



A Case of a Large Sublingual Dermoid Removed Successfully Using a Sublingual Approach

ABSTRACT

Sublingual dermoid cysts are rare lesions in the oral cavity. Common oral lesions include: ranula; benign mucosal swelling; and sublingual salivary gland tumours. Uncommon types of lesions include: thyroglossal cysts, pilomatrixomas, pilomatrix carcinomas, and arterio-venous malformations.

The etiology, diagnostic problems, radiological findings, various treatment approaches, and histopathological findings are described in the following case study, which includes a literature review.

KEYWORDS: epidermoid cyst, submental swelling, sublingual swelling, sialoadenitis, thyroglossal cyst, pilomatrixoma



Introduction

Dermoid cysts in the oral cavity are rare and are part of a group of lesions. They may be classified histologically into: dermoid, epidermoid, and teratoma.¹

Case report:

A seventeen-year-old presented with a three-year history of sublingual swelling. She had no pain associated with the swelling or difficulty swallowing. Upon examination there was significant sublingual swelling which was firm and measured 6 cm in diameter (Figures 1 and 2). An examination of the



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Figure 1: Large sublingual swelling in the floor of the mouth



Figure 3: Submental fullness due to sublingual swelling



neck showed fullness in the submental region (Figure 3). A CT scan of the neck revealed cystic swelling in the sublingual area extending to the submental area above the geniohyoid muscles (Figures 4, 5, and 6).

The patient underwent an exploration of the swelling using an intraoral approach. The large swelling (Figures 7 and 11) was removed using blunt dissection; the lingual nerve and sublingual duct were successfully preserved.

The mass was sent to histopathology and was subsequently reported as a dermoid cyst removed in toto (Figures 7 and 11). Immediately after the removal of the sublingual dermoid, the submental swelling disappeared (Figure 8).

Figure 2: Large sublingual swelling filling the floor of mouth



Figure 4: Sagittal CT scan of the neck showing the dermoid cyst



Figure 5: Axial CT scan of the neck showing the large dermoid cyst

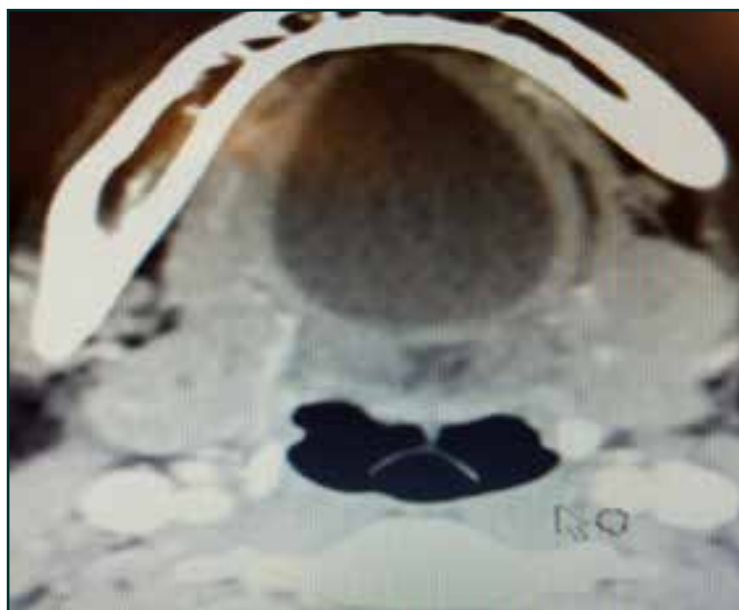


Figure 7: Large dermoid cyst with cheesy sebaceous material



Discussion

Dermoid cysts are not uncommon entities in the head and neck and comprise of 7% of all cysts with the majority found in the floor of mouth.² The incidence of dermoid cysts is approximately 1:4000 live births.³

Embryologically, dermoid cysts are derived from the entrapment of ectoderm at the fusion site of the first and second

branchial arches during the third or fourth week of embryonal development.⁴ Dermoid cysts are uncommon in infants and usually present in the second or third decades of life.¹

Epidermoid cysts are cyst cavities lined by epithelium without skin appendages. The dermoid includes skin appendages such as hair, hair follicles, sebaceous, and sweat glands while

