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Case Report

Infiltrating basal cell carcinoma with squamous differentiation: a case report

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ABSTRACT

We describe a case of basal cell carcinoma of right pinna in a 54 year old man. The patient underwent wide local excision of the lesion with lateral temporal bone resection. The defect created was reconstructed using Pectoralis major myocutaneous flap on same side in collaboration with plastic and reconstructive surgeons. Review after 6 months does not reveal any signs of recurrence.

Keywords: Basal cell carcinoma, Temporal bone

INTRODUCTION

Malignancy of Temporal bone is a rare entity. Temporal bone carcinoma was first reported histologically by Politzer in 1883.[1] Basal cell carcinoma represents 11% of tumors of the external auditory canal and temporal bone. Temporal bone involvement most often occurs as tumours extend along the external canal from the auricle. They rarely metastasize but can be very aggressive locally. They carry a better prognosis than squamous cell carcinoma, and even extensive tumors are usually amenable to surgical excision.[2]

CASE REPORT

A 54 years old male, farmer by occupation, a habitual tobacco chewer and alcohol consumer presented with history of gradually progressive painless ulcer of right ear lobe since 4 years. There was history of itching and occasional bleeding. Medical history was not significant. On local examination, there was 'eaten up' appearance of right ear lobule. There was an ulcero-infiltrative lesion on medial aspect of right ear lobule extending anteriorly till tragus and posteriorly involving half length of retro auricular sulcus (Figure 1). There was hyper pigmentation along ulcer margins and few satellite lesions on the right cheek.

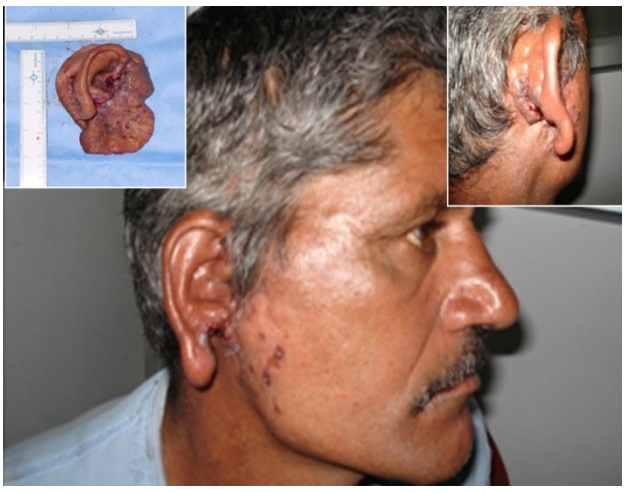

Figure 1: Preoperative picture of the patient.

Right external auditory canal was obliterated and otoendoscopic examination revealed granular myringitis. Skin induration was present in preauricular region, cheek and post auricular region till highest attachment of pinna. There was no cervical lymphadenopathy. Punch biopsy of the lesion was suggestive of two possibilities: Basal cell carcinoma or malignant adnexal neoplasm. Incisional biopsy was then taken which confirmed the lesion as Basal cell carcinoma with squamous differentiation.

USG neck for cervical lymphadenopathy was normal. HRCT temporal bone was suggestive of soft tissue density obliterating right ear canal and tumor extension till tympanic membrane reaching handle of malleus. MRI was suggestive of involved superficial lobe of parotid and normal temporomandibular joint capsule. MR Angiogram study was normal. A diagnosis of Basal Cell Carcinoma Right Pinna T4 N0 Mx (stage IV) was made as per Pittsburgh staging system.

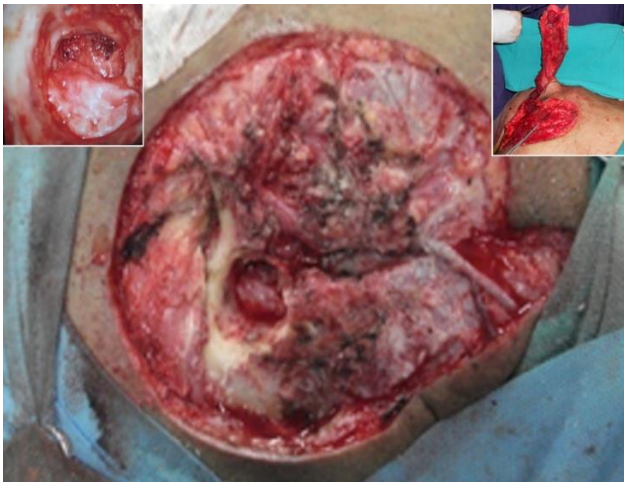

Figure 2: Intra-operative picture of the patient.

