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Cholesteatoma of the External Auditory Canal: A Rare Case

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Abstract: ***Cholesteatoma of the external ear is a rare disease, which is characterized by osteonecrosis. These cases reveal bony erosion with subsequent invasion of the adjacent part of the temporal bone, middle ear as well as adjacent structures. The prompt diagnosis is necessary as the disease is insidious in presentation concealing serious destruction, with few or no symptoms. We present a case of cholesteatoma of the external auditory canal because of its rarity and to highlight its grave implications.***

Keywords: Cholesteatoma, external auditory canal and bony erosion

1. Introduction

Cholesteatoma of the external auditory canal is a rare disease which affects a wide range of ages. The onset of disease is insidious and the symptoms are not too evident which results in late diagnosis. The most important feature of the disease is osteonecrosis and bony erosion invading adjacent structures[1,2]. Hence early diagnosis plays an essential role to reduce the further morbidity related to the condition. We report a case of cholesteatoma of the external auditory canal in a 35 year old male patient to highlight its rare occurrence in the external ear and the typical feature of osteonecrosis.

2. Case Report

A 35 year old male patient presented with dull pain in the ear and discharge in the left ear since 8 months. There was no history of trauma or hearing loss. Otoscopy revealed a polypoidal lesion of 1.8 cm x 1 cm x0.5 cm in the external auditory canal with meatal stenosis.

CT scan of the left ear revealed a soft tissue bulging in the external auditory canal with erosion of the anterior wall. Left mastoid air cells showed soft tissue hyper dense opacification.

Modified radical mastoidectomy was performed and the tissue was sent for histopathological examination.

Histopathology of the lesion revealed predominantly non viable bony fragments focally lined by stratified squamous epithelium showing keratinisation. Adjacent viable tissue revealed chronic non specific inflammation and giant cell reaction to keratin. Considering the clinical presentation and the histopathological features the diagnosis was offered as cholesteatoma of the external auditory canal. **Fig 1& 2.**

3. Discussion

Cholesteatoma rarely originates in the external auditory canal, the incidence being 1 to 1.2 per 1000 new patients with ear problems[1,3]. Cholesteatoma of the external auditory canal was first described by Toynbee and later in 1893, Sctolefield[4,5]. The pathopysiology of the disease is related to desquamation of the epithelium which blocks the keratin debris causing erosion and osteonecrosis[2,6].

Predisposing conditions are ear surgery, trauma, and obstruction of the external auditory canal due to stenosis or osteoma which causes local periostitis and initiates the process of osteonecrosis. Our patient had meatal stenosis which may have initiated the process[2,7,8]

These patients present with earache and discharge without history of hearing loss as seen in our case. Otoscopy in these cases reveals intact tympanic membrane and erosion in the external auditory canal. The disease has tendency to invade the adjacent structures, hence CT is recommended. The differential diagnosis of cholestatoma of external auditory canal includes keratosis obturans, trauma and necrotizing external otitis. Keratosis obturans reveals keratin accumulation in the external auditory canal without bony erosion. Hearing loss is seen in keratosis obturans and not in cholesteatoma. Also the earache is dull and insidious in cholesteatoma and never as acute and severe as seen in keartosis obturans[9].

The treatment is clinical or surgical. Clinical treatment is preferred when the extent of the lesion is limited and includes flushing and topical antibiotics. Surgical treatment is recommended for progressive disease in spite of clinical treatment and for involvement of the adjacent structures[6,7,8,10].

4. Conclusion

Cholesteatoma of the external auditory canal is a rare condition which has tendency of insidious onset. The disease

is characterized by osteonecrosis and bony erosion resulting in invasion of the adjacent structures. CT scan helps to reveal the extent of the disease. Early diagnosis in these cases is necessary to prevent further morbidity related with bony erosion.

