CASE REPORT

Extraoral approach of the surgical treatment of sublingual epidermoid cyst: A case report

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Abstract

Epidermoid and dermoid cysts account for <0.01% of all oral cavity lesions with dermoid cyst which is twice as common to epidermoid. Epidermoid cysts are benign lesions that occur rarely in children. They usually present early in life as an asymptomatic mass. The treatment option is surgical and intraoral or extraoral approaches can be performed according to the localization and size of the mass. This report presents an 11 year old child with a sublingual epidermoid cyst treated extraorally.

Keywords: Epidermoid cyst, Sublingual, Extraoral, Surgery, Child.

Introduction

Epidermoid cysts are rare, benign developmental cysts, arising from ectodermal tissue lined by epidermis without skin appendages.[1,2] Their incidence in the head and neck region ranges from 1.6% to 6.9% and 1.6% in the oral cavity. Oral form account for less than 0.01% of all oral cysts.[3] It usually presents as a painless, slow growing swelling in the sublingual, submandibular or submental space in isolation or combination, rarely in children but more commonly in young adults.[4] Especially swelling can cause difficulty in swallowing and speaking.[5] The possibility of malignant transformation is rare.[6] Treatment options are intraoral or extraoral surgical exicion.[7] Recurrence rate is low after excision.[8] This report presents a 10 years old child with a sublingual epidermoid cyst treated with extraoral surgical excision.

Case Report

A 10-years-old male patient was referred to Orthodontics Department at the University of Süleyman Demirel, Faculty of Dentistry in September 2015, complaining of dental teeth anomalies. Patient was class 3 malocclusion and had a cleft palate history. Following a detailed intraoral and extraoral examination it was noted that no teeth mobility, poor oral hygiene, some caries and a swelling below the area from hyoid to inferior border of the mandible. No clinical symptoms were noted in intraoral examination without any mucosal lesions. The patient was systemically healthy, however he had been operated for his cleft palate in an another hospital in 2007. There was pain and severe swelling in palpation of submental lymph nodes. Other lymph nodes were normal. On radiographic examination (MRI), a 4x3 cm sized well-circumscribed radiopaque mass was seen in submental and sublingual region were observed (Figure-1). Provisional diagnosis was salivary gland cyst. Differantial diagnosis included thyroglossal cyst, infection and lymphatic malformation.

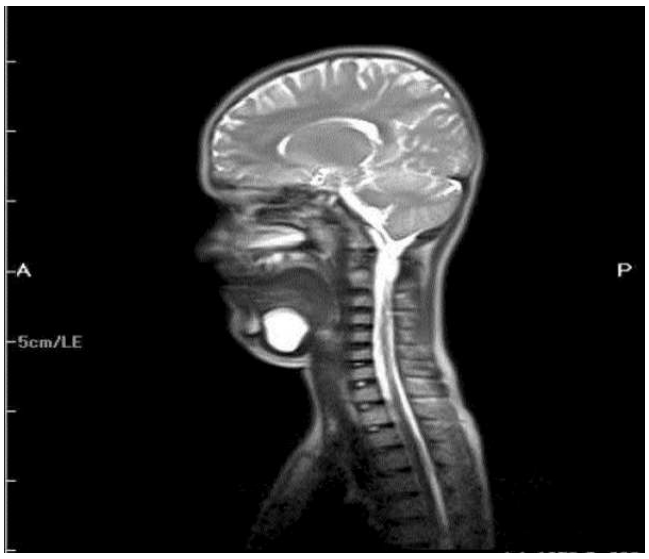

Figure-1: Preoperative MRI scansshowed 40 × 30 mm well-circumscribed non-enhancing cystic mass extending in submental and sublingual area.

The patient was operated in October 2015 at Oral and Maxillofacial Surgery Department under general anaesthesia. Informed consent was taken from the parents of child before the procedure. Neccesary permission for case publication was also taken from the parents of child. After an extraoral skin incision platysma muscle was passed and blunt dissection was performed under the mylohyoid muscle to remove the mass (Figure-2). The wound was sutured in layers with 3.0 vicryl primarily. Skin was closed with 6.0 poliprophylene

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Figure-2: Lesion dissected from platysma and myhlohyoid muscles.

sutures. The extraorally removed mass had a size of 3x4x4cm. It was sent for histopathologic examination. Histopathological sections revealed a cystic cavity lined by orthokeratinized,stratified squamous epithelium. The cystic lumen was composed of keratin lamellae. Edematous connective tissue was observed in the cystic wall. According to these findings lesion was diagnosed as epidermoid cyst.

Postoperative course was uneventful and the patient was followed for 6 months with no signs of recurrence. Orthodontic treatment for Class 3 malocclusion is stil going on.

Discussion

Developmental cysts are rare, benign congenital tumours that can be divided into three histopathological subtypes: dermoid, epidermoid and teratoid types. Dermoid and epidermoid cysts are developmental cysts, arising from ectodermal tissue lined by epidermis with skin appendages (dermoid cysts) or without appendages (epidermoid cysts).[1,2,6]

Sublingual epidermoid cysts are uncommon in the floor of the mouth.[8] In one retrospective study among 89 children, only 13.33% cases of head cysts were found to be epidermoid, compared to 58.88% of dermoid cysts.[9]

Clinically epidermoid cysts are painless, slow growing with doughy consistency, often soft and well encapsulated without any associated lymphadenopathy. Large intraoral cysts usually present with dysphagia, dysphonia or dyspnoea. Contents of the cyst can be keratinous, casseous, sebaceous or purulent.[10] Men are affected more often than women in the ratio 3:1, with mean age 28 years.[7] In our case 11 year old male patient with a painless swelling in the submental region was presented.

These cysts remain asymptomatic for a long time until they interfere with mastication, swallowing, speaking, and breathing or when an infection occurs,[11,12] rarely causing a life-threatening situation as reported by Cortezzi et al.[13] Bimanual palpation and conventional radiography are not always sufficient in making a differential diagnoses.[6] In these cases, it is necessary to use ultrasonography, computed tomography, or magnetic resonance imaging together with cytologic examination by fine-needle aspiration biopsy.[6,14] CT scan ultimately becomes essential for surgical planning and post-operative follow-up.[15] We realized the lesion in our patient with the help of extraoral swelling and preoperative MRI scans.

Surgical enucleation is the only effective treatment for these kinds of lesions. Several techniques are reported in the literature, which may be divided into intraoral and extraoral techniques depending on which approach is used.[7] The extraoral approach is generally preferred in the case of median geniohyoid or very large sublingual cysts, whereas the intraoral approach is typically used for smaller sublingual cysts.[16] In our case due to no clinical signs and symptoms intraorally we surgically excised the mass with extraoral approach.

Prognosis is good, with a very low incidence of relapse. Malignant changes have been recorded in dermoid cysts by New and Erich[17] but not in the floor of the mouth, although a 5% rate of malignant transformation of oral dermoid cysts of the teratoid type has been reported by other authors.[18] No recurrence were observed for 6 months in this case.

Conclusion

Sublingual epidermoid cyst are rarely seen and extraoral surgical approach can be performed according to the location and size of the mass. For recurrence long term

follow up studies are needed.

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Conflict of Interest: None.

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