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CASE REPORT

Apocrine hidrocystoma in external auditory canal

M Shishegar,[1] MJ Ashraf, [2] N Azarpira,[3*]

[1]Department of Otolaryngology, [2]Departmentof Pathology, School of Medicine, [3]Transplant Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Abstract

The present report describes clinical, radiographic, and pathological features of an external auditory canal giant apocrine hidrocystoma in a 36-year-old Iranian woman. To the best of our knowledge, this tumor has not previously been reported in this area. There was no evidence of local recurrence one year after surgery.

Keywords: Hidrocystoma; Auditory canal, external

Introduction

Apocrine hidrocystoma is generally regarded as a benign apocrine tumor which is mostly solitary. It is usually found as a single cystic lesion on the head and neck,[1] but can occasionally be seen elsewhere.[2-6] It equally affects both sexes and most often appears in middle-aged individuals.[1] This benign lesion originates from appendages of skin. The color of tumor varies from that of skin, and may be pink, brown, blue or purple.[2] It has also been called giant apocrine hidrocystoma whenever the size was greater than 10 mm in diameter.[7] To our knowledge, this is the first report of apocrine hidrocystoma occurring in the external auditory canal. Herein, we discuss the clinical and pathologic features of this unusual condition. Surgical excision is the treatment of choice.

***Correspondence:** N Azarpira, MD, Transplant Research Center, Nemazi Hospital, Shiraz University of Medical Sciences, Tel/fax: +98-711-627-6211, E-mail: *negarazarpira@yahoo.com*

Case Report

A 36-year-old woman presented with one-year history of fullness and hearing loss in the left ear and felt a mass in the ear canal when it was touched for cleansing. On otoscopy, a huge cystic mass was found in the external auditory canal (EAC) without any evidence of inflammation or redness. It completely obstructed the canal and prevented the visualization of the tympanic membrane. When touched, the mass, which was attached to the wall of canal, appeared compressible and cystic and measured about 23 mm in diameter. Pure tone audiometry showed conductive hearing loss (Fig. 1) with SRT of 2 decibels. Using CT scan, a mass of soft tissue was found in the EAC that obliterated the canal (Fig. 2). The lesion was approached under general anesthesia, through a post- auricular incision and a cystic mass was completely removed along with adhering skin of the canal. The skin graft prepared from post-auricular region was placed into the EAC and sup-

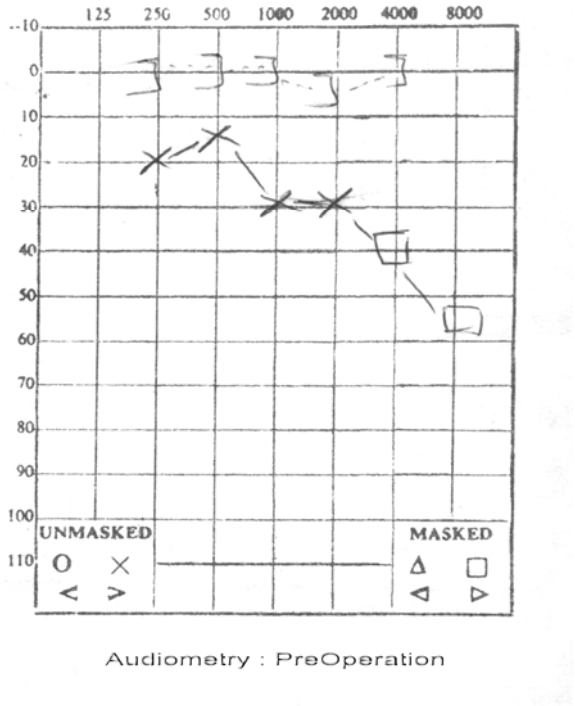

Figure 1: Pure tone audiometry showing conductive hearing loss

ported by gel foam. Histopathology showed the presence of a tumor with a cystic space. The cyst was lined with cuboidal, eosinophilic cells that demonstrated decapitation secretion (Fig. 3). Therefore, a diagnosis of giant apocrine hidrocystoma was made based on these findings and size of the mass. After healing process, audiometry showed the return of hearing to normal limit, without any evidence of recurrence during one-year follow-up.