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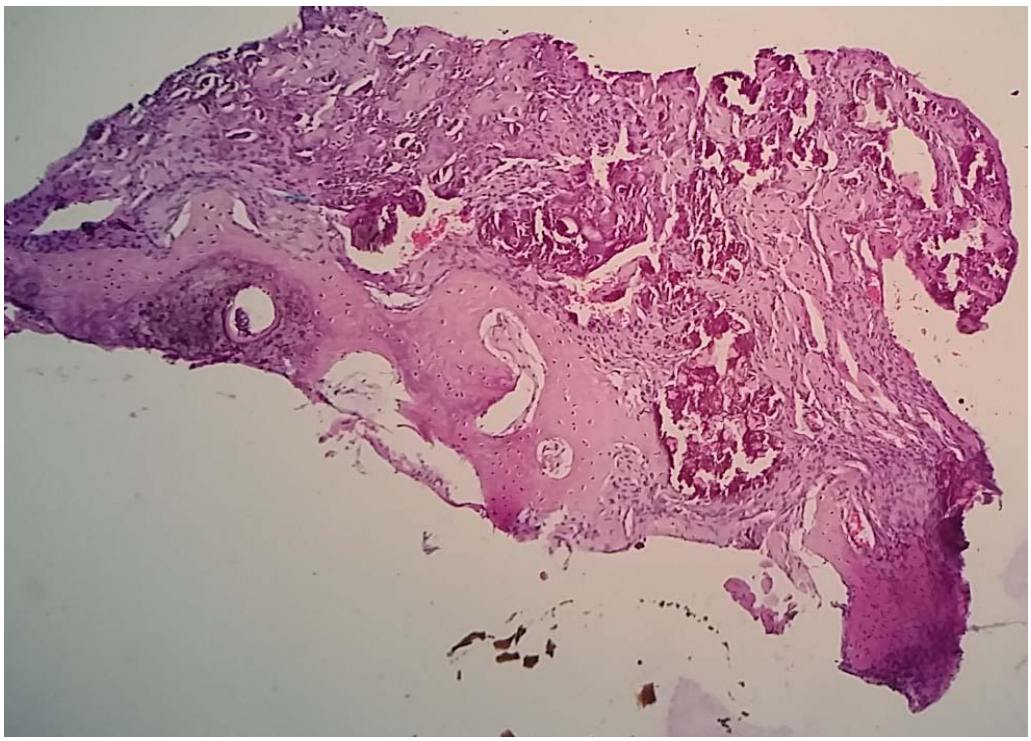

Figure 1: (A) Photomicrograph showing fragments of necrotic bone (100x H&E).

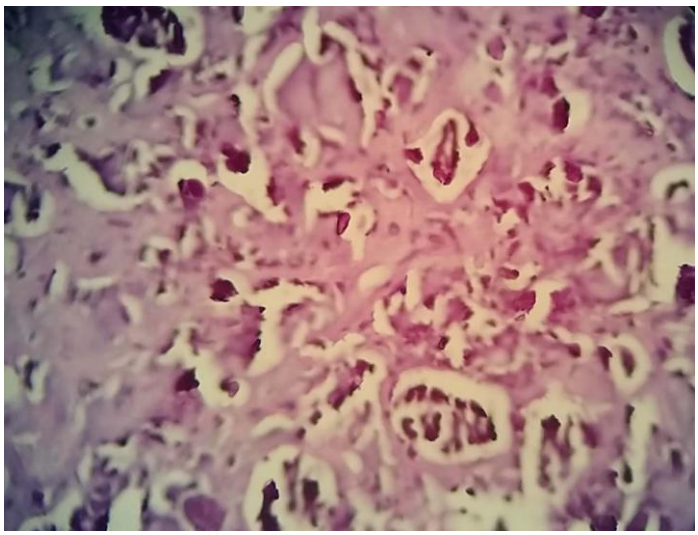

Figure1 (B): Photomicrograph showing necrotic bone(400x H&E).

