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Case Report

Osteoid Osteoma of Temporal Bone: A Rare Case Report

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Abstract

Osteoid osteoma is an uncommon primary benign tumor of the temporal bone. The tumor has tendency to occur in all the bones of the body, however its occurrence in the temporal bone and middle ear is extremely rare. Patients may present with postauricular swelling in cases of involvement of mastoid part of temporal bone. Radiological investigation and excisional biopsy is usually necessary for diagnosis. Surgical excision is the treatment of choice as it has tendency to recur, cause local invasion and the rarest chance for malignant transformation. We report a case of rare benign osteoid osteoma involving the mastoid part of temporal bone.

Keywords: Osteoid Osteoma; Benign Tumor; Temporal Bone

Introduction

Osteoid osteoma is an uncommon primary benign tumor of the temporal bone. The tumor has tendency to occur in all the bones of the body, however its occurrence in the temporal bone and middle ear is extremely rare.

Case Report

A 20 years female presented with right postauricular swelling since 1 year. The swelling was insidious in onset and gradually progressive. It was not associated with pain or discharge. Patient did not complain of any ear discharge, aural fullness, hearing loss, vertigo or tinnitus. There was no problem in the left ear. Her medical history was not significant with no previous treatment history. Clinical examination revealed 3 * 2 cm hard non-tender immobile round swelling just posterior to the right postauricular groove. Right external auditory canal, tympanic membrane and facial nerve findings were normal.

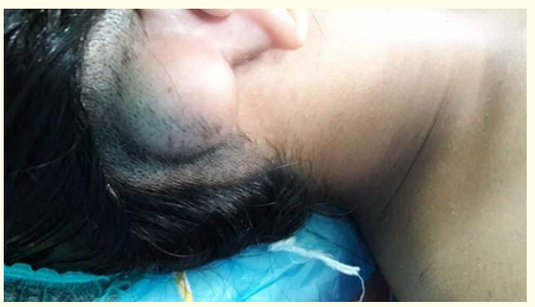

Figure 1: Showing hard, non tender, round, immobile, right post auricular swelling.

Computed tomography of the temporal bone was done which revealed well defined soft tissue mass at right post auricular region measuring 20 * 28* 32 mm adjacent to mastoid segment of the right temporal bone with multiple calcified foci within it largest measuring 5 * 6 mm. No lytic or sclerotic changes were noted.

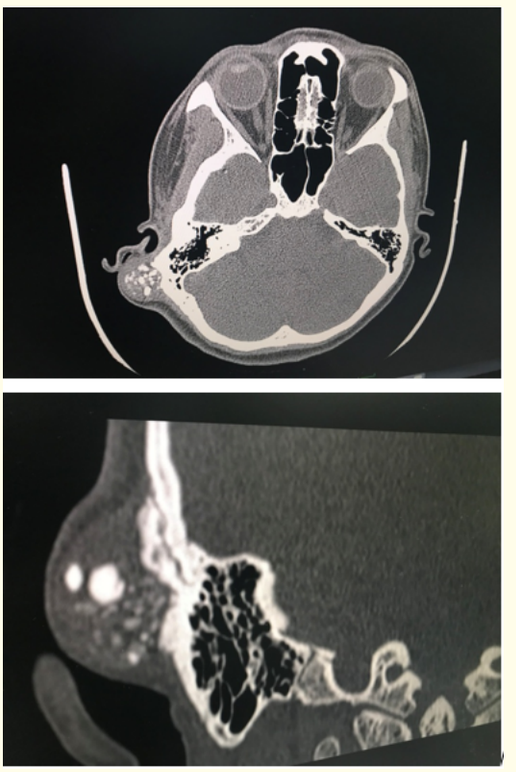

Figure 2: Showing computed tomography of temporal bone.

Patient then underwent surgical excision under general anaesthesia with findings of 3.5 * 2 cm hard swelling adhered and arising from mastoid part of temporal bone. Drilling of the temporal bone had to be carried out for en-bloc resection of the tumor.

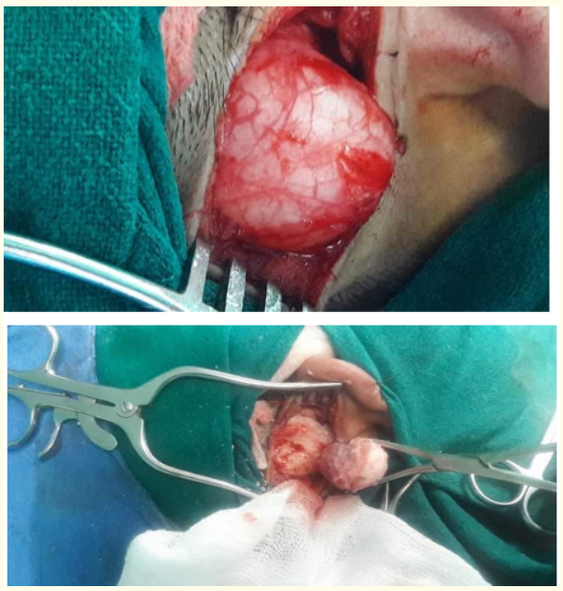

Figure 3: Showing intraoperative pictures.

Histopathological report of the excised specimen showed nidus of anastomosing and irregular trabeculae of woven bone rimmed by single layer of osteoblasts and frequent osteoclasts with loose fibrovascular stroma with a diagnosis of osteoid osteoma.

Discussion and Conclusion

Osteoma is a slow growing benign mesenchymal osteoblastic tumor formed by mature bone tissue. Osteoma is prone to grow from the outer table of the cranium, jaw and paranasal sinuses [1].

Temporal bone osteomas are rare. Incidence of temporal bone osteomas generally is 0.1% - 1% of all benign tumours of skull [2]. Aetiology of non-syndromic temporal bone osteomas are not known and various possible causes have been reported in literature and previous case reports. These include genetic origin, trauma, surgery, radiotherapy, chronic infections and pituitary dysfunctions [3]. Osteoma occurrence may be syndromic or non-syndromic. They may occur as a feature of Gardener's syndrome, which is characterized by multiple intestinal polyps, epidermoid inclusion cysts, fibromas of the skin and mesentery and osteomas. Osteomas in Gardener's syndrome have a predilection for membranous bones, and as such the mandible and maxilla are more commonly involved [4]. Temporal bone osteoma swellings are usually painless like in our case. They however can be painful gradually with cosmetic disfigurement as well as there can be difficulty in wearing glasses. Rarely, the petrous part of the temporal bone may be involved along with facial nerve and part of the internal ear that leads to hearing loss as a complication [5].

In differential diagnosis of mastoid osteomas, osteosarcoma; osteoblastic metastasis; isolated eosinophilic granuloma; Paget's disease; giant cell tumor; osteoid osteoma; calcified meningioma and monostotic fibrous dysplasia should be considered. Radiologic borders of these lesions are less clear than those of osteomas [6]. CT scanning demonstrates an osteoma as well demarcated, dense, sclerotic outgrowth from the mastoid bone.

Surgical resection is the treatment of choice with most common indication being cosmetic disfigurement followed by associated symptoms, and also to prevent its later complications, which can be caused by giant osteomas [5].

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