

# A Case Report on Osteoma of External Auditory Canal

Shilpi Sujata<sup>1</sup>, Kapil K. Singh<sup>2</sup>, Amrit P. Singh<sup>3</sup>

<sup>1,2,3</sup>Department of Otorhinolaryngology and Head and Neck Surgery, Lala Lajpat Rai Medical college, Meerut, Uttar Pradesh, India, 250003

<sup>1</sup>shilpisujata[at]gmail.com

<sup>2</sup>drkapil2510[at]gmail.com

<sup>3</sup>amritsakarwar[at]gmail.com

**Abstract:** Osteoma of external auditory canal is benign overgrowth. The incidence of osteoma of temporal bone is very low. Osteomas of external ear commonly present as bony outgrowth originating from tympanomastoid or tympanosquamous suture lines near the bony and cartilagenous junction. Osteomas are usually single, slow growing, unilateral tumors. Osteomas are slow growing tumors, asymptomatic when small in size. Small size osteomas can be removed via trans canal approach or the larger one with broad base via postaural approach. The patient described in this case report underwent surgery due to symptoms of conductive hearing loss in right ear. The patient got immediate relief in symptoms after surgery and in follow up, there was no hearing loss on pure tone audiometry and no recurrence seen after 3 months

**Keywords:** osteoma, exostoses, external auditory canal

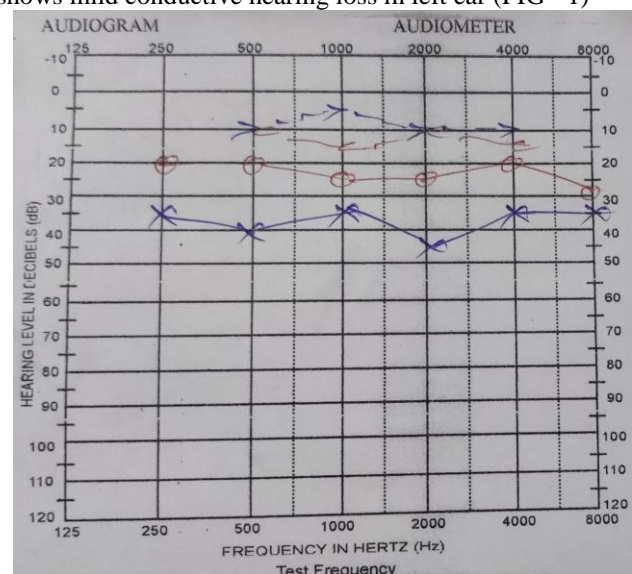
## 1. Introduction

Osteoma of external auditory canal is benign overgrowth. Osteoma and exostoses are the two bony benign tumors which are usually seen in clinical practice commonly. The main difference between two is on their gross appearances. The incidence of osteoma of temporal bone is very low. Osteomas of external ear commonly present as bony outgrowth originating from tympanomastoid or tympanosquamous suture lines near the bony and cartilagenous junction [1]. Osteomas are usually single, slow growing, unilateral tumors [1]. Since osteomas are slow growing tumors they usually are asymptomatic when small in size. The most common symptom of presentation to OPD is ear fullness and conductive hearing loss [1] and very rarely patient can have tinnitus, vertigo and pain [2]. One of the most common causative factor associated with osteoma is long term irritation and inflammations [2]. Management of osteomas are depend on the symptoms, severity, complications, size and location. Small size osteomas can be removed via trans canal approach or the larger one with broad base via postaural approach [3]. In maximum patients, removal of osteomas gives instant relief in symptoms of ear fullness and conductive hearing loss.

## 2. Case Report

A 18 year old Indian male presented to OPD with complains of left ear fullness, decrease in hearing and mild left ear pain for last 8 months. Local examination revealed a hard outgrowth covered with normal skin, arising from posterior wall of EAC and obstructing the EAC almost completely. Microscopic examination confirmed the local examination findings. There was no access to see the tympanic membrane through otoscopic or microscopic examination. Tuning fork test (512 hz) weber' s shows conductive hearing loss in left ear (lateralized to the left) and Rinne's was negative in for

left ear, which was the affected ear. Pure tone audiometry shows mild conductive hearing loss in left ear (FIG - 1)