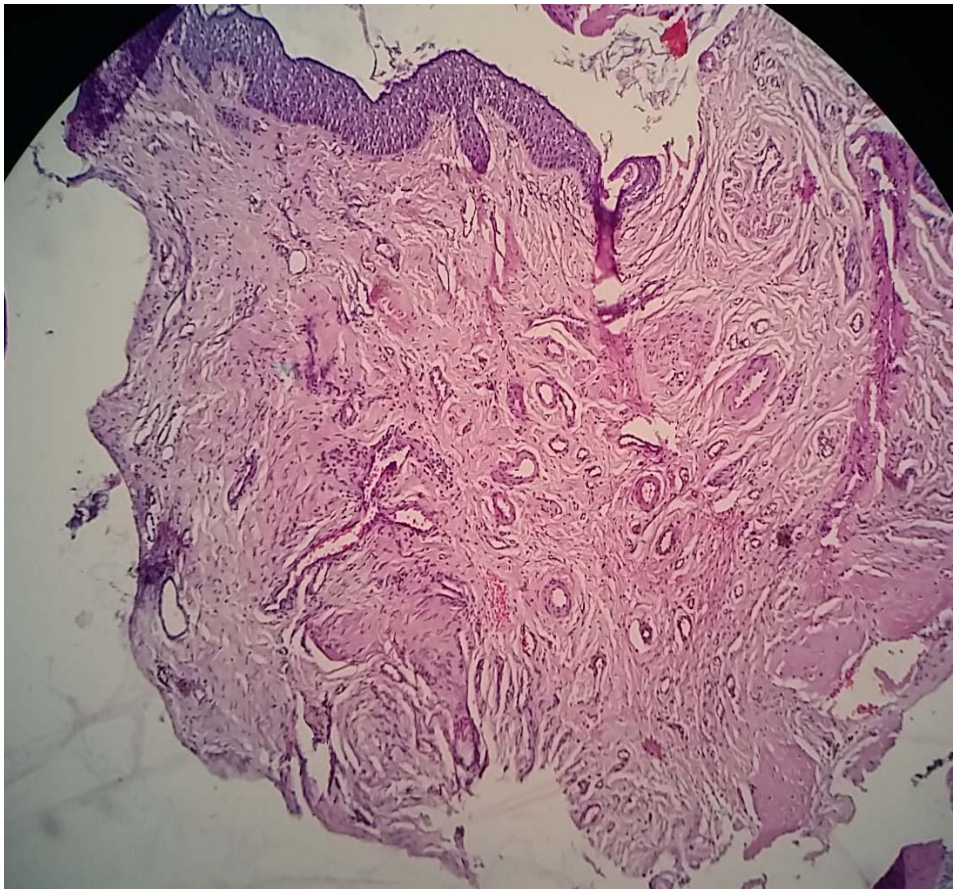

Figure 2: (A)Photomicrograph showing lining stratified squamous epithelium with chronic non-specific inflammation in sub-epithelial tissue (100x H&E)

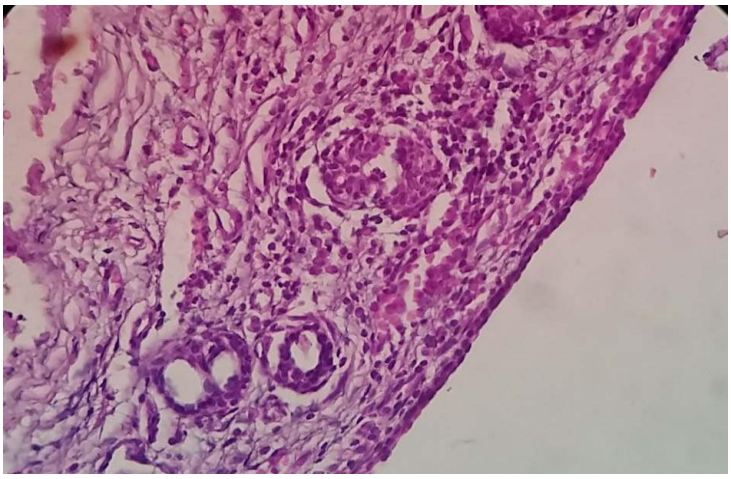

Figure 2 (B): Photomicrograph showing chronic inflammation (400x H&E).