

## Epidermoid Cyst Imitating as Ranula - Report of a case

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### Abstract

Among all the epidermoidal cysts originating throughout the body, 7% of them occur in the craniofacial region, with the oral cavity accounting for only 1.6%. Intraorally it is located in the submandibular, sublingual and submental region as a benign, painless lesion. This leads to symptoms such as dysphagia, dyspnoea or may have a malignant transformation potential. Treatment of choice is surgical excision. A case report of epidermoid cyst diagnosed clinically as plunging ranula is discussed.

**Keywords:** Epidermoid, Dysphagia, Ranula.

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### Introduction

Dermoid and epidermoid cysts are uncommon developmental cystic malformations termed as dysontogenetic cyst. Epidermoid and dermoid cysts constitute 1.6 to 6.9% of all cysts in the craniofacial region.<sup>(1)</sup> Common sites includes orbit, calvarial diploic space and intracranially.

The incidence of the lesion in the floor of the mouth is rare and represents less than 0.01% of all cysts of the oral cavity. Most clinicians and researchers believe that dermoid and epidermoid cysts that appear in the floor of the mouth are a result of entrapped ectodermal tissue of the first and second branchial arches, which fuse during the third and fourth weeks in utero. A second theory suggests that midline dermoid and epidermoid cysts may be a variant of the thyroglossal duct cyst with ectodermal elements predominating.<sup>(2)</sup> Sublingual, submaxillary and submandibular spaces are common localization in the floor of the mouth.<sup>(3)</sup>

Epidermoid cysts generally presents as slow and progressive growth, and even if they are congenital, the diagnosis is commonly possible in the second or third decade of life.<sup>(4)</sup> Such a swelling on the floor of the mouth can occasionally cause serious problems for swallowing and speaking.<sup>(5,6)</sup> They appear as painless, asymptomatic mass, slowly increasing in size, usually located in the midline, above or below the mylohyoid muscle. Treatment of epidermoid cysts of the floor of the mouth is surgical and can be intraoral or extraoral

according to the localization and the size of the lesion.<sup>(4)</sup>

Here, we report a case of epidermoid cyst in the floor of the mouth of a 25 year old male.

### Case Report

A 25 year old male patient complained of a mass in the oral cavity which was slowly enlarging in right side floor of the mouth, over last 6 years. The patient had no dyspnea or pain. There was no history of previous surgery or trauma to the oral cavity or neck. On examination a non-tender, soft, fluctuant mass, pinkish in colour was observed.

Swelling was present in the right submental region which enlarges when the patient swallows (Fig. 1). On neck examination, a diffuse firm swelling was also noticed in the submental area, extending down to the thyroid notch (Fig. 2). Based on these findings, clinically the lesion was diagnosed as plunging ranula.

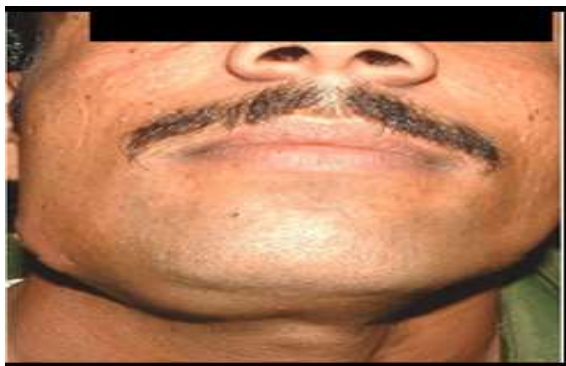
A contrast film lateral view was taken after injecting radioopaque dye. Panoramic radiograph & lateral view with radio-opaque dye revealed an irregular lobulated cystic swelling in the floor of the mouth (Fig. 3, 4). The patient underwent surgical removal of the mass under general anaesthesia and with nasotracheal intubation. A midline horizontal incision was performed through the oral mucosa overlying the swelling and the cyst was dissected and excised from the surrounding tissues. The wound was closed primarily.

Macroscopic examination revealed sublingual salivary gland consisting of single, irregular, soft, brown tissue measuring 4x 2 x 2.5 cms. Cut section revealed pale, cheesy coloured material in one block. Histological findings of serial sections revealed fragment of cystic cavity lined by keratinized stratified squamous epithelium. Lumen is filled by keratin flecks (Fig. 5). Swelling in the right submental region regressed and there was no postoperative complication with the tongue resuming its normal position (Fig. 6, 7).

No recurrence was noticed at a follow-up period of 1 year.



**Fig. 1:**



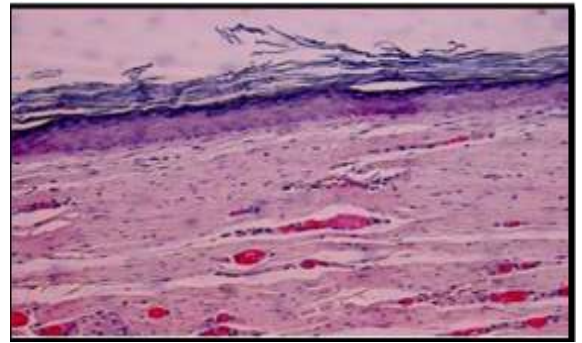
**Fig. 2:**



**Fig. 3:**



**Fig. 4:**



**Fig. 5:**



**Fig. 6:**



**Fig. 7:**

### Discussion

Dermoid and epidermoid cysts are usually single solitary lesions but occasionally they are found as multiple masses occurring on the floor of the mouth as reported by MacDonald Worley<sup>(8)</sup> et al and Calderon et al<sup>(9)</sup>.

These cysts for a long time remain asymptomatic until they create disturbances by interfering during the speech, respiration, mastication and swallowing or when an secondary infection has occurred<sup>(10,11)</sup>. Rarely may lead to life threatening situation as reported by Cortezzi et al<sup>(12)</sup>.

Dermoid and epidermoid cyst has an idiopathic aetiology<sup>(13,14,15)</sup>. The patient presented here went through a surgical excision at an early stage as the tongue was adherent to the floor mouth. He had a family history with the same problem in his father but he didn't present with the epidermoid cyst in this region. Therefore, a traumatic event can be identified,

but there is no evidence that the cyst has developed due to this surgical injury. When the cyst was removed, we have preferred to remove the content of the mass to reduce its volume and to dissect it easily according to Walstad et al.<sup>(5)</sup>

### Conclusion

Appropriate imaging techniques and thyroid scintigraphy are necessary in the preoperative diagnosis of cysts of the floor of the mouth. Surgical enucleation is the only effective treatment for these kinds of lesions.

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