ORAL MUCOCELE IN PEDIATRIC PATIENT: A CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT:
The Mucocele are benign mucous containing cystic lesion of salivary gland mainly of traumatic origin. The wall of this cavity is formed by compressed bundles of collagen fibrils and it is filled with mucin. Mucoceles are known to occur most commonly on the lower lip, followed by the floor of mouth and buccal mucosa being the next most frequent sites. This paper presents oral mucosal lesion on lower lip in pediatric patient and literature review on Oral Mucocele.

KEY WORDS: Mucocele, Extravasation, salivary gland, retention phenomenon, cyst

INTRODUCTION:
Oral mucocele represent lesions which affect the oral mucosa.¹ According to literature mainly two types of mucoceles are there; retention type and extravasation type. However the term mucocele only used by some authors for extravasation type.² ⁴ Extravasation mucoceles most commonly occurs in minor salivary gland². They are mostly seen in children and young patients with no sex predilection. Clinically Mucoceles are painless and tend to relapse.⁵ ⁶ Etiological factors are mainly obstruction which leads to saliva retention and formation of mucocele. Clinically, two types of mucoceles cannot be differentiated. They can however be distinguished histologically.⁷ ⁸

CASE REPORT:
Thirteen years old male child visited the dental clinics with the chief complain of painless swelling in the lower lip. History of present illness includes swelling in the lower lip on the left side since 3 months in the 33, 34 region along with prominent blood vessels in surrounding mucosa. (Figure 1) There is no significant change in the size of the swelling. The patient didn’t reveal any history of trauma. The other oral findings were insignificant except an occlusal pit in 35. (Figure 1) The laboratory investigations like HB, TLC and DLC were conducted and the values were found to be under normal limits. The provisional diagnosis of mucocele was made. The differential diagnosis considered were benign and malignant salivary gland neoplasm, Oral lymphangioma, Oral haemangioma, benign and malignant mesenchymal tumor.

Figure1. Clinical presentation of mucocele on lower right lip

The treatment planning consisted of the surgical removal of the lesion by placing an incision vertically; therefore splitting the overlying mucosa and then resecting the lesion from the base so that chances of reoccurrence are less. Regular follow up and checkup for the reoccurrence of the lesion were conducted. Macroscopic examination of specimen reveals a round to oval shape cystic lesion soft to firm in consistency with characteristic bluish hue discolouration (Figure 2).
Figure 2. Macroscopic Examination of excisional specimen
Histologically, light-microscopic examination with H&E staining revealed an area of mucus retention surrounded by epithelial lining along with dense to moderate inflammatory infiltration of chronic inflammatory cells (Figure 3).

Figure 3. Photomicrograph showing cystic cavity filled with mucus and inflammatory cells (H&E stain, 10X magnifications)

The Final diagnosis was rendered as a Mucocele with retention phenomenon on the basis of the site, clinical and histopathological features.

**DISCUSSION:**
Mucocele is accumulation of mucus within minor salivary glands resulting in benign cystic lesion. The most common etiological factor for mucocele may be of traumatic origin. The most common site of occurrence of Mucocele are the lower lip, followed by the ventral part of tongue, vestibule and buccal mucosa in children. Although mucoceles are benign and simple in their presentation, however differential diagnosis becomes important due to their clinical resemblance with many other benign or malignant swellings, vesiculobullous and ulcerative lesions of oral cavity.

Histopathologically, retention mucoceles are true cysts, as the duct has an epithelial lining. Extravasation mucocele is a pseudocyst containing pool of spilled mucus, surrounded by granulation tissue which undergoes fibrosis with time forming a pseudocapsule.

**LITERATURE REVIEW OF ORAL MUCOCELE**
Mucoceles are believed to arise equally in both sexes and affect patients of all ages, with the highest incidence in the second decade. Although frequent in children and adolescents, very few studies of mucocele in this specific population have been performed.

The data given in Graph no. 1 shows the literature available on mucoceles noted according to the common age predilection as examined in 138 cases by Matin Filho et al in 2010. The development of Mucoceles usually depends on the disruption of the flow of saliva from the secretory apparatus of the salivary glands. The lesions are most often associated with mucus extravasation into the adjacent soft tissues caused by a traumatic ductal insult, which may include a crush-type injury and severance of the excretory duct of the minor salivary gland. Due to disruption of the excretory duct, mucus is extravagated into the extracellular space.

**Graph 1:** Age distribution of pediatric mucoceles. Clinically they are painless, asymptomatic swelling but can produce discomfort by interfering with speech; chewing or even swallowing. Patient can give a history of relative rapid onset and clinically shows fluctuancy in size. Patient might correlate lesion with the past or recent trauma to the mouth or face, or the patient may have a habit of biting the lip. Mucocele arising on the lower lip is because of trauma or assault to the minor salivary glands located in this region because of a fact that this region is most frequently associated with traumatic injury. Extravasation phenomenon is more common in children as compared to retention phenomenon probably due to trauma. Extravasation cyst is a delimited area surrounded by granulation tissue containing pools of extravasated mucus, i.e., pseudocyst.

Similar histological picture have been found in the present described case. Evolution of extravasation mucoceles occurs mainly in three phases. During the first phase mainly mucous spreads out in a diffuse manner in the connective tissue from the excretory duct. Because of the presence of inflammatory cells (leucocytes and histiocytes) this leads to formation of granulomatous inflammatory reaction. This granuloma appears during the resorption phase and caused mainly because of foreign body reaction by the spilled mucus. This phase is characterized by the histiocytes, foamy macrophages and foreign body giant cells. Third phase is the healing phase characterized by formation of a pseudo-capsule without epithelium around the mucosa.
A number of lesions are to be considered as differential diagnosis ranging from benign mesenchymal tumor to malignant salivary gland neoplasm according to the site and duration of the mucocele as because of variable clinical picture as the time progress.² Most acceptable treatment option considered is excision followed by careful dissection of adjacent minor salivary gland to prevent recurrence. Variability in these techniques depends upon the location, accessibility and size of the lesion.¹²

CONCLUSION:
Mucoceles commonly occurs in childrens as this group is mainly susceptible to local trauma. This case report highlights the clinical and histopathologic presentation of mucocele in young patient which reconfirms the literature. Because of the clinical resemblance of this lesion with various benign and malignant tumors, clinician should rule out other lesion for better diagnosis and management of the mucocele.

REFERENCE