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Ear Lobule Flap for Reconstruction of a Near Total Auricle Defect

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Abstract: A number of surgical procedures can be performed for partial auricular defects occurring due to various causes. The most appropriate reconstruction method should be employed with regard to the defect dimensions and the status of local adjacent tissues. We present a case of near total excision of external ear due to recurrent basal cell carcinoma and the reconstruction of the defect with ear lobule flap.

Key Words: Ear lobule, flap, auricle

Totale Yakın Kulak Defekti Onarımında Kulak Lobülünün Flep Olarak Kullanılması

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Özet: Değişik nedenlerle oluşan parsiyel kulak defektlerinin onarımında birçok cerrahi yöntem uygulanmaktadır. Parsiyel kulak defektlerinin onarımında defektin ve yakın bölgenin özellikleri göz önüne alınarak en uygun tedavi seçeneği uygulanmalıdır. Bu olguda tümör eksizyonu sonrası oluşan totale yakın kulak defektinin kulak lobülü ile rekonstrüksiyonu sunulmaktadır.

Anahtar Sözcükler: Flep, aurikula, kulak lobülü

Introduction

Ear reconstruction continues to stimulate the imagination of every plastic surgeon in practice. When a significant part of the ear has been destroyed or excised, the reconstruction remains a significant challenge (1). The issues include a good skin covering devoid of hair follicles, a framework of cartilage to maintain the upright position of the reconstructed auricle and to represent its characteristic convolutions, and a covering of skin for the posteromedial aspect of the auricular framework after it is raised from the mastoid area (2). However, in the majority of cases, the resulting ear is cosmetically displeasing and may require multiple revisions of the reconstructed ear. In this article we report the use of ear lobule as a flap for the reconstruction of the mastoid area following a near total excision of the external ear due to recurrent basal cell carcinoma.

Case Report

A 74-year-old man presented with a recurrent basal cell carcinoma of the left external ear. He had undergone excision of the tumor previously. On physical examination, he was found to have a tumor located on the concha extending superiorly and laterally (Figure 1). Due to its invasive character, he was offered a near total excision of the ear. He refused the alternatives such as autogenous tissues and external ear implants for the reconstruction of the area. He had a near total excision of the auricle. Due to deep tumor invasion, the periosteum on the mastoid was also excised. The inferior portion of the defect where the bone was exposed was resurfaced with the remaining lobule split in the middle. The remaining defect on the superior aspect was covered with a local scalp flap. His postoperative period was uneventful. There was no recurrence at the end of the first year after the surgery. The patient was pleased with the result (Figure 2).

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Figure 1. Location of the tumor in the concha extending superiorly.



Figure 2. Postoperative appearance of the ear at the end of the first year following surgery.

Discussion

Many options are available for reconstruction of auricular defects that yield acceptable results. Factors to consider before choosing a reconstructive format include size, location and depth of the defect, patient medical history, smoking and esthetic concerns (3). The ear lobule is a three-dimensional, tongue-shaped pendant appendix of the auricle. It is made of skin and subcutaneous tissue and has no cartilage frame. It is composed of three layers, with the subcutaneous tissue between two skin layers. Ear lobule excision for tumor resection is an extremely

rare eventuality (4). Therefore, the ear lobule can be used for the reconstruction of the mastoid area defects following the near total excision of the external ear. Despite the availability of various reconstruction methods, the patient's desire and concern should take priority. We opted to use the ear lobule instead of discarding it. We were able to close the remaining portion with a local flap. The ear lobule, particularly when it is large and redundant, may provide a satisfactory coverage for the mastoid area defects following near total excision of the external ear.

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