UNEXPECTED LOCALIZATION OF DERMOID CYST: IN PREAURICULAR REGION

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ABSTRACT

Purpose of the study: Dermoid cysts are cysts are asymptomatic, slowly expanding, unilocular, cystic congenital masses. They are rare congenital benign tumors in head and neck region, with only less than 7 percent of all dermoids presenting in this area. Half of head and neck dermoids have been located in the orbit and no lesion has been specifically identified in the preauricular region. With this report, we aimed to describe that dermoid cysts can be seen unexpected localization such as in preauricular region.

Procedures: Case report

Results: With the current report, the dermoid cysts could be added to differential diagnosis of preauricular region mass.

Conclusions and message of the paper: In this paper, we present a case of dermoid cyst located in preauricular region and discussed clinical presentations, imaging, and treatment of dermoids. As far as we know it is the first dermoid cyst case in preauricular region in English Medical Literature.

Key words: dermoid cysts, preauricular region, head and neck.

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Introduction

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. The exact etiology of these neoplasms is unknown though the most likely theories are embryological incomplete closure at lines of fusion or traumatic implantation of skin elements(1). We report a case of dermoid tumor of preauricular region in a 33-year-old man with preauricular and lateral of external ear fistula tract since 20 years. The embryology, clinical features, evaluation, and treatment are discussed.

Case Report

A 33-year-old male patient was referred to our outpatient clinic, complained with slow growing mass placed in right preauricular region for 20 years. Occasionally purulent discharge was occurred from fistula tract. He had no associated symptoms, such as pain or fever. His past medical history was insignificant. On examination, a 2x1 cm cystic and non-tendered mass with fistula between cavum concha and preauricular region was revealed. Magnetic Resonance Imaging (MRI) showed hypodense mass in preauricular region15x15x8 mm in size. It was attached to the subcutaneous lipid tissue on T2-weighted images (Figure 1).

Figure 1: Post-contrast MRI of the head and neck showing hyperintensity of the right subcutaneous tissue (white arrow) in preauricular region.
Complete blood count, comprehensive metabolic and serologic panel, chest radiography, and electrocardiography showed no abnormality. The patient underwent surgery to excise this mass (Figure 2). Histopathologic evaluation showed that the lesion was a dermoid cyst (Figure 3).

**Discussion**

Dermoid cysts are asymptomatic, slowly expanding, unilocular, cystic, and congenital masses. They are seen during the second and third decades of life. They are rare in head and neck region, with only less than 7 percent of all dermoids present in this area. 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.

Dermoid cysts originate during early embryogenesis, and include both ectodermal and mesodermal elements. The etiology is unclear, but the most likely theories are incomplete closure at lines of fusion or traumatic implantation of skin elements.

Dermoid cysts are subcutaneous tumors lined by stratified squamous epithelium, and may contain smooth and stratified muscle, cartilage, bone, minor salivary glands, nerves, and lymph nodes. In our patient, histopathology showed a cystic lesion in subepitelial region, which lined by an epidermis that possesses various epidermal appendages that are fully matured. The dermis of cyst contains sebaceous glands, eccrine glands, hair follicles, and mature chondroid elements. The histologic diagnosis was “dermoid cyst”.

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. An 18-year-old female patient has described diagnosed dermoid cyst with otitis media effusion by Hamad S et al. Shah reported a dermoid cyst case with submental mass. Our case presented as swelling mass in preauricular area. As far as we know, it is the first dermoid cyst case in preauricular region in English Medical Literature.

Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Ultrasound (USG) provide information regarding the cyst location and densities, and may help making the differential diagnosis of the lesion. On MRI imaging, dermoid tumors are hyperintense on T1-weighted sequences, and are variable from hypo- to hyper-intense on T2-weighted sequences due to their high fat content.

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 long-standing dermoid cyst is a rare complication. About 5% of dermoid cysts undergo malignant degeneration into squamous cell carcinoma.

**Conclusion**

Radiographic studies may lead to suspicion of the anomaly, but are not diagnostic. The diagnosis of dermoid cyst is confirmed histopathologically. Complete surgical excision is the best treatment of choice. With this report, we aimed to describe that dermoid cysts can be seen in unexpected localization such as preauricular region, and could be added the differential diagnosis of this regions’ masses.
References


