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Case Report

Ear concha carcinoma: excision and repair with an innovative revision of Masson's post-auricular revolving-door flap (flip-flop flap)

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ABSTRACT

Carcinomas of the concha are difficult to treat due to the difficulty in accessing the site and the surrounding important anatomical structures. In this article, we describe the reparative procedure of an auricular concha defect using the Masson1 revolving door island flap revisited according to Mauro Giordani, MD.

Keywords: Carcinoma, Auricular concha, Revolving door flap, Post-auricular flap, Flip-flop flap

INTRODUCTION

Carcinomas of the concha are difficult to treat due to the difficulty in accessing the site and the surrounding important anatomical structures. In this article, we describe the reparative procedure of an auricular concha defect using the Masson,[1] revolving door island flap revisited according to Mauro Giordani, MD. It is known that neoplasms of the auricle account for 6% of skin cancers about 55% of which are cutaneous squamous cell carcinoma (SCC). It is estimated that 6 – 18% of SCC concerning the external ear is already metastatic at diagnosis confirming the aggressive nature of these neoplasms.[2]

CASE REPORT

We report the case of a 59-year-old man suffering from carcinoma of the left auricular concha for about 8 months [Figure 1]. Initially, the skin lesion was treated with cryosurgery without regressing. It is well known that the diagnosis of *in situ* SCCs is related to an increased risk of developing invasive SCC,[2] and although in most cases, SCC can be treated with excellent results, in a small percentage of cases the latter can recur, metastasize, and/or, rarely, lead to patient death.[3] Therefore, given the lack of response to cryosurgery and the risk of malignant progression of the lesion, the decision was made for radical resection. The left auricular concha lesion was removed by full-thickness excision of the skin, subcutis, and underlying cartilage, and the defect was repaired using an innovative revision of the Masson post-auricular revolving door flap.[1]

Figure 1: Carcinoma of the left auricular concha before surgery.

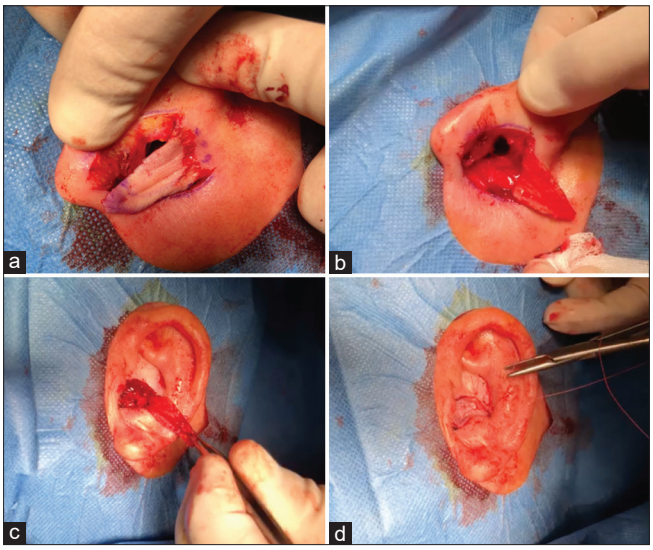

Figure 2: (a) Postauricular flap with de-epithelized area at the base, (b) Communication tunnel between the post-auricular region and concha, (c) Transposition and internal suture of the post-auricular flap through the tunnel, and (d) External suture of the flap.

DISCUSSION

Due to the copious sensory innervation of the external ear, the Klein.[4] tumescence anesthesia method was preferred, so two infusions of 0.1% lidocaine mixed with epinephrine and sodium bicarbonate were administered, respectively, on the anterior and posterior faces of the auricle. At first, using an 11-blade scalpel, the concha auricular lesion was excised by incising the skin, the subcutis, and the cartilage. Next, at the retroauricular site, by incising in an anteroposterior and caudo-cranial direction the skin and the subcutis, a triangular flap size of about 4 cm long by 1.5 cm wide was isolated [Figure 2a]. After cleaving the flap from the skin behind the external ear, the communication tunnel between the anterior and posterior regions of the ear was created [Figure 2b]. An innovative feature was introduced as compared with the technique traditionally described by Masson: At the base of the newly created flap, using a round-bladed scalpel, the skin was de-epithelialized to create a de-epithelized rectangle that could overlap with the thickness of the communication tunnel layers between the two sides of the ear [Figure 2a]. Then, the retroauricular flap was rotated and transposed through the above tunnel to repair the defect. A 6 – 0 vicryl filament was used at the meeting point between the de-epithelialized area of the flap and the tunnel wall [Figure 2c], while the suture of the flap at the level of the concha was perfused using a 5 – 0 vicryl filament [Figure 2d]. Histologic examination revealed the presence of *in situ* SCCs with residual disease-free excision margins. One month later, the patient had no signs of recurrence, and the functional and cosmetic outcome was both satisfactory [Figure 3].

Figure 3: One month after surgery.

CONCLUSION

The innovative revision of the Masson post-auricular revolving door flap achieved successful reconstruction with excellent functional and cosmetic results. One month postoperatively, the patient showed no signs of recurrence, and histology confirmed clear excision margins.

Authors' contributions

All authors contributed to designing and conducting the work, drafting, and revising the manuscript and approved the final version for submission.

Ethical approval

Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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