

## Case Report

### TEMPORAL BONE OSTEOMA: A CASE REPORT

Dr. Anshul Bansal\*, Dr. Ankur Vats\*\*

#### ABSTRACT

Osteomas are slow growing bony tumors common in fronto-ethmoid regions and rare in temporal bone. These are usually asymptomatic and require treatment mainly for cosmetic reasons. We describe a case of temporal bone osteoma in a female.

#### KEY WORDS:

Ivory osteoma, Temporal bone.

#### INTRODUCTION

Osteoma is a benign tumor of mesenchymal osteoplastic nature composed of well-differentiated osseous tissue with laminar structure<sup>1</sup>.

Osteomas are extremely rare in the temporal bone and mostly occur in the external auditory canal, while mastoid osteomas are rarer<sup>2</sup>.

Temporal bone osteomas in general constitute 0.1% to 1% of all benign tumors of the skull<sup>3</sup>. Causes of mastoid osteoma reported in the literature included trauma, previous surgery, radiotherapy, chronic infection, and hormonal factors with dysfunction in the hypophyseal gland<sup>4</sup>.

We present a case of mastoid osteoma presenting as a single painless swelling in the postauricular region.

#### CASE REPORT

A 20 year old female presented with the complaints of swelling over the right post auricular region since 10 years, which was insidious in onset and was gradually progressive in size. Initially it was a pea size swelling but since last 7 years it started growing in size and has now progressed to attain the size of a lemon. She did not complain of local pain, earache, headache, deafness, giddiness or any other systemic symptoms. She did not give any history of Trauma. There were no aggravating or relieving factors. There was no similar previous history and

family history.

On examination, she was found to have a 3x3 cm solitary, hard, immobile, non-tender, smooth surfaced, temperature above the swelling was not raised and skin above the swelling was normal, retro auricular groove was slightly obliterated.

#### PATHOLOGICAL FINDINGS

Detailed ENT examination including facial nerve function was normal. There were no bony exostoses in the external ear canal.



Fig. 1 Swelling in the right post auricular region

Considering the presentation, diagnosis of osteoma was obvious even though rare, which was confirmed by plain X-ray of the mastoids which showed Radio dense broad base opacity noted in the RT side mastoid region. CT scan was done to exclude the presence of any other osteoma within the temporal bones, the skull

\*Associate Professor, Deptt. of ENT, Subharti Medical College, Meerut

\*\*Junior Resident Deptt. of ENT, Subharti Medical College, Meerut

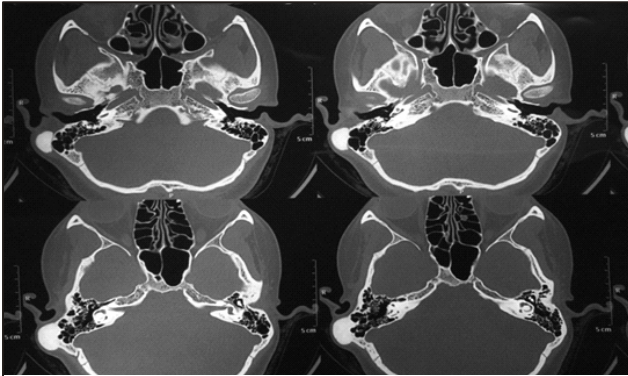


Fig. II CT- scan depicting a pedunculated dense osteoma arising from outer cortex of the right mastoid

and sinuses. It showed a pedunculated dense osteoma arising from outer cortex of the right mastoid.

She was taken up for excision of the osteoma under general anaesthesia. A modified post aural incision was given sufficiently behind the groove to expose the tumor completely. After sequential dissection the osteoma was freed of all muscle attachments. Bony swelling was found to be pedunculated and was excised using gouge and hammer. Cortical Mastoidectomy was done to prevent recurrence and also to obtain adequate margins.