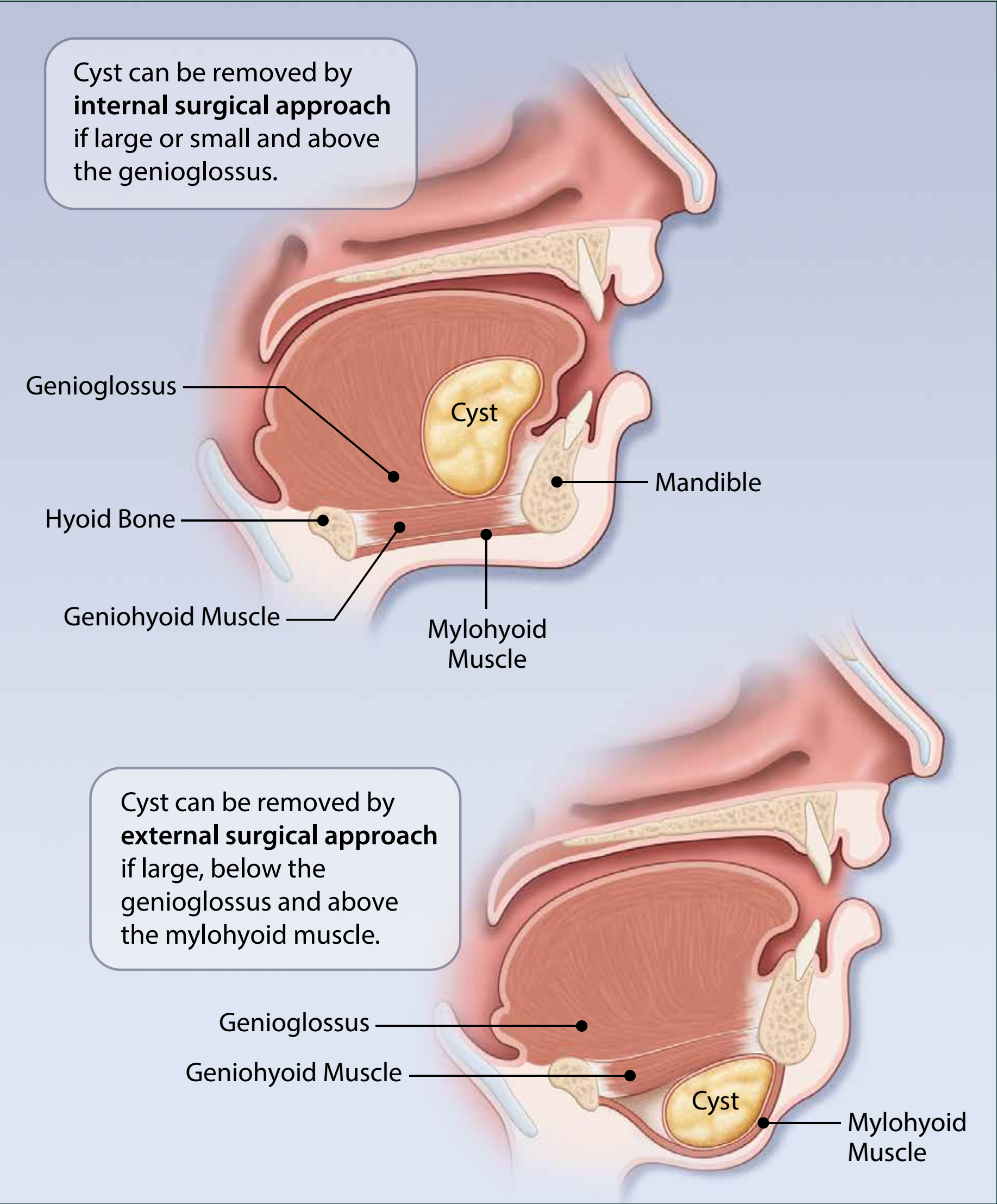
Figure 6: Coronal CT scan of the neck showing the large dermoid cyst



Figure 8: Complete absence of submental swelling after removal of the sublingual dermoid



Figure 9: A Diagrammatic Representation of a Sublingual Dermoid Cysts and the Appropriate Surgical Approaches



teratomas, in addition to skin appendages, contain mesoderm such as muscle and bone as well as gastrointestinal and respiratory epithelium.

Dermoid cysts on the floor of mouth are classified topographically as sublingual or submental in relation to the mylohyoid muscles.⁵ They can be further classified as medial or lateral.

Differential diagnoses of swelling in the sublingual or submental regions are: sublingual salivary tumours, plunging ranula, benign tumours on the floor of the mouth, recurrent sialadenitis, cystic hygroma, thyroglossal cysts, and submental fat.³

A sublingual dermoid cyst may present with no symptoms if it is small. Once it grows larger, it can

present as a large swelling under the tongue or submental region causing a double chin,⁶ dysphagia,⁷ sialadenitis,^{8,9} ankyloglossia,¹⁰ and sometimes a partial obstruction of the airway.¹¹

A cervical dermoid cyst can be removed by an external approach if it is large and situated below the genioglossus and above the mylohyoid muscle. It can be removed internally if the cyst is large or small but situated above the genioglossus (Figure 9).

