

Bilobed flap for the reconstruction of lower eyelid defect: a case report

Retalho bilobado para reconstrução de defeito em pálpebra inferior: relato de caso

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ABSTRACT

Merkel cell carcinoma is a rare and aggressive cutaneous neuroendocrine cancer that occurs in the photodamaged skin of white and elderly patients, usually presenting as a solitary plaque or nodule in the head and neck region. When located in the lower palpebral area, reconstructing the defect resulting from its excision can become challenging for the dermatological surgeon due to the local cosmetic and functional peculiarity. We report the use of a bilobed flap for lower eyelid reconstruction with a satisfactory result, both in terms of aesthetics and the resulting functionality.

Keywords: Surgical flaps; Eyelids; Carcinoma, Merkel Cell; Case reports

RESUMO

O carcinoma de células de Merkel é um câncer neuroendócrino cutâneo raro e agressivo, que ocorre em pele fotodanificada de pacientes brancos e idosos, apresentando-se geralmente como uma placa ou um nódulo solitário, na região da cabeça e do pescoço. Quando localizado na região palpebral inferior, a reconstrução do defeito resultante de sua exérese pode se tornar muito desafiadora para o cirurgião dermatológico devido à peculiaridade cosmética e funcional local. Relatamos a utilização de retalho bilobado para reconstrução palpebral inferior, com resultado satisfatório tanto pela estética quanto pela funcionalidade resultantes.

Palavras-chave: Retalhos cirúrgicos; Pálpebras; Carcinoma de célula de Merkel; Relatos de casos

Case Report

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INTRODUCTION

Merkel cell carcinoma (MCC) is a rare and aggressive neuroendocrine cancer occurring in the photoexposed skin of white and elderly patients. It is rare in black patients and generally presents as a solitary plaque or nodule, measuring 2 cm to 4 cm, in the head and neck region.^{1,2} It represents less than 1% of malignant cutaneous tumors but is the third cause of death from skin cancer.² Reconstructions in the lower eyelid region become more challenging for the dermatological surgeon due to the characteristics and locations, such as aesthetic and functional aspects.³

The bilobed flap (BLF) is one of the possibilities for closing larger skin lesions. It borrows part of adjacent skin to fill a nearby defect with little laxity, and its geometric structure (two flaps) allows better distribution of tension forces along its axis of rotation, preventing distortions and excess skin caused by other flaps or primary closure.^{4,5}

We report a case using BLF for reconstruction after excision of MCC in the lower eyelid region, with satisfactory aesthetic results. The objective of the case report is to exemplify and demonstrate a technique option to correct defects in the infero-lateral eyelid with easy execution, in a single surgical procedure, and a good level of patient satisfaction.

METHODS

We treated a patient with MCC in the lower-lateral eyelid region.

The patient was a 75-year-old white man with a 55 mm plaque in the right infraocular region/external canthus (infero-lateral eyelid on the right) compatible by histopathological examination with MCC and confirmed by immunohistochemical examination. The lesion was excised with safety margins of 4 mm. The resulting defect was 63 mm in its longest axis. The initial programming was a simple rotation, but intraoperatively, BLF was chosen for reconstruction (Figures 1 and 2).

Description of the Technique:

- Infiltrative anesthesia with 2% lidocaine with vasoconstrictor;
- Incision with a 15-blade and en bloc excision of the piece to the subcutaneous tissue;
- Hemostasis;
- Incision of the flap, starting the first flap in the external corner of the defect, with an area 10% smaller than the primary defect. The second flap is 10% smaller than the first (Figures 2A and 2B);
- Detachment of the flap flaps at the subcutaneous level;
- Flap transposition movement, in which the first flap moves to the position of the primary defect. The second flap moves to the location of the first flap (Figure 2B);
- Sutures of the RBL mononylon 5.0 flaps, single stitches. The defect of the second flap is closed primarily with 5.0 mononylon, single stitches (Figure 3A);
- Local cleaning with saline solution;
- Occlusive dressing.

RESULTS

The patient evolved uneventfully in the first postoperative days (Figure 3B). There was good healing and accommodation, with a satisfactory aesthetic result in the late postoperative period (Figure 4).

DISCUSSION

The upper and lower eyelids are complex tissues with specific functions such as protecting the eyeball against trauma and excessive light, moving tears towards the tear drainage system, and establishing the beauty and expression of the eyes. Therefore, reconstructions in these locations are challenging for dermatological surgeons, especially when primary closure is not possible.³



