



## Mushroom shaped Osteoma of the temporal bone – An unusual case report

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Submission Date: 26-11-2014

Acceptance Date: 10-12-2014

### How to cite this article:

#### Vancouver/ICMJE Style

Mukherjee D, Banerjee S, Bandyopadhyay S, Mondal S, Bandyopadhyay S. N. Mushroom shaped Osteoma of the temporal bone – An unusual case report. *Int J Res Health Sci* [Internet]. 2015;3(1):46-9. Available from <http://www.ijrhs.com/issues.php?val=Volume3&iss=Issue1>

#### Harvard style

Mukherjee D, Banerjee S, Bandyopadhyay S, Mondal S, Bandyopadhyay S. N.. Mushroom shaped Osteoma of the temporal bone – An unusual case report. *Int J Res Health Sci*. [Online] 3(1). p.46-9 Available from: <http://www.ijrhs.com/issues.php?val=Volume3&iss=Issue1>

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#### Abstract:

**Introduction:** Osteomas of the temporal bone are rarely encountered, especially extracanalicular ones in the mastoid region. Mushroom shaped osteomas of the temporal bone are even more rare with a handful of cases being reported in medical literature. We present a case of a mushroom shaped osteoma of the mastoid in a 16 year old female patient. **Case Report:** A 16 year old female presented to our OPD with a history of a slow growing swelling behind the right ear for the last eight years. Her only complaint was the aesthetic deformity caused by the swelling. Local examination revealed a bony hard swelling. The patient was posted for excision of the bony mass under general anaesthesia. Histopathological examination of the excised mass confirmed it to be an osteoma. **Discussion:** Osteomas of the mastoids are benign tumours which should be differentiated from exostosis of the external auditory canal. Surgical excision is usually the treatment of choice and in experienced hands, presents few problems. **Conclusion:** We present a case report of a mushroom shaped extracanalicular osteoma of the right temporal bone which is extremely rare as per available medical literature

**Key words:** Bone neoplasms, Mastoid, Osteoma, Temporal bone

#### Introduction:

Osteomas of the temporal bone are rarely encountered, especially extracanalicular ones in the mastoid region [1]. They are usually benign in nature, slow growing [2] and usually globular in shape and of various sizes. However, mushroom shaped osteomas of the temporal bone are extremely rare with a handful of cases being reported in medical literature.

The usual clinical presentation is a symptomless swelling causing aesthetic disfigurement in the retroauricular region. However, a variety of symptoms may arise if the osteoma is present in any other location in the temporal bone. After appropriate investigations, the bony swelling is usually excised by an open or endoscope-assisted approach [3] depending on the extent of the swelling and available resources.

We present a case of a mushroom shaped osteoma of the mastoid in a 16 year old female patient.

### Case Report

A 16 year old female presented to our OPD with a history of a slow growing swelling behind the right ear for the last eight years. (Figure 1) The swelling was hard in consistency but devoid of any local pain. She did not have any associated complaint like earache, ear discharge, impairment of hearing, dizziness or headache and no history of prior trauma to the region. Her only complaint was the aesthetic deformity caused by the swelling.

Local examination revealed a bony hard swelling measuring approximately 2.1cm x 1.7cm in the right postauricular region. The swelling was fixed to the underlying bone but the overlying skin was free. Careful palpation suggested the swelling to be a pedunculated one. Routine otolaryngological examination revealed no other abnormality except the aforementioned swelling. A clinical diagnosis of a right temporal bone osteoma was made.

A CT Scan was advised to determine the extent and confirm the nature of the swelling. The CT Scan revealed a homogeneous bony mass measuring 1.64cm by 1.48cm overlying the right mastoid cortex. (Figure 2) The rest of the CT Scan was normal. The patient was posted for excision of the bony mass under general anaesthesia.

A post-aural incision was utilised to expose the mass. (Figure 3) The incision was modified so as to pass in front of the swelling. The swelling was skeletonised and drilling was done with a cutting burr using a motorised drill so as to excise the swelling. There was a stalk like attachment to the underlying mastoid cortex which was drilled out. (Figure 4) The excised swelling was about 1.8cm x 1.6cm in size and was seen to be mushroom shaped which is very rare as per available medical literature. (Figure 5) A cortical mastoidectomy was done as some mastoid air cells were already exposed after removal of the swelling. Postoperative recovery was uneventful. There was no subcutaneous depression at the surgical site postoperatively. Histopathological examination of the excised mass confirmed it to be an osteoma.

### Discussion

Cutaneous hyper proliferative states like Osteomas of the mastoids are benign tumours which are usually slow growing and primarily composed of

mature bone [2]. These should be differentiated from exostosis of the external auditory canal which are bilateral and reactive in nature. Although osteomas are occasionally found in the temporal bone, albeit rarely, mastoid osteomas are extremely rare [1] and mushroom shaped ones even more so [3].

