Interpolation flap for closing a surgical defect in the cauda helicis

Retalho de interpolação para fechamento de defeito cirúrgico na cauda da hélice da orelha

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ABSTRACT

Oncologic ear resection can create partial skin and / or cartilage defects that make reconstruction of this site difficult and challenging. Several techniques have been described, however few cases of surgery for defects in the cauda helicis have been reported. The authors describe an interpolation flap in this anatomical location for the correction of a defect secondary to the excision of a basal cell carcinoma.

Keywords: surgical flaps; ear; carcinoma, basal cell

RESUMO

A ressecção oncológica auricular pode criar defeitos parciais da pele e/ou da cartilagem que tornam difícil e desafiadora a reconstrução desse local. Várias técnicas têm sido descritas, porém poucos casos de cirurgias para defeitos na cauda da hélice têm sido relatados. Os Autores descrevem um retalho de interpolação nessa localização anatômica para correção de defeito secundário à excisão de carcinoma basocelular.

Palavras-chave: retalhos cirúrgicos; orelha; carcinoma basocelular

INTRODUCTION

Among skin tumors, basal cell carcinoma (BCC) is the most common type, accounting for roughly 70% of all skin cancers. Surgical excision is the recommended treatment; nevertheless situations where direct closure is not possible can occur, leading to the need of implementing a flap or graft.1

The interpolation flap consists of a segment of skin and subcutaneous cellular tissue that rotates on a pivoting point, in a path resembling an arch that reaches a nearby – but not immediately adjacent – defect. This flap’s pedicle passes over the normal skin that is being repaired.2-6

The authors of the present paper describe the implementation of an interpolation flap to resolve a wound secondary to the exeresis of a BCC in the cauda helicis of the right ear, in which the lobe remained intact.

CASE REPORT

A white, 70 years old female patient sought care due to the presence of a lesion in the cauda helicis of the right ear that was clinically and histologically compatible with BCC (Figure 1A). The demarcation of the lesions and 0.5cm safety margins entailed a large defect after excision of the tumor (Figure 1B). A decision was made for the implementation...
of an interpolation flap to close the wound (Figure 2). The flap was sutured in the correct position with 5.0 and 6.0 mononylon threads, with a small vascular pedicle being left in place. The donor area was sutured with 5.0 mononylon (Figure 3). The sutures were removed one week after (Figure 4). The resection of the pedicle was performed three weeks after the intervention (Figure 5). The patient coursed with a good aesthetic result (Figure 6). Figure 7 outlines the steps of the surgery.

**DISCUSSION**

Cutaneous flaps may be necessary for the closure of skin tumor excisions.1-5 In dermatologic surgery, most flaps use skin originating from sites located nearby the surgical wound, aiming at better integrating and providing similarity with the recipient area, which results in a better aesthetic outcome.5,6

Large surgical wounds resulting from excisions of cutaneous neoplasms of the auricular region can be challenging for the surgeon. Satisfactory outcomes depend on the used technique and the skill to perform it, in addition to the patient’s health conditions.5,6

Techniques for the closure of defects or correction of the ear lobe have been quoted in the literature.5-10 Nonetheless, there are a few cases describing the correction of only cauda helicis with preservation of the lobe.
The interpolation flap is an excellent method for resolving a wide and deep defect in which the adjacent tissue does not allow direct closure. The tissue from a nonadjacent area is used, with the implementation of a vascular pedicle aimed at supplying the flap up until neovascularization has been established between the flap and the recipient bed. The main disadvantage of this type of flap is that it requires two stages to be completed. The resection of the pedicle is performed after the complete neovascularization of the recipient area has been achieved, which occurs in about 3 weeks. In oncological cases in the cauda helicis, some surgeons prefer to amputate the remainder of the auricular lobe (lower third of the ear) and then perform local reconstruction in order to avoid risks of distal necrosis. In the present case, part of the interpolation flap’s pedicle (cervical donor area) has covered the lobe, which has been preserved all along, ensuring its vascularization as well as that of the flap itself (Figures 2, 3 and 4). There was good integration of the flap with the recipient area. The second stage was carried out 3 weeks after with the resection of the vascular pedicle, leading to optimal aesthetic outcome (Figure 6).

In the case present case, the primary closure of the lesion would not result in a good esthetic outcome, entailing the traction of the lobe towards the propeller. A graft would probably progress to local necrosis. The authors decided to implement a flap and preserve the earlobe, aiming at achieving the best aesthetic and functional outcomes.

CONCLUSION

The interpolation flap can be an excellent option to resolve defects in the cauda helicis, in which the lobe can be preserved, as demonstrated in the present case.
REFERENCES


DECLARATION OF PARTICIPATION:

Priscila Daiane Pavezzi:
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