternative in the correction of eclabium with satisfactory aesthetic and functional results (Figure 8). ●

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