Discussion

Hearing loss is due to many possible causes and can be divided into two basic conductive and sensorineural types. Conductive hearing loss is caused by anything that interferes with the transmission of sound from the outer to the inner ear. Possible causes include:

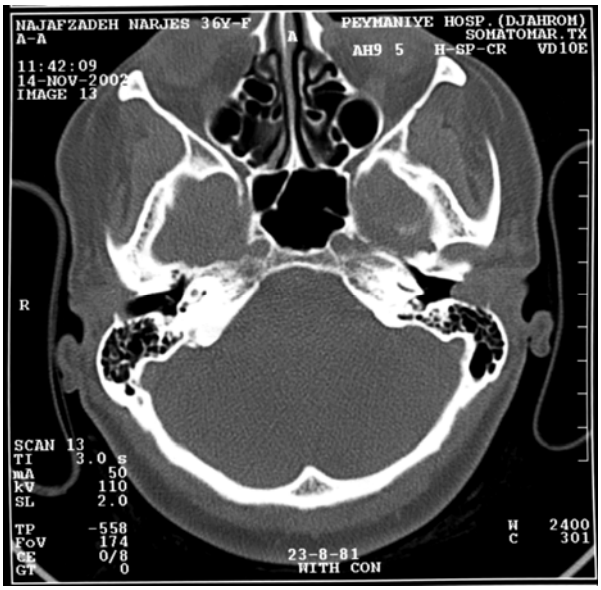

Figure 2: CT scan. A soft tissue mass in the EAC with obliteration of the canal.

1. Middle ear infections (otitis media); 2. Collection of fluid in the middle ear ("glue ear" in children); 3. Blockade of the outer ear (by wax); 4. Damage to the eardrum by infection or injury; 5. Otosclerosis, a condition in which the ossicles of the middle ear become; and, 6. Immobile because of growth of the

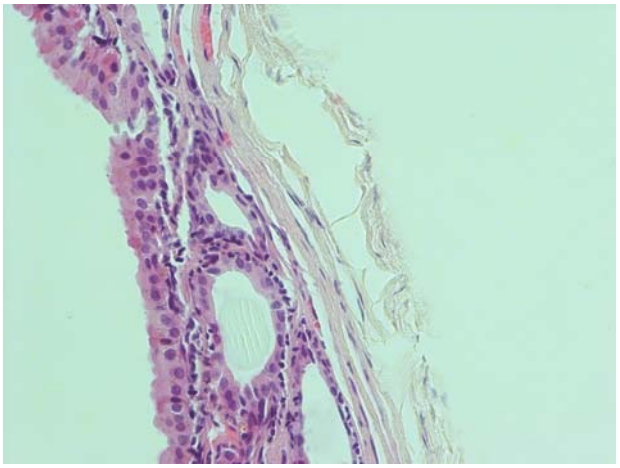

Figure 3: Cystic space in dermis lined with a row of secretory cells which show decapitation (H&E, ×400)

surrounding bone.

Sensorineural hearing loss is due to damage to the pathway for sound impulses from the hair cells of the inner ear to the auditory nerve and the brain.[6] Possible causes include:

1. Age-related hearing loss; 2. Acoustic trauma to the hair cells; 3. Viral infections of the inner ear; 4. Ménière's disease; 5. Certain drugs, such as aspirin, quinine and some antibiotics; and, 6. Acoustic neuroma.

Hearing loss subsequent to the obstruction of external auditory canal by a tumor is unusual. Apocrine hidrocystoma, a benign skin appendage tumor, is usually asymptomatic and occurs as a solitary translucent nodule of cystic consistency. The usual location of this lesion is on the face especially medial canthus, but it is occasionally seen on scalp, chest or shoulders.[1,3] The ear and external auditory canal are unusual locations. Cysts are mobile on palpation and transilluminate. In histopathology, the dermis contains one or several large cystic spaces with some papillary projections, that are lined by rows of cuboidal to columnar-shaped secretary cells The nuclei of these cells are positioned basally.[2] The outer layer of cells composing the cyst wall is formed by myoepithelial cells in which the long axes run parallel to the cyst wall. The secretary cells contain periodic-acid-Schiff positive, diastase-resistant granules and occasionally contain pigment granules, which provide the brown color of the cystic fluid. This pigment is neither melanin nor hemosiderin. On electron microscopy, secretory cells have numerous, dense, lysosomal-type secretory granules typical of apocrine gland cells.[2-5] When the size of lesion is greater than 10 mm it is called giant apocrine hidrocystoma.[7] Cysts are entirely benign and seldom recur after removal. Basal cell carcinoma, malignant melanoma, blue nevi, syringoma and millia should be considered in differential diagnosis of this tumor.[2] Apocrine hidrocystomas can be incised and drained; however, electrosurgical destruction of the cyst wall often is recommended to prevent recurrence. Punch, scissors, or elliptical excision can also remove tumors. Multiple apocrine hidrocystomas can be treated with carbon dioxide laser vaporization.[8]

Acknowledgment

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