FIGURE 1: A - Merkel cell carcinoma. B - Defect

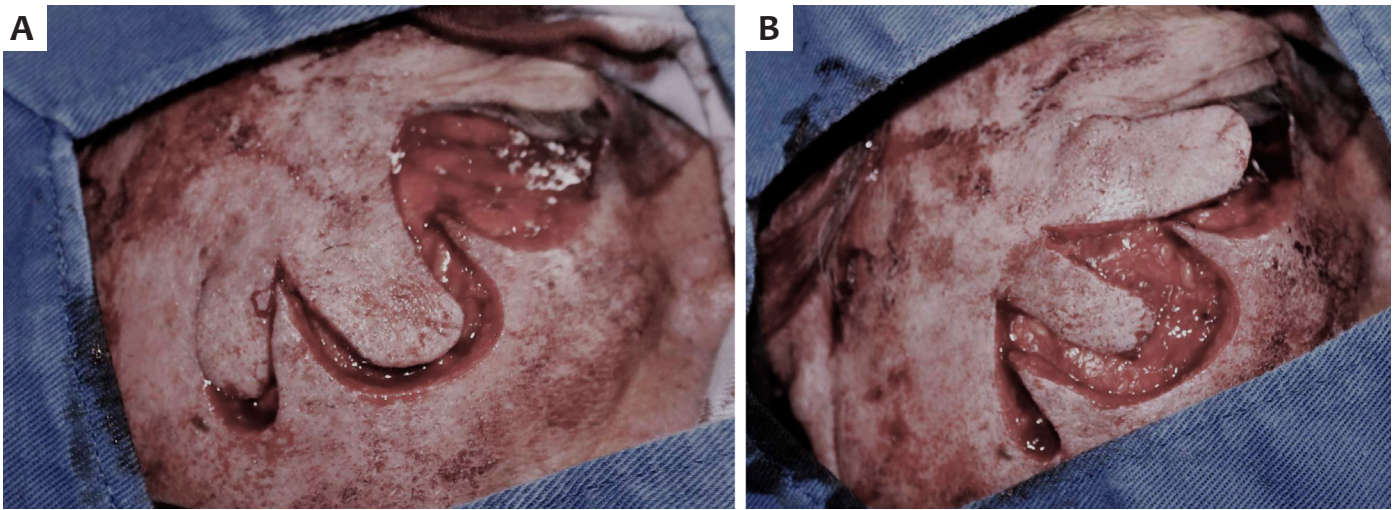


Figure 2: A - Flap incision. B - Flap movement



Figure 3: A - Sutured flap. B - Five days after surgery

Flaps can be used in lower eyelid reconstruction. The BLF is a double transposition flap that transposes the first flap into a defect and the second one, a smaller flap, to fill the secondary defect caused by the transposition of the larger flap. There is a distribution of tension forces in several directions, which reduces distortions and excess skin generated by a simple transposition flap or primary closure.⁵

Zitelli (1989) was the one who described the bilobed flap for the reconstruction of defects in the nasal tip and ala. However, other authors modified their technique, adjusting the angulations and sizes of the lobes (flaps), thus reducing the distortion of the tip and retraction of the nasal wings.⁶

Currently, the BLF has also been applied to extranasal areas as a versatile option for reconstructions in different locations.⁷ The present authors used the flap, in the case in question, for a large infrapalpebral defect, aiming to avoid ectropion through the distribution of force vectors provided by the technique (Figures 3 and 4).

Regarding the angulation between the lobes, angles of 45° to 50° between the defect and the largest lobe and between the lobes provide the best results, although there is no exact consensus. The literature recommends that the size of the first lobe should be approximately 10% smaller than that of the defect, as well as the second lobe concerning the first. Closure of



FIGURE 4:
A - Three months postoperatively, frontal view. Discreet skin flap trapdoor.
B - Three months postoperatively, oblique view

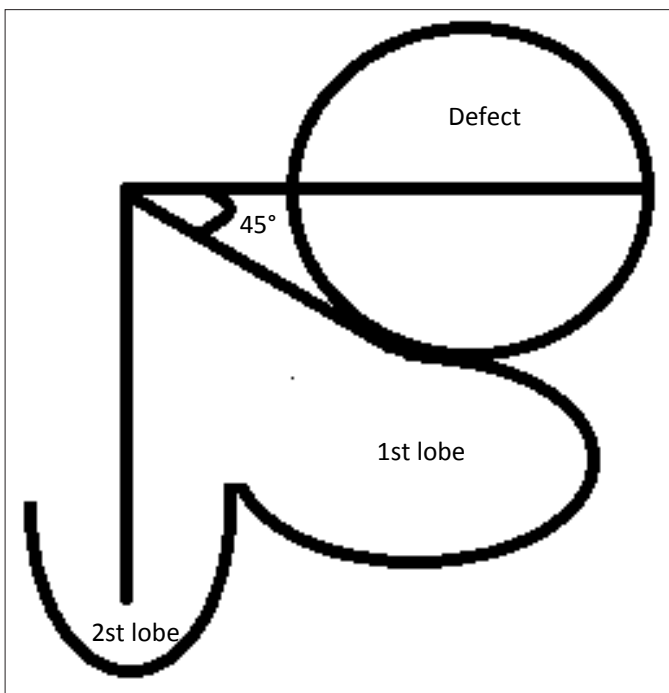


FIGURE 5: Schematic drawing of the bilobed flap

the second lobe defect must be primary (Figure 5). Depending on the location, skin inelasticity, and defect size, proportions and angulations can be adjusted to adapt the flap and avoid anatomical distortions.⁷

Despite the knowledge and use of BLF for lower eyelid defects by many dermatological surgeons, literature still reports few cases. The authors consider this procedure a good surgical option, as the patient reported.

CONCLUSION

The use of BLF can be a good option for resolving defects in the lower-lateral eyelid regions, considering its versatility and resolution in a single surgical procedure, with good cosmetics and functionality. ●

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