Original Research Paper

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# TEMPORAL BONE OSTEOMA –A CASE REPORT

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**ABSTRACT** Temporal bone osteoma is a benign slowing growing tumour that consists of well differentiated mature ,compact or cancellous bone arising from the surface of cranial vault of temporal area of skull bone, external auditory canal etc. They mostly arise from mastoid and squamous part of temporal bone. This case was reported with painless postauricular swelling since childhood with increase in size since one year and was asymptomatic. On physical examination, there was hard , painless postauricular swelling of 3*2cm present on squamous and mastoid region of temporal bone. CT facial bones revealed 22*19 mm sized wide based, large mass probably osteoma. MRI brain was normal. The resection of tumour was performed under local anaesthesia using postauricular approach and was completely resected. Multiple bony pieces sent for histopathology examination and was confirmed osteoma. Review was done after 6 months,no recurrence was observed.

**KEYWORDS :** Temporal bone , Osteoma, postauricular.

## INTRODUCTION:

Osteoma which is slow growing bony tumour of well differentiated mature, compact or cancellous bone. They usually arise from surface of cranial vault and named according to the bone from which they arise hence named temporal bone osteoma. They most commonly arise from external auditory canal , mastoid and squamous part of temporal bone, middle ear, Eustachian tube, petrous apex, internal auditory canal, zygomatic process, glenoid fossa, styloid process etc. These are rare, arising in 2nd and 3rd decades ,mostly in females. Factors include chronic infection, trauma, hereditary, surgical, radiotherapy, glandular dysfunction [pituitary]. Varboncoeur stated that they originate from embryonic cartilaginous rests or persistent embryologic periosteum. Yamasobo et al proposed that they are congenital. Caplan et al proposed that they arise due to trauma and muscle contracture. In this article,we present a case of osteoma of temporal bone.

## CASE REPORT:

A 19 year old male reported with a swelling behind right ear present since childhood . It has insidious onset and gradually progressively increasing in size since 1 year. There was no history of trauma, headache, hearing impairment, otorrhea, dizziness, vomiting, facial weakness and neurological deficit. On clinical examination well defined , bony hard, non tender, non pulsatile, non reducible, non compressible, swelling of 3*2 cm was present behind pinna not obstructing postauricular groove and fixed to underlying bone. Skin over swelling was free. External auditory canal was normal. Tympanic membrane was normal . Left ear was normal. Audiometry showed normal hearing. FNAC couldnot be done as it was hard in consistency.

