



ORIGINAL CASE STUDY

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ORAL MUCOCELE: A CASE REPORT

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ABSTRACT

Mucocele is a common lesion of the oral mucosa that results from an alteration of minor salivary glands due to a mucous accumulation causing limited swelling. Two histological types exist - extravasation and retention. Clinically they consist of a soft, bluish and transparent cystic swelling. This report presents a eight year old female patient having mucocele on lower lip. Treatment performed was surgical removal as she suffered difficulty in mastication & speech. For this reason it was decided to deliberate the clinical characteristics of mucocele, and their treatment to aid for decision-making in daily clinical practice.

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INTRODUCTION

Mucocele is a common lesion of the oral mucosa that results from an alteration of minor salivary glands due to a mucous accumulation causing limited swelling. Mucoceles (Mucocyst and coele-cavity), are cavities filled with mucus. They are one of the most common benign soft tissue masses that occur in the oral cavity (Gupta Bhavna *et al.*, 2007). Mucoceles are traumatic in origin. They are most commonly found on the lower lip, lateral to the midline. They are rarely seen on the upper lip, retro molar pad or palate (Yamasoba *et al.*, 1990). They may occur at any age, but are seen most frequently in the second and third decade of life. These lesions have no sex predilection and occur more frequently in children, adolescents and young adults (Kheer Supriya *et al.*, 2010). Mucoceles can be single or multiple often rupturing and leaving slightly painful erosions that usually heal within few days (Ata-Ali *et al.*, 2010). They are either the extravasation type or the retention type.

The mucous extravasation phenomenon is the term used when there is spillage of mucin into the connective tissue around the gland.

The term mucous retention cyst is used to describe a cyst with retained mucin which is lined by ductal epithelium,

appears due to a decrease or absence of glandular secretion produced by blockage of the salivary gland ducts (Guimarães *et al.*, 2006).

Case report

A 10 year old male child reported to the Department of Pediatric and Preventive Dentistry in SMBT Dental College & Hospital Sangamner, Maharashtra.



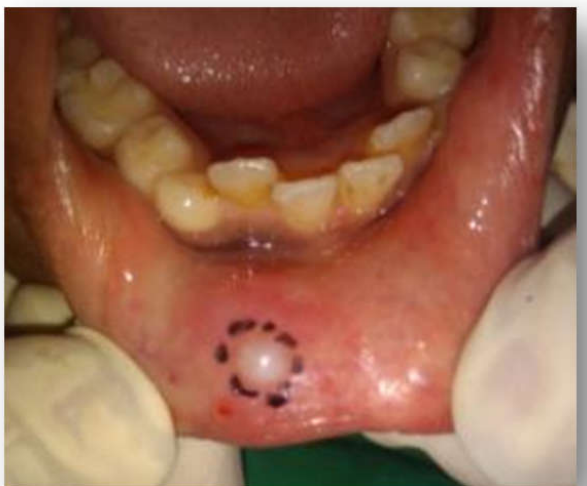
He came with a chief complaint of painless swelling on right side of lower lip.



The history of present illness consisted of swelling in inner aspect of lower lip in relation to both central incisors region since 1 month seen in the inner aspect of lower lip against teeth #82 and #83 region.



A detailed history elicited from the accompanying parent showed etiology to be trauma from lip biting. The growth was of negligible size when the patient first noticed it, but had grown rapidly over the past one week to attain the present size. Patient gave history of trauma one month ago while mastication. The patient's medical and family history was not significant. The child was observed nonchalantly to see whether lip biting or sucking is present as a habit. Clinical examination revealed the overlying mucosa was normal. Swelling was soft, fluctuant, palpable and non-tender with no increase in temperature, circular in shape measuring roughly 0.5x 0.5 cm² in size placed in the inner aspect of labial mucosa of the lower lip.



The patient did not have any difficulty in speech. The child had mixed dentition with stains and no obvious malocclusion. The lab investigations like HB, TLC and DLC were conducted and the values were found to be normal. The Final diagnosis was formulated as a Mucocele on the basis of the history of the Lip biting habit, clinical features and histopathological findings. The treatment planning consisted of the surgical removal of the lesion. Excision of the growth was performed under local anaesthesia. The surgical site was irrigated with povidone iodine - saline solution and closed primarily with 3-0 silk sutures. All post-operative instructions were given and analgesics were prescribed. An incision was placed vertically; therefore splitting the overlying mucosa and separating the lesion from the mucosa.



The Mucocele was resected from the base so that chances of reoccurrence are less.