Figure 3: Immediate post operative photograph after PMMC flap reconstruction of the defect.

The patient underwent Wide local excision and lateral temporal bone resection under general anaesthesia. Right lateral tarsorrhaphy was done in view of anticipated right facial nerve palsy. The Eustachian tube and middle ear cavity was obliterated by temporalis muscle and tympanomastoid part of facial nerve covered with temporalis fascia graft (Figure 2). This created a large defect of about 13 cm by 12 cm (Figure 2) which was reconstructed by raising a Pectoralis major myocutaneous flap on same side (Figure 2 and 3). Post op period was uneventful and the sutures were healthy and well healed (Figure 4). All the surgical margins were free of tumor.

Figure 4: Post operative day 10.

DISCUSSION

Final diagnosis

Infiltrating Basal cell carcinoma with squamous differentiation.

The reported incidence of malignancy of temporal bone is 1 to 6 in 10,00,000.[3,4] The auricle is the site of origin in 60% in malignancies of the ear, with the external auditory canal giving rise to 28% and mastoid and the middle ear account for 12%.[3] Squamous cell carcinoma accounts for 60 to 80% of all temporal bone malignancies.[4] Basal cell carcinoma is a distant second followed by a variety of other tumors. Temporal bone cancer does not appear to have any gender predilection.[3]

The rarity of temporal bone cancer makes measuring specific etiologic factors for this cancer in the area, very difficult. However, fair skinned whites, chronic sun exposure, genetic predisposition, chronic otitis media and cholesteatoma[6] Human papilloma viruses, previous radiotherapy and gross incidence found in radium dial workers[5] have been implicated as etiologic factors.

Common presenting sign and symptoms are aural discharge, otalgia, hearing loss, facial palsy, canal mass/lesion, tinnitus, pruritus, headache, vertigo, preauricular swelling and aural bleeding.[2,5] Nodal disease is present in 10-20% of patients.[6,7]

Lesions in the auricle can spread along neurovascular bundle and embryonic fusion plates of the pinna and the external auditory canal, thereby invading surrounding structures (temporal bone, facial nerve, parotid gland) and making initial adequate resection difficult.[8]

Determination of tumor stage and medical status assist the surgeon in surgical planning. The use of imaging studies to assess tumor extent is critical. A detailed pre-op workup and patient's medical and anaesthetic fitness status plays a major role in his or her tolerance of such a long surgical procedure, postoperative recovery, healing and rehabilitation.

The Pittsburgh staging system has been widely applied in case reports of temporal bone cancer.[6,9] Nodal involvement can be classified as nodes present or absent, thus adding further to the stage of the cancer.

Primary radiation has been found to be ineffective and all patients found medically fit are amenable to surgery.[6] The resection procedures that can be performed for the temporal bone depend upon the extent of involvement and include sleeve resection of temporal bone, lateral temporal bone resection, modified lateral temporal bone resection, subtotal temporal bone resection and total temporal bone resection. Various adjunctive surgical procedures depending upon the radiological and intraoperative frozen section, including neck dissection, parotidectomy, temporomandibular joint resection and craniotomy should be performed when indicated. Tumors with intracranial invasion have a grave prognosis, and treatment should be palliative with less extensive and less morbid surgical procedures. In the most extreme cases in which there are contraindications to surgery, palliative radiation and chemotherapy may be offered. Most authors recommend postoperative radiation to stage T3 or T4 tumors as defined by the University of Pittsburgh staging system.[10]

However, Basal cell carcinoma carry a better prognosis than squamous cell carcinoma, and even extensive tumors are usually amenable to surgical resection.[2] In an era of investigations and early and quick diagnosis of malignancy cases, it is recommended that these patients should be managed urgently to prevent the significant morbidity associated with it.

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