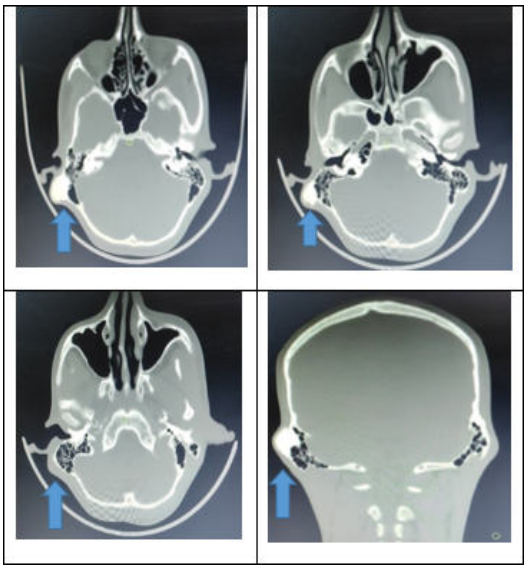

**Fig2:**CT Of Facial Bones- Superficial Bony Growth.

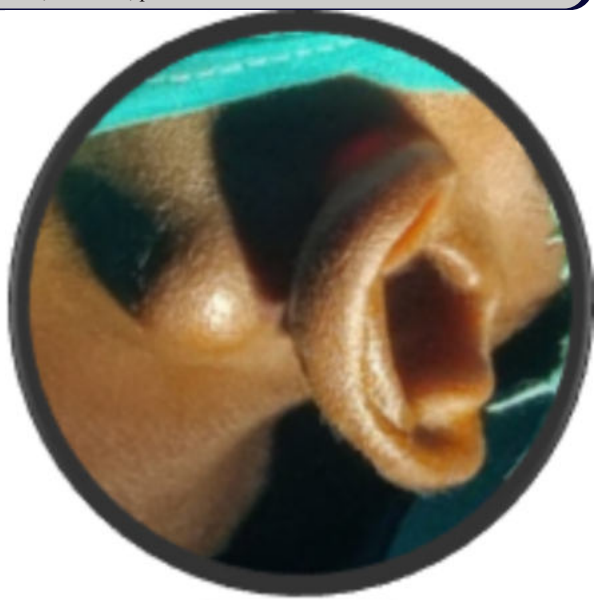

**Fig 1:** Right Side Post Auricular Growth

CT scan revealed bony growth arising from superficial part of squamous and mastoid part of temporal bone measuring 22*19 mm broad based bony outgrowth without involving mastoid aircells and no associated soft tissue swelling.

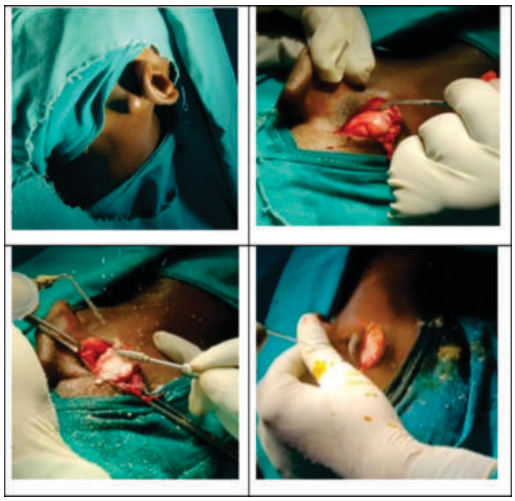

**Fig 3:** Intra Operative Pictures Of Surgical Excision.

**Operative Procedure:**

Patient posted for surgical excision of growth under local anaesthesia. A postauricular incision given completely exposing the bony growth and periosteum elevated. Excision was done by drilling out a groove at the base of growth over the surface under continuous irrigation. After excision the contour of the mastoid cortex was found intact without any evidence of bony invasion. Excessive skin was removed and suturing was done in layers. Excised bits of bone sent for histopathological examination. HPE revealed the lesion having multiple fragments of lamellar bone without any fibrovascular stroma. This confirmed the diagnosis of osteoma. Sutures removed on postoperative day seven. Patient followup was done after 6 months, no evidence of recurrence observed.

## DISCUSSION :

Osteomas are classified according to their pattern of growth into outgrowing, ingrowing , unilateral or bilateral and on histopathology into 4 types. 1. Osteoma compactum – common, hard , attatched to cortex. Histology – dense lamellated bone tissue and traversed by few vessels. Osteoma cancellare – includes cancellous bone. Osteoma cartilagenum – rare, includes bone and cartilage. Osteoma mixtum – is mixed type. Extracanalicular osteomas of temporal bone are primarily composed of mature bone. These are more common in young females. Grossly covered externally by thin layer of periosteum .They are round or oval , hard ,tan white, bosselated , well circumscribed and attached to underlying bone by broad base or occasionally by small stalk . On dissection they are dense or sclerotic with narrow [ compact] or [spongiotic] intra trabecular spaces. Histologically compact osteomas are composed are composed of predominant lamellar bone With haversian like systems of variable size and shape that often blends imperceptibly with underlying normal cortex. Foci of woven bone and fibrous tissue at times reminiscent of a fibro osseus lesion may be present. Patients with gardener syndrome an autosomal dominant disorder characterised by colonic polyps, soft tissue tumours, multiple osteomas. Only symptomatic should be treated. Recurrences are rare. Malignancy not been reported.

## CONCLUSION :

Osteomas need to be removed only in cosmetic conditions, hard of hearing, histopathology.

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