IJMPR 2023, 7(8), 07-11

International Journal of Modern Pharmaceutical Research

www.ijmpronline.com

ISSN: 2319-5878
IJMPR
Case Report

SJIF Impact Factor: 5.273

EXTERNAL AUDITORY CANAL OSTEOMA- A RARE ENTITY

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Received on: 03/06/2023

Revised on: 23/06/2023

Accepted on: 13/07/2023

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INTRODUCTION

Osteoma of external auditory canal (EAC), is a rare benign tumor.[1] It accounts for only 0.05% of total ontological surgeries.[1,2] Frontal sinus osteoma are more common than temporal bone osteoma in head and neck region.[3,1] It is rare but literature reported cases from middle ear, internal auditory canal, and semicircular canal, mastoid and in external auditory canal.[4] External auditory canal osteomas are mostly pendunculated lesions arising along tympanomastoid suture.[5] Here, we present a case of osteoma of external auditory canal that we came across in our hospital.

KEYWORDS: Osteoma, External auditory canal, bony growth, polypoidal growth.

CASE REPORT

A 30 year old male patient with no known comorbid presented to ENT outpatient clinic with complain of left ear blockage and progressive ipsilateral decrease hearing for 2 years. He never had otorrhea, otalgia, tinnitus, facial weakness or any neurological symptoms.

On examination, right ear was normal. Left ear examination revealed that firm to hard polypoidal growth present in external auditory canal arising from superior wall of canal. No ear discharge or significant skin changes noted.Tympanic membrane couldn't visualized. (Fig A).

Pure tone audiometry was also performed which showed conductive deafness of 60db. Rest of the clinical examination was unremarkable.

He was advised further workup and CT scan of temporal bone was done (figure1a, 1b,1c, 1d). It showed pedunculated bony outgrowth at the bony cartilaginous junction of left external auditory canal likely representing external auditory canal osteoma. There was associated mild soft tissue thickening. Auditory ossicles, Epitympanum, tympanum, hypotympanum and rest of the scan appeared normal.

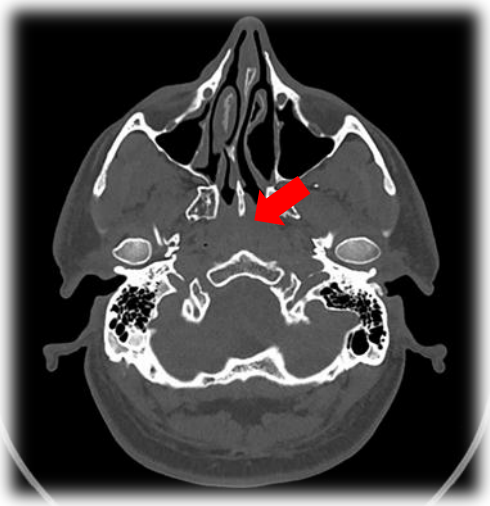

Figure 1a.

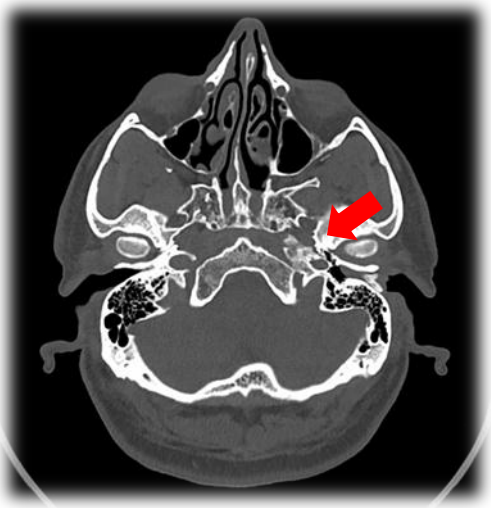

Figure 1b.

