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Case Report Open Access

External Auditory Canal Osteoma: A Case Report

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Abstract

External auditory canal osteomas are found to be rare benign bony neoplasms that are usually unilateral and solitary. Symptoms are rare that includes hearing loss, tinnitus, vertigo and pain. Diagnosis is based on clinical examination, radiographic imaging and histopathology. We describe a case of 26-year-old male with a complaint of aural fullness for one week associated with decreased hearing. On physical examination, the posterior wall of right auditory canal was completely occluded by a mass, which was fixed. On histopathological examination, hematoxylin and eosin stained slides revealed a mass of cancellous bone surfaced by stratified squamous epithelium. Fibrovascular channels were seen with small vessels.

Keywords: External auditory canal; Osteoma; Bone

Introduction

Osteomas are considered to be bony neoplasms that show a predilection for the external auditory canal (EAC), mastoid cortex, facial bones and mandible [1]. External auditory canal osteoma is a rare benign bony neoplasm. Osteomas show clinical presentation such as hearing loss, otorrhea, otalgia, otitis externa and cholesteatoma [2]. External auditory canal osteoma and exostosis shows similar clinical picture. Here, we report a case of external auditory canal osteoma along with clinical and histopathological features that differentiate from exostosis.

Case Report

A 26-year-old male presented to ENT (Ear Nose Throat) OPD with a chief complaint of aural fullness for one week associated with decreased hearing. On physical examination, the posterior wall of right auditory canal was completely occluded by a mass, which was fixed. Left ear did not show any abnormality. CT scan revealed heterodense lesion in the medial part of right auditory canal with hyperdense core arising from posteriomedial wall. The mass was excised under local anesthesia and was sent to histopathology for further evaluation. Grossly, mass was skin covered measuring 1 cm × 1 cm. On histopathological examination, hematoxylin and eosin stained slides revealed a mass of cancellous bone surfaced by stratified squamous epithelium (Figure 1). Fibrovascular channels were seen with small vessels (Figure 2).

Discussion

External auditory canal osteoma is an uncommon bony neoplasm, which is usually asymptomatic, but sometimes may result to hearing loss if canal obstruction occurs. Most commonly seen in middle-aged male. Osteoma of external auditory canal develops in surfers and cold-water swimmers. However, some of the reported cases provides evidence of injury, inflammation, hormones, infections, developmental disorders and genetic disorders [1,3-5]. Distinguishing between osteoma from exostosis of external auditory canal has become controversial since last few decades. But, both of these lesions are found to be incidental [6]. Symptoms of these both lesions include vertigo, paraoxysmal tinnitus, sensorineural hearing loss, trigeminal neuralgia and pain [3,7].

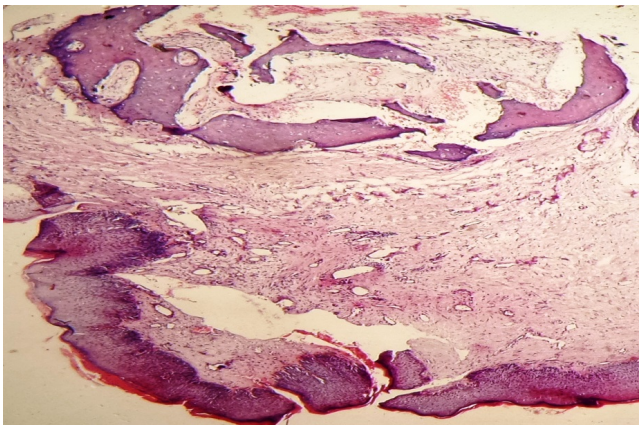

Figure 1: Epithelum over lining a nodule of well-developed bony trbaculae

On computed tomography (CT scan), an osteoma appears as a single, unilateral, pedunculated hyperdense mass which originates from tympanosquamous or tymapanomastoid suture line and extends into internal auditory canal space [4,5]. Exostoses appear as multiple, bilateral, broad based and smooth bordered hyperdense lesions protruding into internal auditory canal [5,8].

Histopathologically, osteoma of external auditory canal shows lamellated bone with minimal osteoytes surrounding fibrovascular channels. Fibrovascular channels contain sinusoidal blood vessels with abundant fibrous tissue [4,5,9]. Exostoses consists of parallel,

concentric layers of subperisoteal bone with abundant osteocytes [3,5]. Hence, in 1979 Graham et al. concluded the presence or absence of fibrovascular channel is the distinguishing feature between exostoses and osteoma [4] But, Fenton et al. concluded only basic histology does not differentiate these two lesions as fibrovascular channels were also present in their study [7].

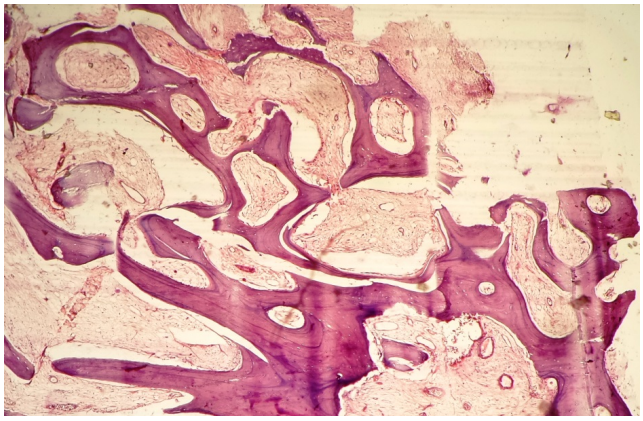

Figure 2: Fibro vascular channels with small vessels

Conclusion

Osteomas of external auditory canal are usually inert and are asymptomatic. Symptoms are noticed only if there is obstruction of canal. Complete surgical excision through its stalk is a definite treatment of external auditory canal osteomas to avoid recurrences [10]. However, the prognosis of osteomas are excellent.

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