A Rare Case of Sublingual Epidermal Cyst

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Abstract:
Dermoid and epidermoid cysts in the mouth are uncommon and comprise less than 0.01% of all the oral cysts [2-4]. The pathogenesis of midline cysts of the floor of the mouth is not well established and dysontogenetic, traumatic, and thyroglossal anomaly theories have been suggested. Histologically, Meyer divided the cysts of the floor of the mouth into three groups: epidermoid, dermoid, and teratoid. Intraorally it develops in the submandibular, sublingual and submental region. It causes symptoms like dysphagia, dyspnoea and stridor. Surgical excision is the treatment of choice. It has chance of transforming into malignant.

I. INTRODUCTION:
A dermoid cysts are benign congenital lesions of ectodermal origin not commonly seen in the mouth, however when presents as a swelling in the middle of the mouth floor and its developmental lesion usually due to retention of germinal epithelium during growth of branchial arches and Lower jaw. Usually diagnosed during the 2nd and 3rd decade of life and rarely seen in children.

II. CASE REPORT:
A 25 year old female came to hospital for complaints of swelling beneath the tongue since 3 years. Initially it was small in size gradually progressed to present size. Patient complained of discomfort during swallowing of food. Oral examination revealed 2*2.5 cm soft, cystic and compressible midline swelling in the floor of the mouth extending from behind the incisors to the root of the tongue, yellowish in colour tiny blood vessels seen over it in the mucosa. Bidigital palpation revealed that it was fully above mylohyoid muscle. Pharyngeal inlet not compromised. Tongue not pushed backwards. No regional nodes. Investigations done. CT scan done to confirm the diagnosis. It revealed a midline swelling in the submental and sublingual swelling above the mylohyoid muscle.

Differential diagnosis includes plunging ranula, Lipoma dermoid cyst, lymphoma and vascular malformation. On clinical examination, ultrasonography, CT scan of the area, decision made to remove the lesion under general anaesthesia. After discussion with parents, full explanation about the procedure, considering age of this patient and scar in the submental area a decision made to enucleate this lesion via an intra-oral approach under general anaesthesia, preparation for surgery done including consent from parents.

Enucleation of the cyst was performed under general anesthesia using intraoral approach with a midline vertical and mucosal incision along the ventral surface of the tongue, dissection slowly and protecting the submandibular gland the cyst was sent to the pathology (Figures 4A-4C). Histopathology report confirms clinical diagnosis as epidermal inclusion cyst. Initial postoperative recovery uneventful and the boy discharged from the hospital the second day with oral antibiotics for 5 days and be reviewed in the clinic regularly.
IV. CT:

V. DISCUSSION:

In the oral cavity it represents less than 0.01% of all oral cavity cysts [1]. Out of 1945 Dermoid cysts in the body only 103 cases in the head and neck region which accounted 6.9% studied in Mayo clinic, of which only 24 cases involving the floor of mouth 1, 6% only [2-6]. In another study carried out of 541 dermoid cysts of the body, 184 (34%) seen in the head and neck region and only 35 (6.5%) in the floor of mouth [7]. The suggested hypothesis for the origin of the dermoid cyst in the floor of mouth falls in the categories: congenital and acquired [7], the most widely accepted theory describes that the cyst results from entrapped midline ectodermal tissue during fusion in the third and fourth weeks in intra uterine life. The arches thought to arise from first or post-traumatic implantation deep tissues injuries demonstrated as a result of accidental or surgical, whereas the lateral dermoid cyst is from the first branchial cleft [8,9]. Post-traumatic implantation deep tissue injuries demonstrated as a result of accidental or surgical [4,10]. Baker and Mitchell this tissue cavities theory by implanting skin in subcutaneous tissue of experimental rats, in which cystic cavities filled with keratin and hair [11].

Meyer classified the congenital floor of mouth cysts in to three different categories:

1. Ectodermal origin, which is lined by stratified squamous epithelial lined cyst

2. Dermoid variant mesodermal structure is sebaceous connective tissues or sweat gland

3. Teratoid is an epithelial lined cyst containing both epithelial and non-epithelial elements such as bone, muscle and gastrointestinal tissues [12,13].

According to the anatomical relationship between the floor of the mouth and the Dermoid cyst the cyst can be classified in relation to the mylohyoid muscle [7]. Clinically the picture of epidermal inclusion cysts usually present as painless slowly growing cystic lesion in the sublingual and or submental spaces with a doughy consistency often present where as those below the mylohyoid muscle in the submental area presents as asymptomatic swelling. In some cases they may cause dysphagia, dyspnea and respiratory distress, which may require Tracheostomy [6]. Clinically dermoid cyst may mimic plunging ranula, lipoma, vascular and lymphatic malformation, salivary gland neoplasm, and thyroglossal duct cyst. Diagnostic aids such as ultra sound, magnetic resonance imaging and computed tomography with or without contrast will help defining the size, extent and nature of the lesion [1,14]. Dermoid cyst usually seen as well defined, unilocular cystic lesion have an intermediate to low signals intensity on T1-weighted MRI image and ultrasound shows typically unilocular cystic mass depending on the dermal appendages within the cyst wall [7,15]. Enucleation of the cyst through an intraoral or extra oral approach is the most commonly recommended treatment in the literature. However, marsupialization has also been proposed as a treatment alternative in cases of large cysts [16]. If the cyst is small nad moderate size (those of 6 cm and less) above the mylohyoid intra oral approach is the best surgical treatment, where as those of large size (more than 6 cm) and below the mylohyoid and involving the submental and submandibular spaces extra oral approach can be done. In this case the lesion involving sublingual and submental space perforating the mylohyoid muscle and intraoral approach to get good cosmetic and functional effect, reported cases using intraoral approach in large dermoid cyst [13,17]. In this case the cystic lesion was large and measuring 5 cm and perforating the mylohyoid muscle, using a gentle 1 appropriate traction the cyst removed via an intraoral approach for better cosmetic results. Extra oral approach only limited to very large dermoid cysts and in case of infection involving both sublingual and submental spaces which affecting the patients airway [18,19].

VI. CONCLUSION

Surgical excision is the treatment of choice to prevent obstructive symptoms like dysphagia, dyspnea and stridor and to prevent malignant transformation. Based on clinical presentation and behaviour of the cyst without advanced investigation. Follow up is mandatory as there are cases reported with recurrence after excision and up to 5% of dermoid cysts undergo malignant changes in teratoid type [19-23].

VII. REFERENCES


