10.5005/jp-journals-10015-1297

CASE REPORT

An Unusual Presentation of a Neck Dermoid Cyst

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ABSTRACT

Dermoid cysts are cystic malformations lined with squamous epithelium and constitute 1.6 to 6.9% of all cysts in the head and neck area. Within head and neck region, they are predominantly found in orbital, oral and nasal regions (over 80%) and remainder found in occipital, frontal, lip, neck, soft palate. Dermoid cysts are benign lesions usually presenting as a mid line neck mass. They rarely appear in lateral region. So, the purpose of this report is to present and discuss a rare case of posterolateral cervical dermoid cyst.

Keywords: Dermoid cyst, Neck, Cystic malformations.

How to cite this article: Bhateja S, Arora G. An Unusual Presentation of a Neck Dermoid Cyst. World J Dent 2014; 5(4):237-239.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Teratomas are tumors composed of multiple tissues foreign to the part of body in which they arise. In a more accurate sense , a teratoma is made up of variety of parenchymal cell types representative of more than one germ layer, usually all three. The term 'dermoid cyst' has been loosely applied to a number of dysontogentic cystic lesions wherever they occur in body.[1]

Dermoid cyst is a pathological type of congenital or acquired cyst. Because they are almost always asymptomatic, dermoid cysts are usually diagnosed only after they have reached a considerable size.

CASE REPORT

A 52-year-old male patient presented to the department of oral medicine and radiology with complaint of missing teeth and wants to get them replaced. On routine extraoral examination a solitary, oval swelling measuring 2 × 2 cm approx in size, rubbery in consistency, nontender present on posterolateral aspect of left side of neck, behind posterior border of sternocleidomastoid muscle (Fig. 1). Swelling is movable over underlying structures and color is as of normal skin over it. No visible pulsations and peristalsis noted and no movement with respiration, deglutition or on protrusion of tongue was noted. On the basis of above findings, a provisional diagnosis of enlarged cervical lymph node (lymphadenopathy) of left side was put forth. The differential diagnosis of lipoma, fibroma, hemangioma, lymphoma, sebaceous cyst and metastatic carcinoma of skin and oral cavity.

Investigations carried out were routine hematological investigations, Montoux test (result was negative), Diascopy (ruled out vascular anomaly), FNAC(0.5 ml yellowish brown thick fluid was collected), HIV 1 and 2 (result was nonreactive). Treatment included surgical excision. Excised specimen (Fig. 2) was sent for histopathological analysis which showed skin with

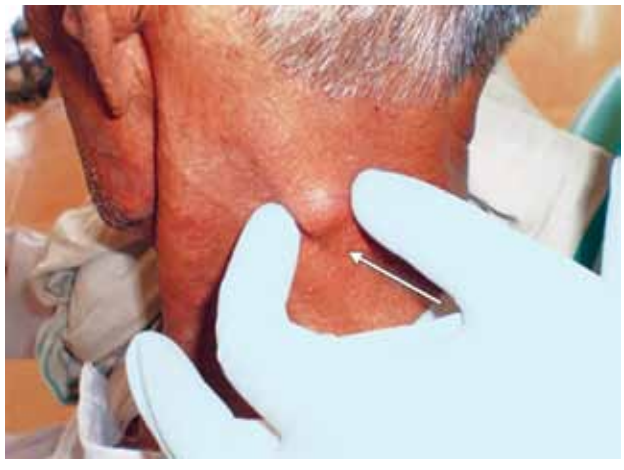

Fig. 1: Swelling on posterolateral aspect of left side of neck

Fig. 2: Excised specimen

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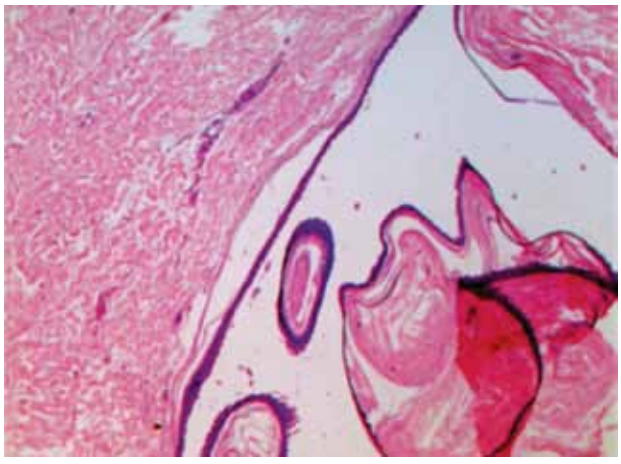

