UNUSUAL PRESENTATION OF EPIDERMOID CYST OF THE ORAL CAVITY -A CASE REPORT

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Abstract

Aberrant ectodermal tissues during foetal period or acquired aberrant epithelial tissue due to trauma or surgery are thought to cause dermoid and epidermoid cysts. Their incidence is 7.0% in the head and neck region with submandibular, submental and sublingual spaces being the common sites. They are extremely rare in the oral cavity accounting for only 1.6 %. Majority of them occur in the floor of mouth. But other sites like buccal mucosa, tongue, softpalate, uvula may also be involved rarely.

A case of a 45 year old female patient with unusual presentation of epidermoid cyst on the lateral border of tongue is presented here. This case was noteworthy due to the absence of any apparent cause explaining implantation of epithelial cells in this region.

Keywords:-Dermoid cyst, Epidermoid cyst

Introduction

Epidermoid cysts are benign lesions encountered throughout the body, predominantly seen in areas where embryonic elements fuse together. Most cases have been reported in ovaries and testicles (80%) with the head and neck accounting for only 1.6-7.0%.[1],[2] Among the cysts in the head and neck region, incidence is highest in the floor of mouth comprising less than 0.01% of all the oral cysts. [3], [4] Sublingual, submental and submandibular spaces are common localization in the floor of mouth. [5] Rarely cases have been reported in the lips, buccal mucosa, tongue, maxilla and mandible.[6]

Epidermoid cysts are indolent in nature, slow to progress and remains asymptomatic unless secondarily infected. Larger cyst can cause obstructive signs and symptoms like dyspnoea and dysphagia.[6], [7], [8]

In the current report, we outline the case of an epidermoid cyst on the posterolateral border of tongue diagnosed in a 45year old woman.

Case Report

A 45 year old female patient reported to the department of oral pathology and microbiology, Govt. Dental College, Kozhikode with the complaint of a mass in the right posterolateral border of tongue of 3 years duration. Initially small sized, the growth had constantly and gradually increased in size. It nevertheless did not cause any pain, discomfort, dysphagia nor speech or masticatory difficulties to the patient. Her past medical and family history was uneventful. The patient did not give a history of previous surgery or trauma in that area.

On examination, a smooth, soft, well, circumscribed and nontender swelling of 2x2 cm was seen on the right posterolateral border of tongue [Fig 1]. Mucosa over the swelling was normal and it was not associated with any discharge. A clinical differential diagnosis of connective tissue neoplasm was considered.

Aspiration yielded white cheesy material. Complete hemogram and ESR was within normal limits. FNAC showed keratinous material suggestive of an epidermoid cyst.

Excision of the swelling under local anesthesia yielded a yellowish white smooth surfaced oval mass of tissue measuring 3x2 cm which was cystic in nature. The mass upon

sectioning was filled with a cheesy material.

Histopathologic examination revealed a connective tissue capsule lined by keratinized stratified squamous epithelium and the cyst cavity itself contained keratinous material. No evidence of dermal appendages presented in the cyst wall [Fig 2].Hence it was conclusively diagnosed as epidermoid cyst. The patient did well postoperatively and she was followed up for 2 years with clinical examinations twice a year and there were no signs of recurrence.

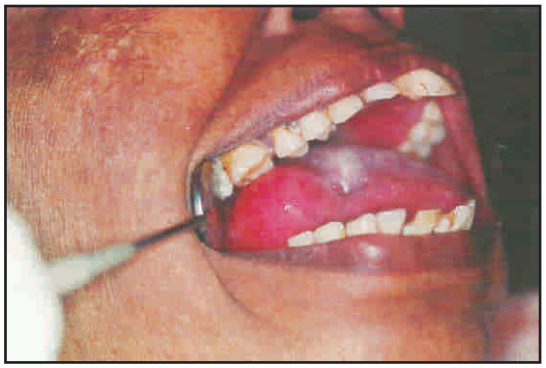

Fig 1 Clinical Photograph

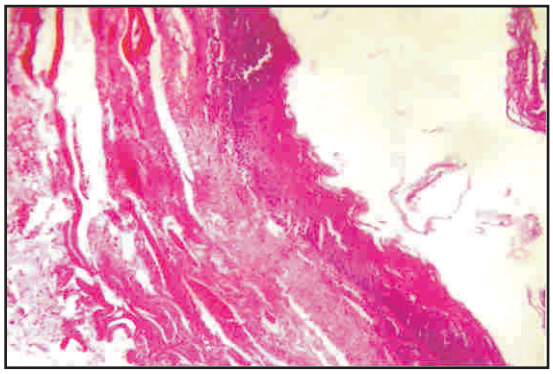

Fig 2 Photomicrograph showing cyst capsule lined by keratinized SSE with keratinous material in the cyst cavity.(H&E, 10x)

Epidermoid cysts of the head and neck region are rare. In 1955, Meyer updated the concept of epidermoid cyst to describe three historical variants-

The True Dermoid Cyst: [1], [2], [4], [9] - here the epithelium lined cystic cavity encloses skin appendages such as hair, hair follicles, sebaceous and sweat glands.