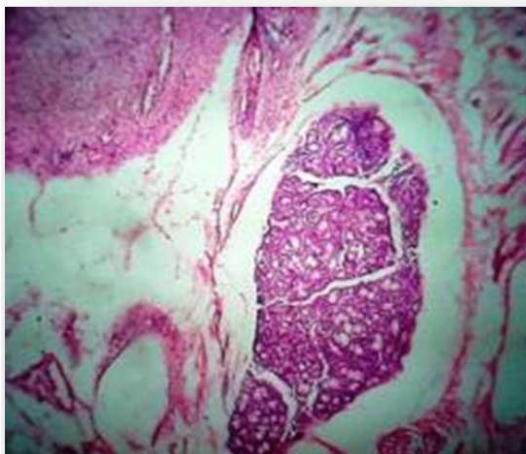
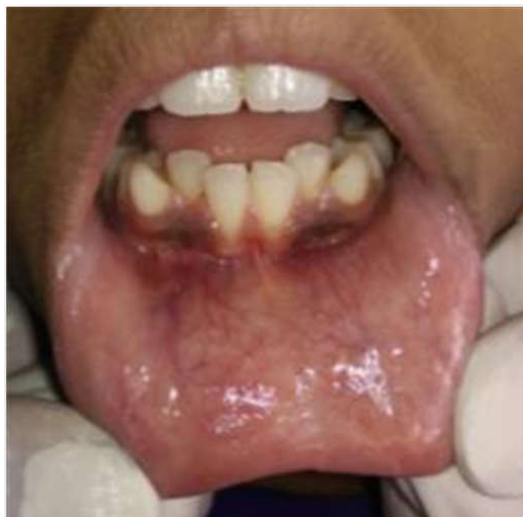
The specimen was placed in 10% formalin and sent for histopathological examination.



Sutures were placed. Regular recall and checkup for the reoccurrence of the lesion was done.



One week later the sutures were removed, with normal healing being observed.



Histopathology

Microscopically Mucocele showed a cystic cavity containing eosinophilic mucinous material and was lined by compressed fibrous tissue as well as granulation tissue with fibroblasts, few blood vessels and acute and chronic inflammatory cells. Minor salivary gland ducts were also present in the proximity to the cavity; few of them were filled with mucinous material.

DISCUSSION

Mucoceles may be located either as a fluid filled vesicle or blister in the superficial mucosa or as a fluctuant nodule deep within the connective tissue. Mucoceles appear as discrete, small, translucent, soft, painless swelling of the mucosa ranging from normal pink to deep blue in color. The development of Mucoceles usually depends on the disruption of the flow of saliva from the secretory apparatus of the salivary glands (Martin *et al.*, 2001). 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. Mucoceles have no age predilection but mainly occur in the children and young adults due to more chances of trauma. The lower lip is reported to be the most common site where the maxillary canine impinges on it (Anastassov *et al.*, 2000). Less common sites for the occurrence are buccal mucosa, anterior lateral tongue, floor of mouth. In our case the site of the lesion is lower lip. The patient may relate a history of trauma or a habit of lip biting. These vesicles rupture spontaneously and leave ulcerated surface that heals within a few days. Their deep blue color results from tissue cyanosis and vascular congestion associated with the stretched overlying tissue and translucent character of the accumulated mucin beneath (Baumash, 2003). The variation of the color depends upon the size of the lesion, its proximity to the mucosal surface and the elasticity of the overlying tissue. Histologically, mucocele are of two types mucous extravasation and mucous retention phenomena, depending on presence of epithelial lining (Layfield and Gopez, 2002; Marcushmar *et al.*, 1997). In children prevalence of mucous retention phenomena is low due to inability of ductal structure to contain an exaggerated accumulation of secretion. Whereas as mucous extravasation is common in children because extravasated saliva is first surrounded by inflammatory cell followed by granulation tissue composed mainly of fibroblast due to absence of epithelial lining, this phenomenon is categorized as a pseudocyst or false cyst (Martin *et al.*, 2001).

Diagnosis is mainly based on clinical findings; The appearance of mucoceles is pathognomonic and location of the lesion, history of trauma, rapid appearance, variations in size, bluish-color, and the consistency are some of the important factors to be considered before the final diagnosis are made. Literatures showed oral habits such as lip biting/sucking is one of the etiologic factors for the oral lesions such as irritation fibroma and mucocele (De Camargo Moraes *et al.*, 2009; Tran and Parlette, 1999). The various differential diagnosis are Blandin and Nuhn mucocele, Benign or malignant salivary gland neoplasm, Oral Hemangioma, Oral Lymphangioma, Venous varix, Soft irritation fibroma, Gingival cyst, Soft tissue abscess. Superficial mucoceles may be confused with Cicatricial pemphigoid, Bullous lichen planus and Minor aphthous ulcers. The history, clinical findings and

histopathological evaluation lead to the diagnosis of a Superficial Mucocele. The localization and determination of the origin of the lesion can be done by Computed tomography scanning and magnetic resonance imaging. Surgical excision with removal of the involved accessory salivary gland has been suggested as the treatment both the Mucocele are treated in same manner. Acc to Pedron *et al*, mucocele can be treated by conventional surgery, cryo therapy, carbon dioxide laser surgery or Nd:Yag laser vaporization (Anastassov *et al.*, 2000). The diode laser can be useful if the lesion contains a vascular area which could result in post treatment hemorrhage. Fibrotic lesions or lesions which do not contain any pigment may be more effectively removed using the Erbium laser. Small mucocele can be removed with marginal glandular tissue but in case of large mucocele marsupialization can be done prevent vital structures primarily labial extension of mental nerve (Baurmash, 2003). Reoccurrence can be avoided by removing adjacent surrounding glandular acini and removing the lesion down to the muscle layer. Special care should be taken to avoid injury to adjacent glands and ducts while placing sutures as this also causes reappearance.

Conclusion

Mucocele are one of the most common soft tissue lesions of the oral cavity which cause distress and discomfort to the patient. Out of many advanced treatment modalities simple surgical excision with care is the treatment of choice that can relieve the patient fear and anxiety.

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