Fig. 3: Histopathologic examination which revealed presence of dermoid cyst

underlying adnexal structures. Beneath it is seen as a cyst lined by stratified squamous epithelium. The cyst wall shows adnexal structures. There is no evidence of immature elements, mitosis or malignancy (Fig. 3). Findings were consistent with 'dermoid cyst'. Regular follow-up is done to check for any recurrences.

DISCUSSION

The term dermoid cyst can be found in the vocabulary of dermatologists, pathologists, gynecologists, neurosurgeons, or pediatricians. Gynecologists and General pathologists might say that a dermoid cyst is a cystic tumor of the ovary. In contrast, neurosurgeons tend to view a dermoid cyst is associated with a congenital cyst of the spine or an intracranial congenital cyst. For pediatricians and dermatologists, dermoid cyst means subcutaneous cysts, which are usually congenital. In all disciplines, however, the common factor is the presence of a solitary, or occasionally multiple, hamartomatous tumor. The tumor is covered by a thick dermis like wall that contains multiple sebaceous glands and almost all skin adnexa.[2,3]

Several theories have been proposed to explain the development of dermoid cysts. They may result from entrapment of ectodermal tissue of the first and second branchial arches during fetal development. They could represent a variant form of the thyroglossal duct cyst. Finally, previous surgical or accidental events could lead to traumatic implantation of epithelial cells into deeper tissues.[4]

Clinically, it usually presents as a painless (unless infected) nodular swelling which is slow growing. Does not usually displace surrounding structures. Only in supramylohyoid variety swelling may displace tongue and may interfere with breathing , speaking , closing the mouth and eating. On palpation swelling is soft to firm, rubbery or cheesy consistency and sharply delineated, transillumination negative and fluctuation positive. On aspiration it contains straw colored fluid (high keratin content).[5,6]

On the basis of origin there are 4 types of dermoid cysts in head and neck region (Table 1). Clinical types include (A) Median variety (supra and infra mylohyoid types) and (B) Lateral variety (supra and infra mylohyoid types). On the basis of pathophysiology, these are of four types viz sequestration dermoid, implantation dermoid, tubulodermoid and teratomatous dermoid.[3,7,8]

Dermoid cysts are histologically differentiated as epidermoid, dermoid or teratoid. The epidermoid cyst showed simple squamous epithelium without skin appendages. Dermoid cysts contain skin appendages and teratoid cysts contain endodermic and mesodermic elements in the cyst wall.[9]

Malignant transformation is an unusual complication that may occur in patients with long-standing dermoid cysts. Carcinomatous transformation to a squamous cell carcinoma is described in sublingual and intra-abdominal dermoid cysts, most often dermoid cysts of the ovary metastatic malignant melanomas arising from dermoid cysts have been reported in the literature.[10]

Dermoid cysts are treated by surgical removal. Those that are supramylohyoid type can be removed by intraoral incision whereas inframylohyoid require an extraoral approach. Recurrence is uncommon with both types.[10]

Table 1: Four types of dermoid cysts in head and neck region

Groups	*Region*	*Origin*	*Pathogenesis*	*Frequency (%)*
I	Periorbital	Naso-optic groove	Inclusion between maxillary and mandibular process	47-70
II	Nasal	Frontonasal plate	Inclusion of plates between	8-12
III	Submental Submaxillary	1st and 2nd branchial arch	Sequestration during union of arch with its fellow	23-42
IV	Suprasternal Suboccipital Thyroidal Lower lip Palate	Mid ventral and mid dorsal line	Formed from fusion of midlines	5-15

CONCLUSION

Dermoid cyst is an abnormality that rarely arises in the lateral region of neck. The most common location at the head and neck is the orbit, followed by the submandibular space. A swelling is usually the only clinical manifestation. Although dermoid cysts are benign, they must be removed surgically to allow a histological evaluation and to prevent complications due to growth of the cyst, such as impingement on adjacent structures and deformities of the head and neck.

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