Various theories have been proposed to explain the origin of such osteomas. These include the theories of congenital malformation, the infectious theory and the post-traumatic theory [4, 5]. The clinical manifestations of these tumours are usually very limited with most patients seeking a consultation for aesthetic reasons only.

After proper clinical evaluation and a provisional diagnosis based on the clinical findings, a CT scan is the usual imaging modality utilised for further evaluation. Not only does a CT Scan help to delineate the extent of the tumour, it also helps to rule out other differential diagnoses such as bony metastases, multiple myeloma, giant cell tumour, fibrous dysplasia or Paget's disease [6, 7]. Signs suggestive of a malignant lesion are rapid growth, pain and a poorly delimited, heterogeneous, osteolytic appearance on CT [8].

Surgical excision is usually the treatment of choice and in experienced hands, presents few problems. If the mastoid air cells are opened, a cortical mastoidectomy is usually done in the same sitting. Some authors have reported a postoperative subcutaneous depression at the surgical site but our patient did not have such a depression [9].

Mushroom shaped osteomas are extremely rare with a handful of cases being reported in medical literature. The peculiar shape of the tumour should raise suspicion of critical inward extensions as extension up to the sigmoid sinus area has been reported [3]. Hence, additional care has to be taken during surgical excision of such a tumour.

### Conclusion

We present a case report of a mushroom shaped extracanalicular osteoma of the right temporal bone which is extremely rare as per available medical literature. Treatment is usually sought for aesthetic reasons and management usually consists of confirmation of clinical diagnosis by computerised tomographic scanning followed by surgical excision.

**Conflict of Interest:** None

**Source of Funding:** Nil

**Acknowledgement:**

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

**Source of Funding:** Nil

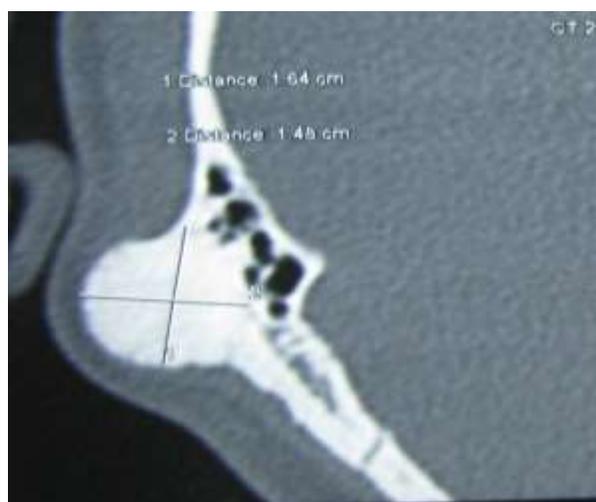
**Source of Conflict:** None

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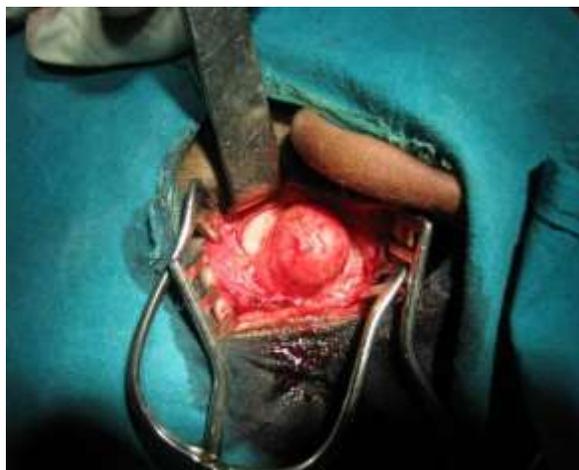
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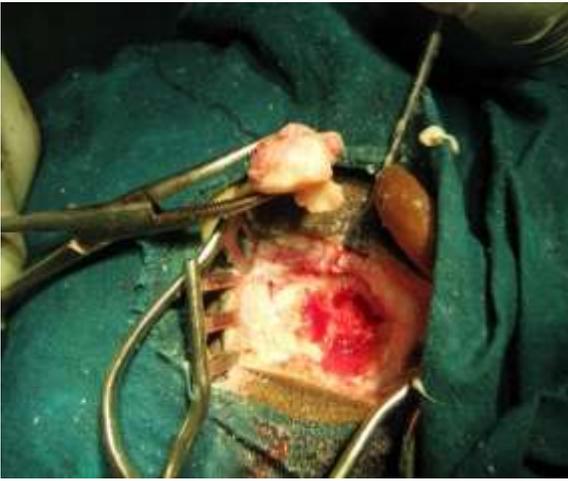
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4:**