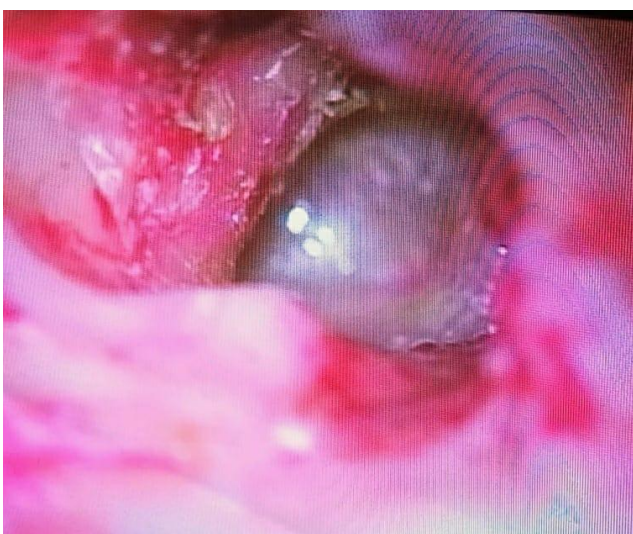


**Figure 1:** Preoperative Pure Tone Audiometry

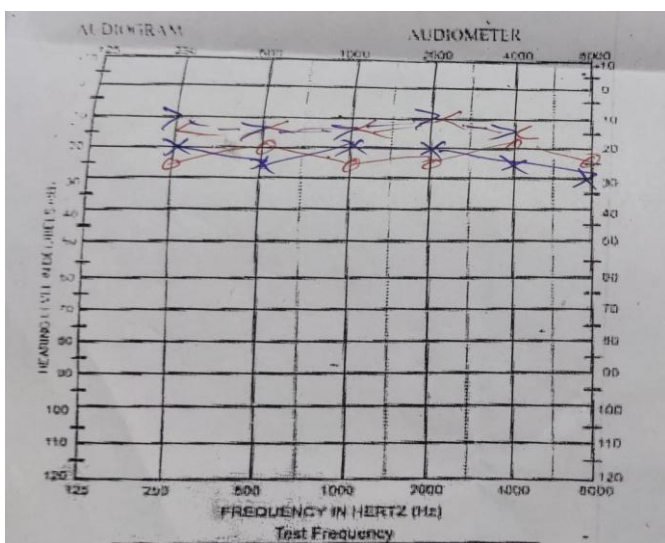
Computed tomographic images were not done due to affordability issues and seems to be not involving any other vital structure. Surgery was done under general anesthesia through post aural route, tumor was drilled from outside in (FIG 2). There was no damage to the posterior wall of EAC by the tumor and no connection between EAC and mastoid was confirmed. Debris beyond the osteoma was removed, tympanic membrane was found intact (FIG3). In postoperative period patient had improvement in hearing and ear fullness. Pure tone audiometry after one month showed improvement in hearing. (FIG 4)



**Figure 2:** Intraoperative Picture of Osteoma of Right EAC.



**Figure 3:** Intraoperative Picture of Intact Tympanic Membrane



**Figure 4:** Postoperative Pure Tone Audiometry (After 3 Months)

### 3. Discussion

Osteomas of the EAC are benign slow growing tumors. They can cause significant symptoms like ear fullness and hearing loss due to mass effect of tumor causing ear canal obstruction [4, 5, 6]. An osteoma of the EAC grows slowly and produces no symptoms, symptoms like conductive hearing impairment or ear fullness can arise, if the osteoma grows and a canal obstruction occurs due to the osteoma itself or due ceruminous impaction [1]. Exostosis is more common than osteoma. The major difference between the two is in their gross appearances. Osteomas are solitary, unilateral, slow growing [1]. While exostosis is multiple, bilateral and symmetrical. Symptoms from both types of the tumors are similar. The common causes which are described to be helping in formation of osteoma are chronic irritation like repeated exposure to cold and otitis externa [7, 8]. But the exact etiology of osteoma is still not known. There are multiple studies which describe the association of osteoma and cholesteatoma, the possible cause to this association is probably defective epithelial migration [4]. On Radiology, an osteoma appears as a single, unilateral, pedunculated hyperdense mass on CT scan arising from tympanosquamous or tympanomastoid suture line. A small osteoma without any symptom is usually incidentally found and should be left, but a periodic evaluation is required. Surgery is indicated in case of large osteomas causing symptoms [2]. When an osteoma is pedunculated and lateral to the isthmus, it can be removed easily by an osteotome or by drilling through the transmeatal approach but if an osteoma is very large, broad based and located medial to the isthmus, excision through the postauricular approach is recommended [3]. Prognosis after surgery is good.

### References

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