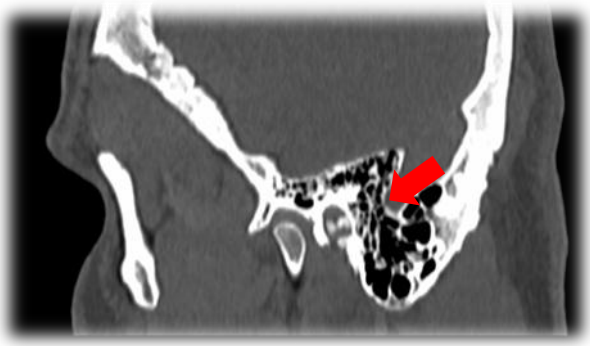

Figure 1c.

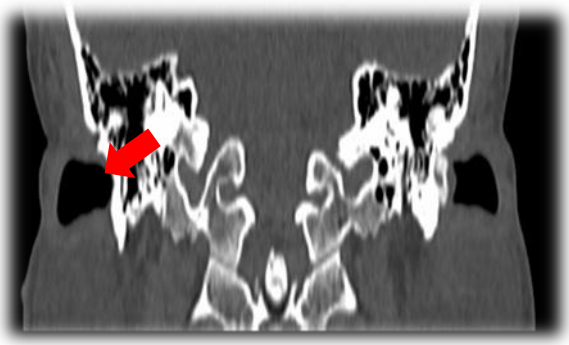

Figure 1d.

Keeping in view the symptoms of patient and findings of CT scan, clinical impression of osteoma was made and patient was advised the surgical removal of this growth.

Patient was admitted under care of ENT team and surgical excision of the growth was planned.

After written and informed consent, baseline investigations, pre-operative workup and general anesthesia fitness he was booked for elective surgery and shifted to Operation Theater. Under general anesthesia, microscopic examination of external auditory canal was done and endaural incision was given. Due to circular shaped pedunculated mass, the external auditory canal tympanomeatal flap was raised using Rosen knife. After complete exposure of area, a hard bony pedunculated mass was seen arising from tympanomastoid suture obstructing the canal (figure 2a). The rest of canal and tympanic membrane was examined and looked normal (figure 2b). The growth was resected up to its base and specimen was sent for histopathological examination to reach the final diagnosis (figure 2c).

The patient went through the smooth recovery with no drastic or minor complications on symptomatic treatment in hospital post-operative course and on follow up visit.

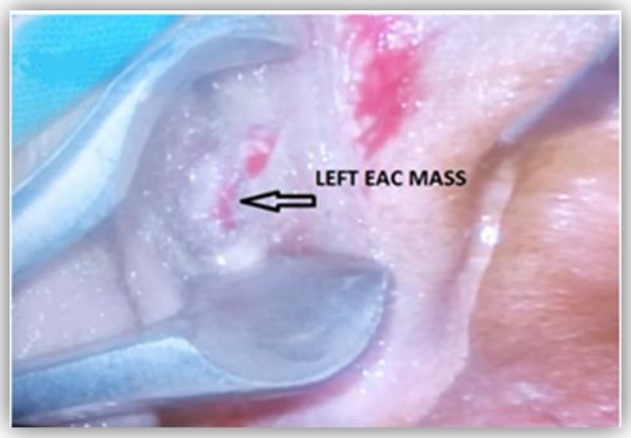

Figure 2a: bony mass obstructing the left external auditory canal.

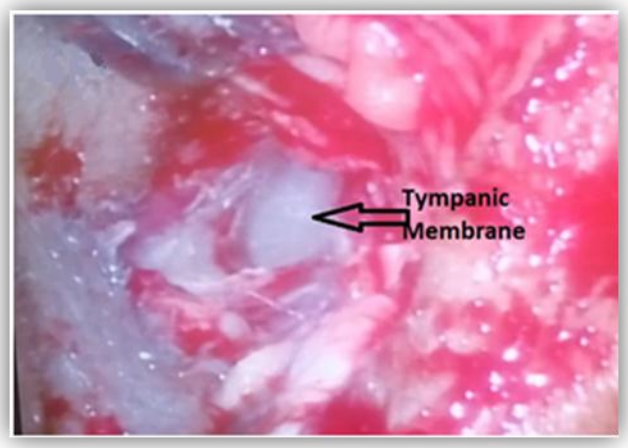

Figure 2b: intact tympanic membrane after removal of growth.

