

Dermoid Cyst Within Concha: A Case Report

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Abstract- Dermoid cysts are congenital anomalies derived from ectoderm. They are rare in head and neck region and especially in pinna. We presented an 8-year-old girl with a dermoid cyst in the conchal region of auricle which was treated with complete surgical resection.

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Introduction

Dermoid cysts are congenital lesions histologically classified as a dermoid cyst, epidermoid cyst, and teratoma, they can occasionally be acquired (1). Acquired lesions develop due to entrapment of epithelium in scar tissue following trauma or surgical incision.

A dermoid cyst is an encapsulated cyst lined by stratified epithelium covered by laminated keratin material containing adnexal structures of the skin, such as a sebaceous gland, sweat gland, hair follicles, and hair (1). An epidermal cyst is derived from the epidermis, and is formed by cystic enclosure of epithelium within the dermis that is lined with squamous epithelium containing keratohyalin granules filled with keratin and lipid-rich debris (2). Dermoid cyst and epidermoid cyst at the auricular area contained in the first and second branchial arch are extremely rare (1).

In this article, we present a rare case of dermoid cyst of the conchal region of auricle in an 8-years-old girl.

Case Report

An 8-year-old girl presented with a complaint of left ear deformity. Her mother had noticed a firm bulging in the conchal region of auricle from her early childhood that was gradually enlarging along with the child growing up. She also declared that sometimes there was a little secretion from an orifice on the auricle. No inflammatory event or abscess formation had happened till the visit. The patient had no history of trauma. Except the mass the anatomy of external ear was normal

and hearing was also normal. On physical examination, a firm mass measuring approximately 1.5×1.5 cm in size was found on left side concha with an orifice just below anti-tragus (Figure 1).



Figure 1. A firm mass in conchal region of auricle and an orifice inferior to anti-tragus

The skin on the mass was normal. Under general anesthesia, a lacrimal probe was inserted into the lumen of the sinus. A fish-mouth incision was made around orifice beneath antitragus. The duct was followed through the mass. An incision parallel to antitragus was done, and the cyst was dissected from conchal cartilage. The cyst had an attachment to the cartilaginous skeleton, to avoid cyst rupture some shaving of cartilage was needed. Grossly the cyst cavity was filled with a yellowish cheese-like material with a bunch of hair. The cyst and tract were completely excised with a cuff of cartilage at some regions. Incisions were closed, and compression dressing was performed. On post-operative visit, no gross deformity was observed.

Histopathological examination confirmed the diagnosis of the dermoid cyst (Figure 2).

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Dermoid cyst within concha

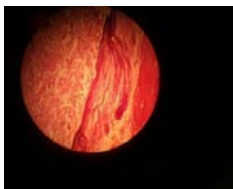


Figure 2. histopathologic view. Cyst lined with squamous epithelium containing keratin and sebaceous debris and a cross-section of a hair follicle

Discussion

The pinna develops from six hillocks of His, which form from the first and second branchial arches (3). Defective closure of the first branchial cleft or failure of fusion of the primitive ear hillocks may result in the formation of a small pit, sinus, or fistula in front of the pinna (4). Cystic lesions occurring in the ear may be a dermoid cyst, epidermoid cyst, cystic teratoma, lipoma, hemangioma, branchial cyst, trichilemmal cyst, and keloids (5). Due to the study of Su YJ, *et al.*, on 63 cases the most common site of auricular mass was ear lobule, followed by the tragus, crus of the helix, triangular fossa, concha-crus of the antihelix and antitragus-scapula. Pathologically, the epidermal cyst was the most common (6).

Dermoid cysts are congenital anomalies that arise from trapped pouches of the ectoderm near the normal folds or from the surface ectoderm that has failed to separate from the neural tube (7). Both dermoid and epidermoid cysts are ectoderm-lined inclusion cysts while epidermoid cysts have only squamous epithelium; dermoid cysts contain hair, squamous epithelium, sebaceous and sweat glands (2). Dermoid cysts generally present with slow and progressive growth, and even if they are congenital may present in the second or third decade of life (8). It rarely occurs in the head and neck area, and 7% of the overall prevalence has been reported to occur in the periorbital area, oral cavity, or nasal area, or in the center of the head and neck area (9).

The most common cause of surgery of dermoid cyst of the peri-auricular area is cosmetic reasons. They also sometimes cause irritation due to secretion or abscess formation. Like dermoid cysts in other areas the goal is the complete excision of the congenital lesion in order to reduce the risk of recurrence. To be best of our knowledge, there have been very few cases of dermoid cyst described in the literature in the peri-auricular area.

Kyu HJ *et al.*, experienced six cases in five patients with dermoid cyst and epidermoid cyst in the area of the ear. Four cases (in 3 patients) were believed to be congenital due to no history of trauma or surgery and

two were acquired. Histologically, there were two cases with dermoid cyst and four cases of epidermoid cyst. They reported three congenital epidermoid cyst on top of the helix and two dermoid cysts at auriculocephalic sulcus or back of helix (1).

M Dive *et al.*, presented a 38-year-old male patient with a prominent swelling of the retroauricular region. Histopathological diagnosis of the lesion was an epidermoid cyst (10).

Reddy *et al.*, described a 60-year-old man with a 4 cmx4 cm epidermoid cyst behind the left auricle in 2014 in, this mass was completely resected (11).

Dermoid cysts rarely occur in the head and neck area, but they are a possible diagnosis even for masses arising in the cartilaginous framework of the ear and are easily treated with complete surgical excision.

References

1. Kyu HJ, Hwan JC, Doo HN. Characteristics of Dermoid Cyst of the Auricle. *Arch Craniofac Surg* 2013;15:22-7.
2. Narain S, Gulati A, Yadav R, Batra H. Epidermoid Cysts of Face: Clinicopathological Presentation and a report of four cases. *Int Clinic Dent Sci* 2012;3.
3. Chami RG, Apesos J. Treatment of Asymptomatic Preauricular Sinuses: Challenging Conventional Wisdom. *Ann Plast Surg* 1989;23:406-11.
4. Wortsman X, Jemec GB. Sonography of the Ear Pinna. *J Ultrasound Med* 2008;27:761-70.
5. Kim HJ, Burm JS, Pyon JK, Kim YW. Acquired dermoid cysts within subcutaneous scar tissue. *J Korean Soc Plast Reconstr Surg* 2007;34:507-10.
6. Su YJ, Myung GK, Sung HB, Eun KY, Chul K, Sun K, *et al.* Clinical Analysis of Auricular Benign Masses. *Korean J Audiol* 2012;16:10-3.
7. Okeke LI, Ogun GO, Etukapan BR, Iyama A, Adeoye AO, Duduyemi BM. Dermoid cyst of the urinary bladder as a differential diagnosis of bladder calculus: a case report. *J Med Case Report* 2007;1:32.
8. Kandogan T, Koc M, Vardar E, Selek E, Sezgin O. Sublingual epidermoid cyst: a case report. *J Med Case Rep* 2007;1:87.
9. Ikeda M, Muto J, Omachi S. Dermoid cyst of the auricle: report of two cases. *Auris Nasus Larynx* 1990;16:193-7.
10. Dive AM, Khandekar Sh, Moharil R, Deshmukh S. Epidermoid cyst of the outer ear: A case report and review of literature. *Ind J Otolog* 2012;18:34-7.
11. Reddy GSP, Reddy NVSS, Reddy GV, Sriharsha K. Giant epidermoid cyst of external ear– A Rare Case Report. *J Clin Diagn Res* 2014;8:167-8.