

# MASTOID OSTEOMA OF TEMPORAL BONE – A RARE CASE REPORT

**Dr. BRIJESH KUMAR PATEL**

Consultant  
ENT Department  
Bokaro General Hospital, Bokaro

**Abstract-** Osteomas are osteogenic tumours which are most commonly affects frontal and ethmoid sinuses. Osteomas of temporal bone are rare entity with incidence of 0.1 to 1% of all benign tumours of skull. In ear, osteomas commonly affects external auditory canal, middle ear and styloid process and rarely affects mastoid region. Here, we present a case of 17 year old female patient presented to us with a painless post auricular mass in mastoid region left side of temporal bone of size 2 cm. Diagnosis of mastoid osteoma was made after high resolution computed tomography (HRCT) temporal bone and histopathological report . Complete surgical excision done with no recurrence.

## CASE REPORT

A 17 year old female patient presented to OPD of ENT department of our hospital with chief complaint of a hard swelling in post auricular region on left side from last 15-16 years which was progressively increasing in size. She did not complain of any pain or other symptoms related to swelling except for cosmetic deformity. On examination there was a single oval shaped swelling in post auricular region on left side with size 2x1.5 cm. Swelling was bony hard in consistency covered with skin, non tender and its base fixed to underlying bone. Otoscopic examination and audiometry normal. Patient having no any past history of trauma or infection.



Xray skull lateral view showed a well defined oval dense radiopacity in left mastoid region. High resolution computed tomography (HRCT ) of left temporal bone showed an exophytic osseous mass in left post auricular region arising from left mastoid region. Middle ear cavity & ossicular chain are normal and there was no any intracranial extension. Based on above findings, provisional diagnosis of mastoid osteoma was made.

A 5 cm post auricular incision was given over the swelling and subcutaneous flap elevated to provide complete exposure of the osteoma. Osteoma was removed with the help of hammer and chisel & remaining portion was drilled out to ensure complete removal and prevent recurrence. The wound was closed in layers and stitches were removed seven days after surgery without any complications. On regular follow up no recurrence of lesion was noted.



## **DISCUSSION**

Osteomas are benign tumours of head and neck common in frontal and ethmoidal sinuses. Temporal bone osteomas are rare. Incidence of temporal bone osteomas generally is 0.1-1% of all benign tumours of skull. Osteomas located in all portions of temporal bone including external auditory canal, squama, mastoid, middle ear, glenoid fossa, Eustachian tube, internal auditory canal, petrous apex and styloid process have been reported.

Clinically, it is difficult to classify type of osteoma because of similar presentations. There are three types of osteoma of mastoid reported in literature as: osteoma compactum, osteoma cancellare, and osteoma cartilagineum based on histology. Compact osteomas have a wide base and are very slow growing whereas spongy osteomas are more likely to be pedunculated and grow relatively faster. Osteoma occurrence can be divided into syndromic and non syndromic. For examples Gardner's syndrome comprises of multiple intestinal polyps, mesentery and skin fibromas, epidermoid inclusion cysts and osteomas with a tendency of occurrence in membranous bones such as maxilla and mandible.

Aetiology of non syndromic temporal bone osteomas are not known and various possible causes have been reported in literature and in previous case reports. These include genetic origin, trauma, surgery, Radiotherapy, chronic infections and Pituitary dysfunctions. Our case had a single oval shaped mastoid osteoma without any obvious aetiology history as stated above.

Temporal bone osteoma swellings are usually painless like our case. Rarely the petrous part of Temporal bone may be involved along with facial nerve and part of the internal ear that leads to hearing loss as a complication. Differential diagnosis of mastoid osteomas may include Osteosarcomas, Osteoblastic metastasis, Isolated eosinophilic granuloma, Paget's disease, Giant cell tumour, Osteoid osteoma, Calcified meningioma and monostotic fibrous dysplasia.

Non contrast CT scan is an imaging method of choice for Temporal bone osteomas and other osteomas. Surgical resection is the treatment of choice and it is mainly indicated for cosmetic deformity with associated symptoms and prevents its later complications such as progress to a giant osteoma.

### **CONCLUSION**

Mastoid osteomas of temporal bone are rare benign slow growing tumours. They are usually asymptomatic unless it increases in size and leads to cosmetic deformity and sometimes pain. Non contrast CT scan is the investigation of choice. Surgical resection is the treatment of choice.

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