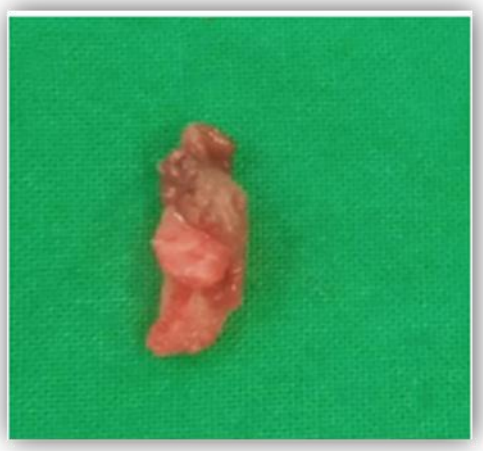

Figure 2c: showing hard growth removed from left external auditory canal.

Histopathological report revealed a single bony piece of 1 x 0.6 x 0.5 cm, that showed mature lamellated and woven bone pattern focally lined by osteoblast showing osteocyte, surrounded by loose fibrous stroma. Features compatible with osteoma.

DISCUSSION

Osteoma is a benign growth of bones. It most commonly involves the skull and the facial bones.[6] In head and neck, frontal and ethmoidal region involvement being more common and temporal bone being the rare.[1] Osteomas of particularly external auditory canal are extremely rare with incidence estimated around 0.05% of total otologic surgeries.[1,5] This makes our case more interesting and unique. Furthermore, solitary osteoma is a rare unilateral lesion that is usually seen attached to the tympanosquamous or tympanomastoid suture line.[2]

Clinical symptoms of osteomas depend upon the site and size of the lesion. Within head and neck, these may include visual and auditory disturbances, headache, otalgia, otorrhea, otitis externa, facial pain, cranial nerve palsies and sometimes infection.[7,11] Small osteomas may remain asymptomatic for years and may be found incidentally.[7] However our patient had only complain of left ear blockage and progressive ipsilateral decrease hearing.

Diagnosis is usually made with careful clinical examination followed by imaging and histopathology.[10] Clinical examination may reveal pearly white, bony outgrowth at the junction of cartilage and bone in the external ear canal.[9] Our patient also showed firm to hard polypoidal growth present in external auditory canal arising from superior wall of canal. CT scan in such cases may show unilateral hyperdense pedunculated mass which usually arises from tympanosquamous or tymapanomastoid suture line extending into internal auditory canal.[10,11]

Treatment plan depends on the symptoms of patient. The lesions can be observed on follow up basis if they remain asymptomatic. However, definitive treatment, that is preferred in symptomatic patients, is complete surgical excision through the stalk of lesion.[10,11,12]

External auditory canal osteomas have excellent prognosis with low recurrence rate and having no predilection for malignancy.[11,13]

CONCLUSION

External ear canal osteoma is a rare benign bony outgrowth. There is common involvement of skull and facial bones. However temporal bone shows rare involvement. In external ear canal tympanosquamous or tymapanomastoid suture lines are the usual sites from where it arises. Symptoms depend on the size and site of presentation with small lesions being asymptomatic for many years usually found incidentally. Large and symptomatic lesions may have various presentations clinically like visual and auditory disturbances, headache, otalgia, otorrhea, otitis externa, facial pain, cranial nerve palsies and sometimes infection. Clinical examination combined with radiological and histopathological findings establish the definitive diagnosis. Depending on the clinical symptoms of patients, treatment plan may vary accordingly from observation in asymptomatic patients to surgical excision in the patients having symptoms.

ETHICAL REVIEW

This case report was written and radiological images, surgical and histopathological findings were added after taking consent from patient. Patient's identity is not shown here and will be kept confidential.

CONFLICT OF INTEREST

The authors declared, there is no conflict of interest.

FUNDING

No funding or grant support.

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