Epidermoid cyst**:** Where in the cyst cavity is lined with epithelium without skin appendages.

Teratoid:-_In this entity, the cystic cavity in addition to skin appendages also enclose mesodermal derivatives such as bone, muscle etc.

Epidermoid cyst is mainly reported from sites of face, trunk, neck, extremities and scalps. In the oral cavity, although floor of the mouth, in the middle is the most favored site, occasional occurrence involving buccal mucosa, tongue, lips, uvula and intraosseous location within the mandible and maxilla also have been cited in the literature. [5], [6], [7], [8] Our case was unusual in that the growth was seen on the posterolateral border of tongue.

Epidermoid cyst may occur at any time in life, but show preponderance between third and fourth decades of life. It is twice as common in men as in women with a male to female ratio of 3:1. [6], [7] The clinical findings in our case were consistent with the previously reported cases except for the site of occurrence.

The present case also fulfills all the characteristic features of an epidermoid cyst suggested by Meyer like a cystic lining comprised of keratinized stratified squamous epithelium and the cyst cavity is filled with desquamated keratin disposed in a laminar pattern. Absence of skin appendages on the wall ruled out the possibility of a dermoid cyst.

Epidermoid cysts may be categorized as congenital or acquired based on their pathogenesis although there is no disparity between the two either clinically or histologically.[9] Ambiguity about the exact pathogenesis exist and dysontogenetic, traumatic and thyroglossal theories have been postulated. [1],[2],[4],[9] Recently HPV infection and eccrine duct occlusion are considered as etiologic agents in the development of palmoplantar epidermoid cyst. Most congenital dermoid and epidermoid cysts develop from congenital inclusion of ectodermal tissue during embryonic development but hardly get perceived until their size cause annoyance. [10] The origin of epidermoid cyst is believed to be from entrapment of epithelial remnants during midline closure of the bilateral first and second branchial arches between third and fourth weeks of intrauterine life. It has also been opined that ectodermal differentiation of pleuripotent cells, most probably pinched off at the point of anterior neuropore closure may give rise to these cysts. On the other hand, they may also crop up from the tuberculum impar of His with which each mandibular arch form the floor of the mouth and body of tongue. [4]

The acquired type first recognized by Werhner in 1855 and originally referred to as

'implantation cyst' by Silton in 1895, is believed to originate through implantation of epithelium by either surgical or accidental trauma into deeper mesenchymal tissues. There is usually a latent period after injury before the cyst is noticed clinically. When healing takes place, the implanted epithelial cells multiply, producing a central mass of keratin which elicits an inflammatory reaction. [10] However, some authors have also stated that these midline cysts may represent a diverse form of thyroglossal duct cyst.[4]

Epidermoid cysts of traumatic origin are found mainly on palms, fingers and soles. Since trauma is said to always precipitate in the formation of implantation type epidermoid cysts, King preferred the term 'post traumatic cyst'. [10] A thorough clinical history and histopathology are mandatory for an accurate diagnosis.

In order to establish the diagnosis of an epidermoid implantation cyst, a history of traumatic or surgical implantation of surface epithelium in mandatory. In our case, the mass was on the posterolateral border of tongue and it is impossible to ascertain congenital cause of cyst here and the possibility of implantation type of epidermoid cyst was considered as posterolateral border of tongue is prone to accidental traumatic injuries. However in our case, the history did not reveal a traumatic incident and we assume that the injury may have been so slight that it was unnoticed / forgotten by the patient. This view was supported by earlier reports wherein even an insect bite have caused epidermoid cyst.[10]

Considering the clinical features, histopathological criteria and site of occurrence, our case was finally diagnosed as epidermoid cyst. Moreover we consider our case as the only authentic example for implantation type epidermoid cyst occurring on posterolateral border of tongue.

Imaging techniques like MRI, CT combined with ultrasound and FNAC provide essential information about the cyst location and enable optimal preoperative planning.[5]

Treatment comprises total surgical excision. Caution should be taken not to rupture the cyst as cystic contents act as irritants to fibrovascular tissues causing post operative inflammation. Prognosis in very good with very low incidence of recurrence. The occurrence of secondary malignancies of the types Basal cell carcinoma, Bowen disease, Squamous Cell Carcinoma and even Mycoses fungoides have been reported rarely.[6]

Epidermoid cysts of the oral cavity is an uncommon entity. Ample understanding and vigilance about this slow growing mass is essential not only because of the symptoms it produces but also due to the malignant potential.

This case was noteworthy due to the absence of any apparent cause explaining implantation type epidermoid cyst in this region.

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