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Case Report

Sublingual Epidermoid Cyst: An Uncommon Developmental Lesion in the Oral Cavity

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Abstract

Epidermoid and dermoid cysts can occur in any region of the body, though m ost commonly they are located in head and neck region, where they constitute 7% of all the cystic lesions. Most common locations in the head and neck regionare the orbit, calvarium and intracranium. They are extremely uncommon in the oral cavity, especially in the floor of the mouth (0.01%). These lesions are thought to originate from ectodermal tissue trapped during early embryologic development. We report one such case of epidermoid cyst in the floor of the mouth in a young female who presented to the otolaryngeologist with a growing, painless swelling beneath the tongue.

Keywords: epidermoid cyst; developmental cyst; sublingual space; oral cavity

Introduction

Epidermoid cysts are benign, painless, slow-growing lesions that may arise in various tissues. They are infrequently encountered within the oral cavity [1] and often originate from ectodermal remnants that persist following embryologic fusion processes [2]. When present beneath the tongue (incidence in floor of mouth is 0.01%), these cysts may gradually enlarge and begin to exert mass effect and affect basic oral functions such as swallowing or speaking mostly in the second and third decade of life [3,4].

Diagnosis typically relies on imaging to characterize the lesion and its anatomic relationships, followed by histopathologic confirmation. Surgical removal is considered the standard treatment and the surgical approach depends on whether the epidermoid cyst is above or below the mylohyoid muscle.

This case report describes the typical imaging findings of the epidermoid cyst which helped to differentiate it from other cystic lesions in floor of mouth.

Case Presentation

A 29-year-old woman reported a gradually increasing swelling beneath the tongue that had been present for approximately seven months. She had no pain, infection, or systemic symptoms, and the overlying mucosa appeared normal. On palpation the lesion was soft, dough like and non-tender. The mass elevated the tongue slightly, leading to mild difficulty with speech and swallowing. No abnormal lymph nodes were detected. Patient underwent magnetic resonance imaging of the neck and oral cavity which revealed a well-circumscribed cystic lesion in the sublingual region in midline above the mylohyoid muscle. The mass showed low signal on T1-weighted images, high signal on T2-weighted sequences, with minimal peripheral enhancement on post contrast images. There was significant diffusion restriction on DW/ADC images [figure 1]. These findings were consistent with epidermoid cyst as keratin-filled cyst causes restriction of movement of water molecules. The lesion was removed surgically using an intraoral approach. Recovery was smooth, and the patient experienced no complications. Histopathologic evaluation revealed a cyst lined by keratinizing squamous epithelium with laminated keratin in the lumen, confirming the diagnosis of an epidermoid cyst.

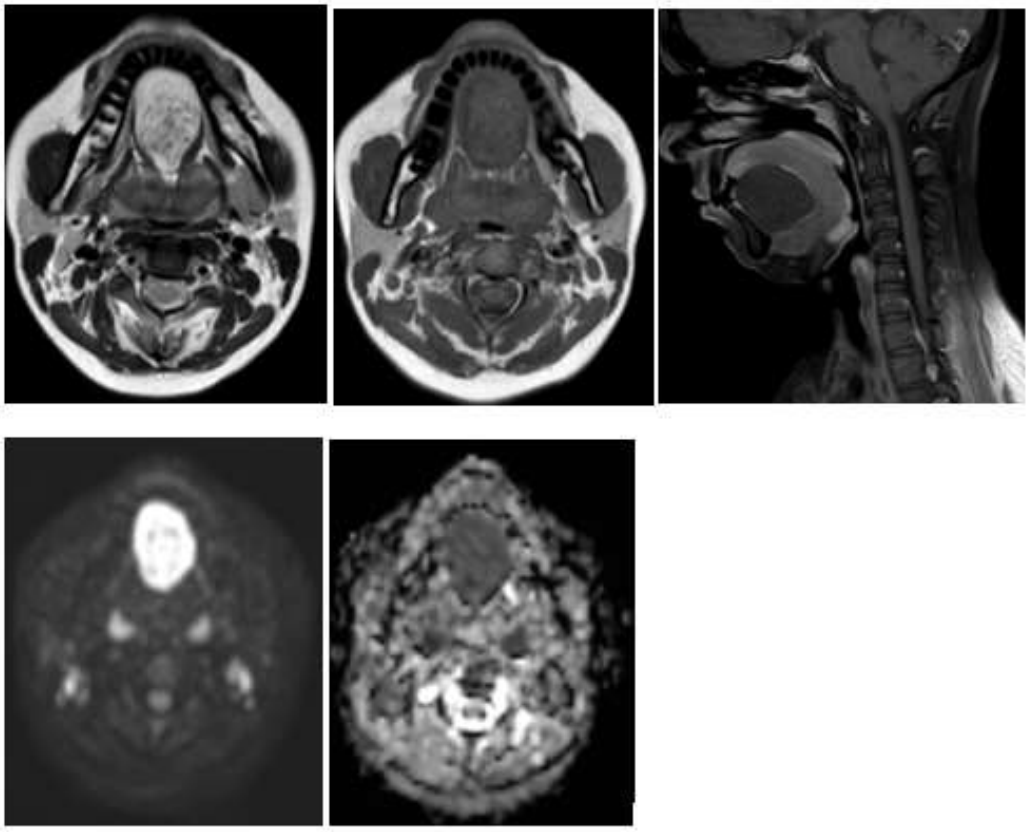

Figure 1: A midline swelling is seen in the floor of the mouth (A – E): A. Cyst appearing hyperintense on T2W images B. Hypointense on T1W images C. displays minimal peripheral enhancement on post contrast images and D& E. restricted diffusion on DW and ADC images confirming the diagnosis of epidermoid cyst.

Discussion

A range of conditions may present as swelling beneath the tongue, including developmental cysts, benign soft-tissue neoplasms, congenital anomalies, and vascular lesions [5-9]. Epidermoid cysts belong to a group of developmental lesions thought to arise from ectodermal tissue that becomes sequestered during embryonic fusion [1]. They typically enlarge slowly and may remain unnoticed until they begin to exert mass effect and affect tongue movement or speech.

Differential diagnoses may include dermoid cysts, which contain skin appendages; teratoid cysts, which contain components from multiple germ layers [10]; lipomas; lymphatic malformations; and cysts derived from heterotopic tissue [5-9]. Imaging helps clarify the lesion's contents and its relationship to surrounding structures. Diffusion-weighted MRI is particularly helpful, as epidermoid cysts usually demonstrate restricted diffusion due to their keratin-rich contents.

Histologically, epidermoid cysts are lined by stratified squamous epithelium and lack adnexal structures unlike the dermoid cysts [10]. Treatment generally involves complete surgical removal. An intraoral approach is often used when the lesion occupies the sublingual space, while other approaches may be chosen depending on location and size. Recurrence is uncommon if excision is complete [11].

Conclusion

Sublingual epidermoid cysts are rare lesions that can affect oral function as they enlarge. Imaging helps establish the diagnosis, and histopathology provides confirmation. Surgical removal is curative in most cases, with excellent long-term outcomes.

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