Dermoid Cyst of the Floor of Mouth in a Pediatric Patient: A Case Report

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INTRODUCTION

Dermoid cysts are rare benign cystic lesions which may occur anywhere in the body, the most commonly ovary and scrotal areas.1 Incidence is a very rare in the head and neck area, about 7% and of which only 1.6% appears in the oral cavity. Floor of the mouth is the second most common site in the head and neck area after lateral eyebrows.2 The dermoid cyst is defined as any cyst that is filled with sebum like material and with evidence of specialized skin derivatives from defective embryologic development (dysodontogenic).3 Several theories explain the etiology of this lesion. They are thought to be congenital, formed by entrapment of epithelial cells along the embryonic line of fusion. Literature also suggests factors such as trauma and surgical implantation.4 The lesion does not show sex predilection and is commonly seen in age group of 15-35 years. Lesions are usually asymptomatic, slow growing and are well-encapsulated with a doughy consistency on palpation.5 Clinical examination along with conventional radiographs does not help provide a definitive diagnosis and so specialized imaging modalities, such as ultrasound and magnetic resonance imaging (MRI), are recommended. Treatment of dermoid cysts is by surgery: Intraoral or extraoral approach or a combination of both depending on the size and anatomic location. A histopathologic examination reveals that the contents of the cystic lining determine the histologic category epidermoid, dermoid, or teratoid.

Dermoid cysts are rare in the mouth. Several reviews conducted have proved the rarity of the lesion.6,7 This case report is of a 13-year-old female pediatric patient with dermoid cyst in relation to floor of mouth, review of all steps taken to establish a proper diagnosis and treatment plan with follow-up.

CASE REPORT

A 13-year-old female patient reported to the dental outpatient department with the chief complaint of swelling below the chin since 8 years [Figure 1]. Patients’ mother first noticed the swelling when she was 5 years old. Initially, the swelling was small in size which gradually increased and reached the present size. A history of homeopathic medication 7 years back for 2 years and was discontinued as there was no reduction in the size of the swelling. The patient reported to a general surgeon for the same problem almost 7 months back and was advised surgery under general anesthesia. The patient refused the treatment as the surgery was planned extraorally. On extraoral examination, solitary diffuse swelling, approximately oval in shape,
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Figure 1: Extraoral photograph of the patient

Figure 2: Extraoral photograph of patient showing a single diffuse swelling approximately oval in shape noted in relation to left submandibular gland region and submental region

Figure 3: Ultrasound image showing a well-defined hetero echoic lesion measuring 6.3 cm × 2.7 cm × 6 cm with anechoic channels and multiple calcific foci within seen in left submandibular gland region, crossing the midline.

Figure 4: Fine needle aspiration cytology was performed in relation to the swelling intraorally, hematoxylin-eosin stained sections revealed the presence of keratin with anucleated cells suggesting an epidermoid or dermoid cyst. Treatment performed was enucleation of the cystic lesion under general anesthesia intraorally with excision of sublingual gland and duct. The patient was put under medications and was advised good oral hygiene with normal diet and recall after 3 months for follow-up. Cystic lesion revealed cheesy material inside and the specimen was sent for histopathological evaluation [Figure 5]. Hematoxylin-eosin stained section under ×4 shows cystic epithelium lined by orthokeratinized stratified squamous epithelium showing papillary projections, epithelium consists of 5-6 cell layers with prominent granular layer and cystic lumen reveals the presence of keratin along with few extravasated red blood cells [Figure 6]. Hematoxylin-eosin stained section under ×20 reveals connective tissue capsule consisting of dense collagen fiber bundles along with adnexal structures such as hair follicles and sebaceous glands [Figure 7]. Thus, a final diagnosis of dermoid cyst in relation to floor of mouth was established. The patient is currently under follow-up.
DISCUSSION

Dermoid cyst is considered as an unusual clinicopathologic lesion which results from defective embryonic development. This points toward the importance of a histopathologic examination in establishing an accurate diagnosis. Clinically, lesion usually appears as a slow growing, single, well-circumscribed asymptomatic mass usually located midline, above or below mylohyoid muscle. Considerable assistance in the diagnosis of these cysts is provided by radiologic modalities such as ultrasound scan, computed tomography, MRI and scintiscan of the area. Subjecting the lesion to ultrasound and MRI has helped us in confirming the nature of the lesion along with its anatomical location and extent. Treatment followed is surgical approach depending on the relationship of cyst to the musculature of the floor of mouth. In our case, intraoral approach was considered as the patient was not willing for an extraoral approach and it has been noted that cosmetic effects and functional results of intraoral approach are better. Recurrence is rare in the case of dermoid cyst after complete removal of the lesion.

CONCLUSION

Dermoid cysts of the oral cavity are relatively rare entities which need to be considered in differential diagnosis of conditions pertaining to the area. Detailed clinical
examination along with invaluable assistance from imaging modalities helps in planning and execution of surgery. Confirmatory and definitive diagnosis can only be provided by histopathology. The purpose of this case report is to emphasize on the rarity of the condition and how important it is to be considered in the differential diagnosis of lesions seen in relation to floor of mouth.

REFERENCES


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