

Case Report

Epidermal cyst of the bony external auditory canal in adult

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The objective of the study is to present a rare case of epidermal cyst of the bony external auditory canal in adult. Epidermal cyst of the bony external auditory canal, though very rare, was kept in the list of differential diagnosis of a skin lined mass of the external auditory canal. A case report method and review of literature was used for the diagnosis. Epidermal cyst is very rare in the external auditory canal. Only two cases of epidermoid cyst arising from the bony external auditory canal are reported previously in English. But both were in pediatric age group. Epidermal cyst in external auditory canal in adult patients may be confused with masses that are commonly seen; this includes osteomas, exostosis, ear polyps, carcinomas etc. Epidermal cyst should be included in the differential diagnosis of a patient with an ear mass.

Key words: Epidermal cyst, external auditory canal.

INTRODUCTION

Epidermal inclusion cyst refers to those cysts that are the result of the implantation of epidermal elements in the dermis and proliferation of the epidermal cells within a circumscribed space of the dermis (Kenneth and Isabella, 2006). Epidermal cysts are rare tumors that may occur anywhere in the body. About 7% of them are found in head and neck region. Dermoid cysts can be classified into three histological types: Epidermoid cyst (with no dermal annexes in its covering epithelium); dermoid cyst (presence of skin annexes such as sweat gland cells and hair follicles), and teratoid cyst (covering containing structures derived from three generative layers) (Evelyn et al., 2007). Epidermal cysts are slowly growing, elevated, round, firm, intradermal or subcutaneous tumors that ceases growing after having reached 1 to 5 cm in diameter (Kenneth and Isabella, 2006; Toshihiro et al., 2007). The most frequent site involved by epidermal cyst in the head and neck region are neck, cheek, preauricular area and nasal area (Khateeb et al., 2009). Epidermal cyst is very rare in the external auditory canal (Toshihiro et al., 2007). We report one such case of epidermal cyst of bony external auditory canal presented with fullness and hearing loss.

CASE

A case study is a 58 year old male presented with complaints of decreased hearing and fullness in the right ear. These symptoms were gradually increasing in intensity over a period of 2 years. There was no history of pain in the ear or discharge from the ear. There was no history of trauma or surgical procedure in the same ear. On examination, there was a firm, skin covered smooth mass filling the external auditory canal (Figure 1a). It was not tender to touch. Mass was completely occluding the canal, the tympanic membrane was not visualized. Probe could not be passed around the lesion. Left ear was normal. Tuning fork test and pure tone audiometer showed conductive hearing loss in the right ear. Computed tomography scan showed a mass in the external auditory canal, tympanic membrane and the middle ear were normal. There was no erosion of the surrounding bony canal wall (Figure 1b). The mass was excised under general anesthesia by endaural approach (Figure 1c). Cyst was excised completely with intact capsule. Canal pack was kept. Cyst was filled with cheesy material.

DISCUSSION

Epidermoid cyst is the most frequent cutaneous cyst of

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Figure 1a. Yellowish skin covered mass filling external auditory canal (arrow).



Figure 1b. CT scan showing soft tissue mass arising from superior wall of ear canal (arrow). There is also a mass of debris collected medial to the cyst (block arrow).



Figure 1c. Endaural incision, cyst filling auditory canal.

the head and neck (Khateeb et al., 2009). It is extremely rare for an epidermoid cyst to appear in the bony external auditory canal. Only two cases of epidermoid cyst arising from the bony external auditory canal are reported previously in English (Toshihiro et al., 2007); but both were in pediatric age group. Epidermal cysts grow slowly and usually do not cause symptoms but they may become inflamed or secondarily infected resulting in pain and tenderness (Kenneth and Isabella, 2006). These cysts appear firm, round, elevated, flesh colored or yellow or white, subcutaneous or intradermal nodule of variable size. A central pore or punctum is an inconsistent finding that may tether the cyst to the skin (Kenneth and Isabella, 2006; Toshihiro et al., 2007). In this case, the patient was an elderly male presented with complaint of fullness and decreased hearing in the ear, which was caused by the obstruction of the canal by the cyst.

Although epidermal cyst in external auditory canal in adult patients may be confused with masses that are commonly seen, this includes osteomas, exostosis, ear polyps, carcinomas etc.

Epidermal cyst results from proliferation of epidermal cells formed by embryologic aberration or traumatic inclusion (Kenneth and Isabella, 2006; Toshihiro et al., 2007). Diagnosis is made by clinical evaluation, radiological imaging, and histopathological examination of the excised tissue. Computed tomography of the temporal region is done to see the location, extension and involvement of the adjacent sites (Evelyn et al., 2007). Treatment is by complete excision of the cyst; the approach depends upon the size of the cyst, location and size of the canal.

In summary, we have reported a case of epidermal cyst of the bony external auditory canal, which seems to be only the third case in the literature and first case of epidermal cyst of bony external auditory canal in adult patient reported in the literature.

REFERENCES

- Al Khateeb TH, Al Masri NM, Al Zoubi F (2009). Cutaneous cysts of the head and neck. *J. Oral maxillofacial. Surg.*, 67(1): 52-57.
- Evelyn L, Marcelo MT, David E (2007). Epidermoid cyst of external ear and hearing loss: Case report. *International archives of otorhinolaryngology*, -out/dez-210, 11: 4.
- Kenneth AB, Isabella T (2006). Epidermoid inclusion cyst. *E-medicine-specialties >dermatology>benign neoplasm*.
- Toshihiro S, Masakatsu T, Toshiaki S, Tatsuya M (2007). Epidermal cyst of the bony external auditory canal. *Otolaryngology head and neck surgery*, 136: 155-156.