Conclusion

Dermoid cysts on the floor of mouth are rare and can be asymptomatic if they are small; they only tend to present with symptoms when they grow large. A comprehensive history, a thorough exam-

Figure 10: Dermoid cyst. At low magnification cyst wall shows keratinized squamous epithelium lining (A) and dermal appendages as benign pilosebaceous unit in the wall (B). Cyst contents are desquamated keratin (C). (Hematoxylin-eosin, original magnification X 40)

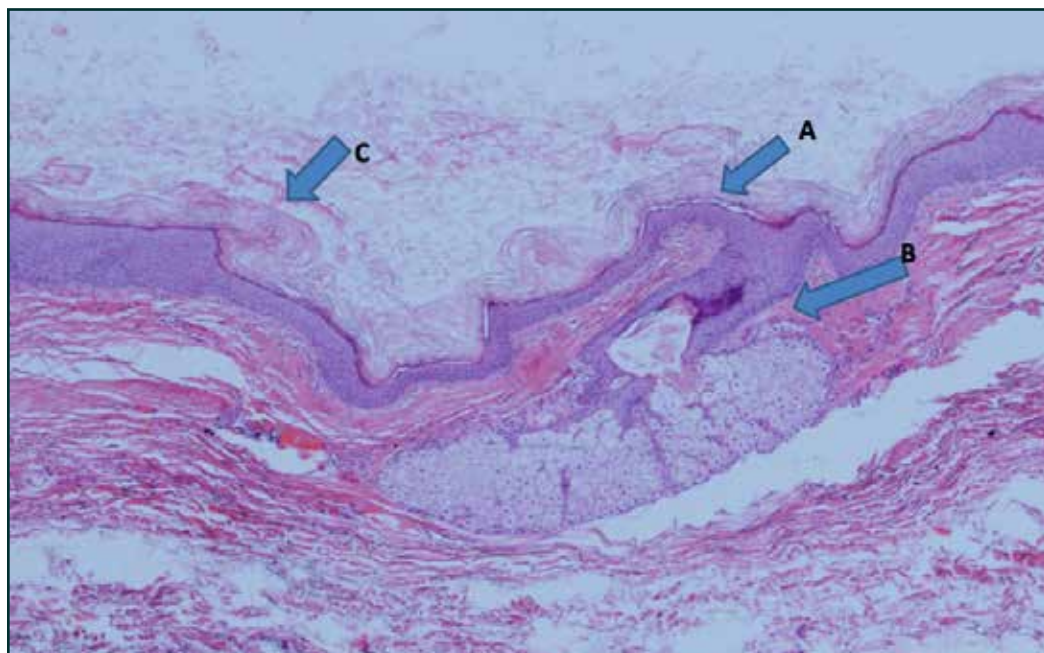
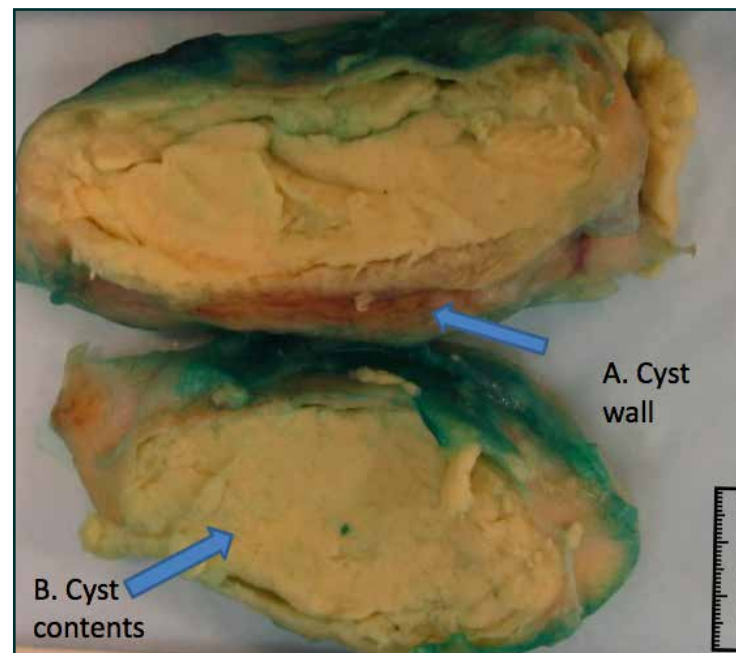


Figure 11: Cut surface of large dermoid cyst shows fibrotic cyst wall (A) and lumen distended with sebaceous material (B).





SUMMARY OF KEY POINTS

Sublingual dermoid cysts are asymptomatic unless they are big causing pressure symptoms causing sialoadnitis, difficulty in swallowing, choking or pain while moving the tongue.

Good examination and CT scan of the neck helps to plan for the surgery.

Once removed completely the recurrence is very rare.

ination, and a CT scan of the neck will assist with planning a surgical approach. Complete excision can result in no recurrence for the patient. An intraoral approach and surgical enucleation are both useful techniques to help avoid cosmetic problems with the large cyst extending to the mylohyoid muscle.¹³

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CLINICAL PEARLS

Dermoid cyst in the oral cavity are rare entity depending on the histological pictures that are classified into dermoid, epidermoid, and teratomas.

Complete excision through intra oral and external approach is done, depending on its site in relation with geniohyoid muscles.

