



## PREAURICULAR DERMOID-A RARE CASE REPORT

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**ABSTRACT** Dermoid cysts are benign cutaneous developmental anomaly that arises from the entrapment along the lesions of embryonic closure. Mostly present in children under the age of 5. It does not have any presenting clinical features until it grows out. We are delineating a case of preauricular dermoid which is treated surgically by surgical excision.

**KEYWORDS :****INTRODUCTION**

Dermoid refers to something that's like a skin. A cyst is a lump or a bump that may contain fluid or other material. Its incidence is approximately 1 in 4000 births, with a slight female predominance. Dermoid cysts are mostly congenital in nature with around 30% of them being diagnosed after five years of age.

Dermoid cysts are benign germ cell tumors with ectodermal and mesodermal components. Histologically, it contains structures such as hair, follicles, sweat and sebaceous glands surrounded by keratinizing squamous cells. They exhibit slow growing characteristics, and can vary in size reaching upto 17cm. The lesions can arise anywhere in the body but only 7% have been reported in the head and neck segment. They are well known to appear in the midline and most often in the periorbital area.

Dermoid cysts can be histologically classified as dermoid cyst, epidermoid cyst and teratoma. Dermoid and epidermoid cysts in the auricular and preauricular area are extremely rare. Epidermal cysts can also be acquired and can be caused by various parts of examination or after surgical operations, and in paediatric cases, determining whether the epidermal cyst is congenital or acquired can be difficult.

Clinically it presents as a "painless" mass or lump that is felt in the affected areas. The cyst is usually solitary, firm, dough like and ranges from 0.5-6cm usually, although it can reach upto a size of 17cm. It can be associated with a nearby pit or sinus tract to underlying tissue.

The diagnosis is approached by a combined physical exam, radiographic imaging (USG most commonly and sometimes MRI) and histopathological studies (FNAC and biopsy).

Surgical treatment is the only effective treatment for any type of dermoid cyst. The type of surgery depends on the type of dermoid cyst ranging from surgical excision to microsurgery. Considering the background information, we intent to present a rare case of preauricular dermoid.

**Case report**

A 27 year old male came with chief complaints of pain and swelling in preauricular region since 3 years. The swelling was of pea size initially and gradually increased to lemon size in the pre auricular area in a span of 3 years. Swelling was present since birth but had gradually increased in size over the past 3 years to present size.

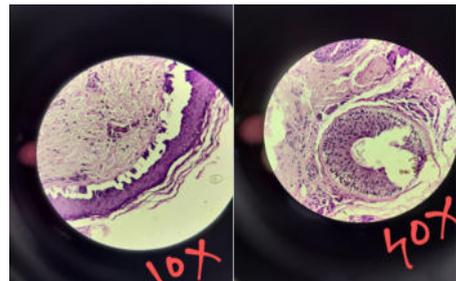
The patient also complained of pain in the pre auricular area since 6 months. The pain radiated to neck and temporal region at times. There was no family history. There was no history of trauma. There was no

hearing loss complaints or any other birth anomalies.

On examination a swelling of 4\* 3 cm size was seen in right pre auricular area. The swelling extended from crus of right helix to tip of lobule. Consistency was variable being soft and firm in most places but at few places it is hard in consistency. Swelling was oval in shape, non tender, mobile mass, non compressible with no local rise of temperature and no overlying skin changes.

FNAC advised showed benign squamous degenerated cells and keratinous material in a background of cellular debris. A provisional diagnosis of Dermoid was made. USG revealed a solid, hyperechoic, well defined lesion of 3 \*4\*2 cm in size, spherical, non pulsatile extending from the crus of right helix to tip of lobule with smooth surface.

The patient was planned for Excision of pre auricular dermoid cyst under General anaesthesia. The excised mass was sent for histopathological examination. Gross examination revealed a well circumscribed, solid oval mass, with a firm consistency and a yellowish surface. [Figure No A&B]. H&E stained sections show a cyst lined by squamous epithelium with a granular layer. The cyst contains keratinous materials. Surrounding tissue shows mild inflammation. Procedure was uneventful and after 3 months of follow up patient was absolutely stable and symptom free.



**Figure A&B** showing cyst lined by squamous epithelium with a granular layer containing keratinous materials. (H&E A- 10X; B – 40X)

**DISCUSSION**

Dermoid cysts are slow growing benign tumors arising from the entrapment of ectoderm elements along the embryonic closure. It is mostly congenital in origin but acquired etiology was also reported for 10% of the dermoid cysts due to trauma or implantation of epithelial cells in utero. They may occur anywhere in the body with approximately 7% of the cases in head and neck.

Dermoid cysts of the head and neck are primarily classified into four groups by Men and Erich: Group 1 pre-orbital, group 2 nose, group 3 submental and group 4 mid-ventral and mid-dorsal fusion area of the suprasternal, suboccipital region. After many cases, Choi.et.al found it necessary to further develop this classification and integrate ear and scalp regions and extend intracranially. In this case, the cyst extended to the preauricular region.

The diagnosis is reached by carrying investigations which are fundamental for the assessment of anatomical relation with the surrounding structures. Even after imaging studies ( mostly USG ), the diagnosis remains challenging. Congenitally cystic lesions may be of the following types; cystic hygroma, teratoma, lymphangiomas and are considered in the preliminary diagnosis. These lesions also presents as soft, painless, compressible, non tender transilluminant masses. They sometimes lead to complications such as respiratory distress, feeding difficulty and infection.

Histology( FNAC and biopsy) remains the only way to differentiate and finalise the diagnosis.

### CONCLUSION

Dermoid cysts are mucosal neoplasms with rare diagnosis at birth but they are most often present in early childhood. Preauricular dermoids are even rare in occurrence. For a dermoid cyst to form , skin cells, tissues and glands typically found in skin collect in a sac and the glands continue to produce fluid often leading the cyst to grow.

A complete analysis of clinical presentation , imaging, examination and histological findings are extremely important for diagnosis. Surgical excision remains the most effective treatment for dermoid cyst with lesser chance of recurrence.

### Images With Legends



### Preauricular Dermoid



### Gross Specimen

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