



RECONSTRUCTION OF A PRE-AURICULAR DEFECT DUE TO A BENIGN SWEAT ADENOMA MIMICKING BASAL CELL CARCINOMA : A CASE REPORT

Plastic Surgery

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ABSTRACT

A 60 years old fair complexion lady, presented with a left sided pre-auricular lesion, clinically suspected as a basal cell carcinoma. The patient was asymptomatic with no metastasis. Wide local excision of the tumour using a face-lift type incision was done with adequate skin margins around the lesion was taken. The primary defects of the cheek, pre-auricular region and components of the ear were reconstructed using a retro-auricular superiorly based pedicle flap. Biopsy of the lesion revealed a benign lesion of the sweat gland known as Eccrine poroma. Porcine eccrine is a benign tumor of sweat gland composed of epithelial cells with eccrine type distal tubular differentiation. It commonly occurs in middle or elderly age group presenting as a painless, soft to firm, solitary mass with variable size of 2-20mm (1). Hence skin lesions in the elderly can be confusing especially between the benign and the malignant form. From this case we have learned that a thorough planning for reconstruction of the resultant defect should be worked up before the excision of the lesion, so that the patient will get a clear margin from the suspected malignancy and at the same time achieved a good aesthetic outcome.

KEYWORDS

Basal Cell Carcinoma, Retro-auricular Flap, Eccrine Poroma, Reconstruction Of Pre-auricular Defects

INTRODUCTION

This is a rare case of pre-auricular benign sweat gland tumour called eccrine poroma. Very few cases of eccrine poroma were reported in the literature. Even though head and neck is the most common site, few cases have been reported so far¹. In this case a clinical diagnosis of basal cell carcinoma was made which fit with the patient's age and the lesion characteristics. Hence a thorough work up and surgical planning was made in accordance with the malignancy. Wide local excision of the lesion followed by reconstruction of the defect was done by a unique technique of retro-auricular superiorly based pedicle flap. In the literature they have described many techniques to resurface such a defect but none were suitable². Our technique gave the patient the best aesthetic outcome along with a disease free life.

CASE REPORT

A 60 years old lady presented with an ulcero-proliferative growth of the pre-auricular region of one year duration. It was an asymptomatic growth, reddish brown in color with no bleeding. There was no history of trauma. Cutaneous examination revealed a red to brown lesion of 5 * 6 cm involving the pre-auricular region and root of the helix, it has a rough surface with areas of ulceration and is non-tender (Figure A). No lymph nodes were palpable. Laboratory examination were within normal limit. Clinically it was diagnosed as a basal cell carcinoma.

A 0.5 cm margin was outlined around the lesion (Figure B). Incisions were kept in relaxed skin tension lines as much as possible so as to heal with less-visible scars. Tumescence was injected into the subcutaneous plane of the lesion. The flap was incised, following a facelift-type incision at the pre-auricular margin, and carefully elevated at the level of the subcutaneous fat. The resultant defect is of 7 * 5.5 * 0.5 cm involving the cheek, tragus and root of helix of the left ear (Figure C). In Figure D,E and F the superiorly based retro-auricular pedicle flap has been elevated after planning in reverse and transposed into the pre-auricular defect. Careful hemostasis was obtained using focal electrocoagulation of bleeding vessels. After obtaining hemostasis, the flap was secured with a 4-0 polypropylene suture. A split thickness skin graft harvested from the right thigh was secured to the secondary defect with 5-0 poliglecaprone 25 created by the transposing retro-auricular portion of the flap and bolster sutures were applied. The final immediate postoperative appearance of the pre-auricular reconstruction is shown in Figure G. There was no flap or graft necrosis, hematoma, infections or other complications. The patient was discharged on post-

operative day three with satisfactory outcome. There was excellent cosmesis from the flap reconstruction at 4 weeks (Figure H,I). In summary, this case illustrates the satisfactory resolution of a large, complex defect of the pre-auricular cheek and auricular region using a retro-auricular pedicle flap with an STSG. Histopathological examination revealed a benign sweat adenoma known as Eccrine Poroma, in contrary to the pre-clinical diagnosis of a basal cell carcinoma.



Discussion

Reconstruction of a large pre-auricular defect involving the multiple subunits of the ear poses a challenge to the surgeons especially when using a single stage reconstruction. Various options are available to resurface the defect in the pre-auricular region. Cosmesis outcome is poor with second-intention healing and time consuming, a full- or partial-thickness skin graft of this large defect runs the risk of tissue and color mismatch as well as unpredictable contraction³. Local flaps like



Limberg flap if used for reconstruction of the defect would lead to additional scarring and disturb the anatomical landmarks of the ear. An

island pedicle type or V-Y advancement flap based on available tissue inferior to the defect was considered, but the extent of movement that would be required of such a flap could place undue tension on the flap pedicle, putting the flap at risk of tissue necrosis. Other options that were evaluated included the facelift flap⁴, and a large cervico-facial rotation flaps. The temporo-parietal fascial flap which is based on the superficial temporal artery is not advisable since the multiple branches of the facial nerve and superficial temporal artery are at risk to injury during the excision of the pre-auricular lesion.

The pre-auricular lesion of this lady could be reconstructed with the superiorly based retro-auricular pedicle flap keeping in mind the property of the aged skin. The epidermis decreases in thickness, particularly in women and particularly on the face, neck, upper part of the chest, and the extensor surface of the hands and forearms⁵. The dermis of aged skin contains fewer fibroblasts and reduced amounts of collagen compared to younger skin, leading to less scarring of tissue. Hence the pre-auricular defect reconstruction remains inconspicuous after a few months time. The pedicle of the retro-auricular flap also need not be divided since overtime it snugly sits in the post-auricular sulcus without any obvious deformity. The retro-auricular grafted site was also hidden from vision. All these factors made this retro-auricular pedicle flap reconstruction to be ideal for this patient giving the best aesthetic outcome and rendering the patient free of any residual disease.



In elderly population both benign and malignant tumors are frequently seen. Very often the benign lesions are mistaken with the malignant lesions due to their pleomorphic characteristics.

Eccrine poroma, a variant of poroid neoplasm represents 10% of all sweat gland tumors⁶. The incidence of eccrine poroma is approximately 0.001 to 0.008% of all skin biopsy specimens. It is a benign tumor of sweat gland composed of epithelial cells with eccrine type distal tubular differentiation. The pathogenesis is unknown, although it has been associated with scarring, trauma and radiation. The differential diagnosis of pyogenic granuloma, seborrheic keratosis, fibroma, malignant melanoma, adenexal cysts, vascular tumors, dermatofibroma, squamous cell carcinoma and basal cell carcinoma should always be considered when we deal with such a case in old age.

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