Fig. III Exposed bony swelling in the post aural region

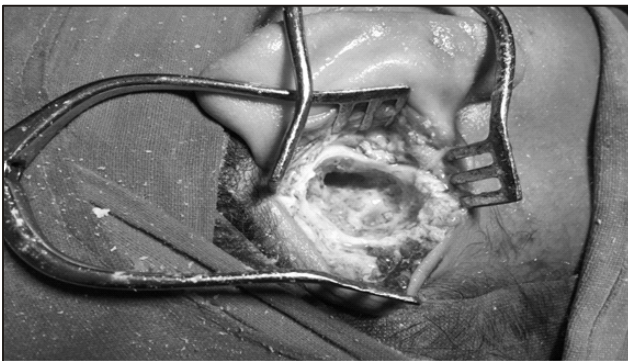


Fig. IV: Exposed sigmoid sinus after the excision of the osteoma

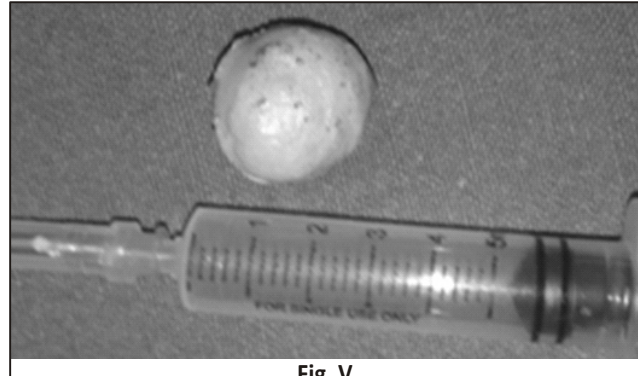


Fig. V

After the excision of the osteoma the sinus plate got exposed thus indicating it was in close relation and if caution was not taken then it could have been damaged.

She had an uneventful postoperative period.

Histopathology confirmed an osteoid osteoma.

#### DISCUSSION

Excluding lesions of the external auditory canal, osteomas of the temporal bone are a definite rare occurrences, the commonest site being the squama and the mastoid. Generally, osteomas of the temporal bone occur in young individuals and those of the mastoid process are more common in females. Mastoid osteoma is usually single and grows from the outer table of the mastoid cortex producing an external swelling. Temporal bone osteomas are rare before puberty. They are slow growing and can remain stable for many years. These are usually asymptomatic and are detected as incidental radiological opacities. In most cases the diagnosis is obtained on plain radiography. They must be differentiated from other bony swellings whose prognoses are poor. While the exact etiology of osteomas is not well understood, they are thought to arise from preosseous connective tissue. There is some evidence that osteomas are of congenital nature<sup>5</sup>. The most widely accepted theories for the etiopathogenesis of osteomas include embryogenesis and metaplasia following recurrent local irritation and trauma.

Osteomas of the skull are classified as,

- a) compact
- b) spongy and
- c) mixed.

Treatment is indicated for osteomas that are symptomatic or cosmetically unacceptable. Excision or drilling of superficial lesions of the mastoid and squama is a

simple procedure. At surgery, since the lesions are always limited to the external cortex a cleavage plane is always encountered when tumor meets normal bone<sup>6</sup>. In mastoid osteomas extending into the fallopian canal and bony labyrinth, complete excision is not indicated since there may be damage to these structures.

Follow up is needed in cases where partial excision is done or where expectant treatment is adopted.

This report is intended to record yet another rare case of mastoid osteoma to add to the body of reported cases.

#### REFERENCES

1. U. P. Carlos, R. W. F. de carvalho, A. M. G. de Almeida and N. D. Rafaela, "Mastoid osteoma. Consideration on two cases and literature review," *International Archives of Otorhinolaryngology*, vol. 13, pp. 350353, 2009. View at Google Scholar
2. A. K. Das and R. C. Kashyap, "Osteoma of the mastoid bonea case report," *Medical Journal Armed Forces India*, vol. 61, no. 1, pp. 8687, 2005. View at Publisher · View at Google Scholar · View at Scopus
3. D. Smud, G. Augustin, T. Kekez, E. Kinda, M. Majerovic and Z. Jelincic, "Gardner's syndrome: genetic testing and colonoscopy are indicated in adolescents and young adults with cranial osteomas: a case report," *World Journal of Gastroenterology*, vol. 13, no. 28, pp. 3900 3903, 2007. View at Google Scholar · View at Scopus
4. N. Guérin, E. Chauveau, M. Julien, J. M. Dumont and G. Merignargues, "Osteoma of the mastoid bone: report of two cases," *Revue de Laryngologie Otologie Rhinologie*, vol. 117, no. 2, pp. 127132, 1996. View at Google Scholar · View at Scopus
5. Yamasoba T, Harada T, Okunao T, Nomura Y. Osteoma of the Middle ear. Report of a case. *Arch Otolaryngol Head Neck Surg* 1990;116:1214-6.
6. Antonio Denia, Fransisco Perez, Rinaldo R, Canalis R, Malcolm D Graham. Extracanalicular osteomas of the temporal bone. *Arch Otolaryngol* 1979;105:706-9.

#### Address for Correspondence

**Dr. Anshul Bansal**

Associate Professor

Deptt. of ENT

Subharti Medical College,

Meerut

Mob.: 7534073315