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#### **Review Article**

# Dermoid cysts of maxillofacial region



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#### ABSTRACT

The dermoid cyst is an uncommon clinicopathological lesion of developmental origin. The term dermoid cyst is used to describe 3 cysts that are closely related histologically: dermoid cyst, epidermoid cyst, and teratoma. Epidermoid and dermoid cysts are benign nature, which may occur anywhere in the body, but most predominantly in the ovary and scrotal regions. Only about 7% are found in the head and neck. The occurrence of such cysts in the oral cavity is extremely rare, with approximately 1.6% located in this area. The floor of the mouth is one of the most commonly affected area, however, these cysts can also be found in the tongue, lips, buccal mucosa and jaw bones.

There is always a difficulty of making a correct diagnosis of these lesions with clinical examinations and conventional radiography. To achieve a diagnosis and to develop correct surgical strategy specialized imaging examinations such as ultrasonography (US), computed tomography (CT), Magnetic Resonance Imaging (MRI) and histopathological examination should be carried out.

Treatment comprises total surgical excision the approach remains dictated logically by the cyst's location. Ample understanding and vigilance about this slow growing painless mass is essential not only because of the symptoms it produces but also due to its malignant potential. When dermoid cysts occur on the floor of the mouth, they may enlarge to such an extent that they can interfere with deglutition and produce respiratory obstruction. Early diagnosis and treatment are essential for these cystic entities.

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#### Introduction

The dermoid cyst is an uncommon clinicopathological lesion of developmental origin which describes three histologically closely related lesions: dermoid cyst, epidermoid cyst and teratoma. Epidermoid and dermoid cysts are benign nature, which may occur anywhere in the body, but

most predominantly in the ovary and scrotal regions. Only about 7% are found in the head and neck region. The floor of the mouth is the second most common site in the head and neck region after the lateral eyebrow as these are the sites of embryonic fusion. The occurrence in oral cavity is approximately 1.6%. The floor of the mouth is one of the most commonly affected areas, however, these cysts can

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Fig. 1 - Pre and post operative photographs.

also be found in the tongue, lips, buccal mucosa and jaw bones.  $^{\!2,3}\!\!$ 

Dermoid cysts are derived from epithelial rests that are included during midline union of the first and second branchial arches. The vast majority of dermoid cysts of the floor of mouth (DCFOM) are located in the midline (sublingual 52%, submental 26%), 16% involve more than 1 of the 3 possible spaces in the floor of the mouth region (submental, sublingual, submandibular), and only 6% are situated exclusively in the submandibular space where they appear to be lateral neck cysts.<sup>4</sup>

There is always a difficulty of making a correct diagnosis of these lesions with clinical examinations and conventional radiography. To achieve a diagnosis and to develop correct surgical strategy, specialised imaging examinations such as ultrasonography (US), computed tomography (CT), Magnetic Resonance Imaging (MRI) and histopathological examination should be carried out.<sup>5</sup>

We report and review the cases of dermoid cyst of head and neck region treated in our centre.

#### Case - 1, sublingual dermoid cyst

A 28-year-old male patient reported with a complaint of persistent swelling of the floor of the mouth and chin since two years. A painless swelling gradually increased in size and he had difficulty in speech since last 6 months. He was moderately built with no history of any systemic illness. He had undergone extraction of lower anterior teeth for the same complaint.

On maxillofacial examination there was an oval shaped swelling of about 6  $\times$  3.5 cm in size in the submental area giving double chin appearance [Fig. 1]. The edges were indistinct, surface was smooth, soft in consistency, non tender and the overlying skin was normal. It was compressible, non-pulsatile, non reducible and was not fixed to the underlying structures. There was no lymphadenopathy. Oral examination revealed the floor of the mouth and tongue were elevated. The mass was bimanually palpable and on digital pressure over submental area the swelling protrudes into the oral cavity. The tongue

movements were restricted. The oral mucosa and Wharthin's ducts were healthy.

All routine laboratory investigations were normal. Computed tomography revealed a well encapsulated unilocular cystic lesion of 6 cm  $\times$  4 cm in size in the midline in the sublingual region above the mylohyoid muscle [Fig. 2]. Aspiration biopsy revealed white granular cheesy material. The histopathological examination confirmed the presence of keratin and sebum like aspirate suggestive of a dermoid cyst. Pre anaesthetic protocol was completed.

Surgical excision was planned under general anaesthesia (GA). The incision was placed in lingual vestibule parallel to the Wharton's duct and the lesion was exposed. It was decompressed by aspirating some of the cystic content to avoid rupture. Blunt dissection was carried out and the lesion enucleated. Surgical wound closed in layers. The postoperative healing was uneventful [Fig. 1].

Histopathological examination depicted stratified squamous epithelial lining with keratin filaments and sebaceous glands confirming the diagnosis of dermoid cyst.

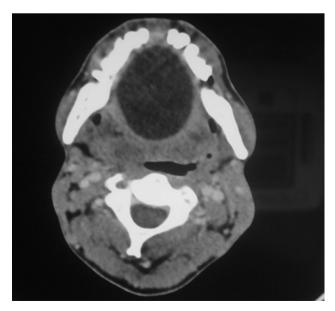


Fig. 2 – Axial scan showing the lesion.

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