

# Dermoid cyst: A case report

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**Abstract:** Dermoid cysts are relatively uncommon in the Oral and Maxillofacial region, accounting for just 2-7% of all dermoids and comprising about 34% of all developmental cysts of the head and neck. They especially occur in the nasal, orbital and oral regions of the face, and preauricular region involvement is uncommon. Here, we present a rare case of a dermoid cyst in a middle-aged male patient with a painless mass in the preauricular region.

**Keywords:** Dermoid cyst, Preauricular region

## Introduction

Dermoid cysts are benign germ-cell tumors containing a combination of different types of cells i.e., ectoderm, mesoderm and endoderm and often parts or whole bodies. Each of the tissues that form the human body is made up of cells and intercellular substance.[1] They always contain mature ectodermal tissues (skin, brain), in over 90% of the cases they contain mesodermal tissues (muscles, fat, bone, cartilage), and in most cases, they also contain endodermal tissues (ciliated, gastrointestinal mucinous or bronchial epithelium, thyroidin tissue).[2] Here, we present a rare case of dermoid cyst in a middle-aged male patient with a painless mass in the preauricular region.

## Case report

A 32 years old male patient reported with a chief complaint of slowly growing mass on the left side of the preauricular region since 10 years. History of present illness revealed that this growth was initially small and was present 10 years back. The patient reported no history of trauma/surgery. All the vital signs were within the normal range. On examination, a well-defined growth was noted measuring 3X2 cm in diameter [Fig 1]. All the inspector findings were confirmed on palpation. Growth was found to be non-tender, firm in consistency and arose from the underlying soft tissue. A provisional diagnosis of dermoid cyst was made and excisional biopsy was done under local anaesthesia and sent for histopathological examination.



Fig 1: Clinical Presentation

The histopathological examination, with H&E stain, revealed a cystic capsule lined by orthokeratinised stratified squamous epithelium with glandular differentiation. Desquamated keratin deposits in lamellar pattern is seen in cystic lining. Adnexal structures were seen in the fibrous wall in some areas. The stroma consisted of loose irregularly arranged collagen fibres with fibroblasts [Figure 2 and 3].



Fig 2: Cystic capsule

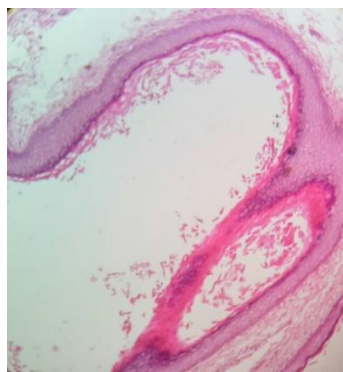


Fig 3: Desquamated keratin deposits

## Discussion

Dermoid cysts are benign germ - cell tumors containing a combination of different types of tissues, and often parts or whole bodies. Each of the tissues that form the human body is made up of cells and intercellular substance. [3] Dermoid tumors of the head and neck are rare. They especially occur in the nasal, orbital and oral regions of the face, and preauricular region involvement is uncommon.[4] They are relatively uncommon in the Oral and Maxillofacial region, accounting for just 2-7% of all dermoids and comprising about 34% of all developmental cysts of the head and neck. In this region they are mostly found in the periorbital lateral eyebrow area, the “orbital dermoid cysts”, followed by the submental region, the “submental dermoid”, external to the mylohyoid muscle or in the floor of the mouth, the “sublingual dermoid”, oral to the mylohyoid muscle. Others are the “nasal dorsum dermoid cysts” arising from inclusions between the developing nasal bones.[5] According to New and Erich, less than half of head and neck dermoids are seen in the periorbital region, 25% are presented in the oral cavity, and 13% occur in the nasal cavity.[6] Histologically, lined by stratified squamous epithelium, and may contain smooth and stratified muscle, cartilage, bone, minor salivary glands, nerves, and lymph nodes.[4] The cyst contains keratin rich sebum material admixed with occasional hair; the dermoid cyst wall characteristically contains skin adnexal structures including hair follicle, sebaceous & sweat glands. They express cytokeratins 1 and 10, constituents of the suprabasal layers of epidermis. The source of this epidermis is infundibulum of hair follicle, as the lining of these two structures are similar.[7] Clinical presentation varies and usually depends on the location of the tumor such as otitis media with effusion, facial nerve paralysis, pain, mass, hearing loss, headache or dysphagia. Raphael reported a case with dermoid cyst in facial nerve with facial paralysis. Our case presented as swelling mass in preauricular area. A cystic mass in the preauricular region is mostly Warthin tumor, lymphoepithelial cyst, epidermal keratinous cyst, cystic lymphangioma, lipoma, teratoma, branchial cyst, and abscess. The differential diagnosis of these preauricular masses should be confirmed with histopathological evaluation. With the current report, the dermoid cysts should be added to this list. Total surgical excision, for the treatment of dermoid cysts, reduces the risk of recurrence. The prognosis of dermoids in the head and neck region is favorable. Malignant transformation in a longstanding dermoid cyst is a rare complication. About 5% of dermoid cysts undergo malignant degeneration into squamous cell carcinoma.[4]

## REFERENCES

- [1] Krastev S D, Filipova I. Embryology Of Dermoid Cysts With Neuro Ectodermal Content. J of IMAB 2013;19:405-407.
- [2] Moş C. Ovarian dermoid cysts: ultrasonographic findings. Med Ultrason 2009;11:61-66.
- [3] Yogesh TL, Jha AK, Ghosh D, Samuel AS. J Dent Med Sci 2016;15:99-102.
- [4] Erdogan S, Topdag M, Vural C, Sari F, Ozturk M. Unexpected localization of dermoid cyst: in preauricular region. Acta Medica Mediterr 2014;30:101-103.
- [5] Jeyaraj PCW, Sahoo NKB. A case of an unusually large Sublingual dermoid cyst of the maxillofacial region. J Dent Med Sci 2012;2:19-25.
- [6] New G.B, Erich J.B.. Dermoid cysts of the head and neck. Surg Gynec Obst 1937;65: 48-55.
- [7] Sunil S, Oommen N, Rathy R, Rekha VR, Raj D, Sruthy VK. Epidermoid cysts of head and neck region - Case series and review of literature. Int. J. Odontostomat 2014;8:165-169.
- [8] Nwojo R, Roy S, Chang CY. Dermoid cyst in the facial nerve-a unique diagnosis. Int J Pediatr Otorhinolaryngol 2011;75:874-876.

## LEGENDS:

Figure 1: Extra-oral picture showing swelling in front of the left ear and sinus tract on posterior mandible

Figure 2: Gross examination reveals two tissue bits, together measuring 2.7X2.5 cm, whitish in color and firm in consistency

Figure 3: The H&E stained photomicrograph at 4x reveals a cystic capsule lined by orthokeratinised stratified squamous epithelium with glandular differentiation

Figure 4: The H&E stained photomicrograph at 10x reveals desquamated keratin deposits in lamellar pattern in cystic lining