CASE REPORT

Oral Mucocele : A Case Report

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Abstract

The Mucocele or Mucus retention phenomenon is a salivary gland lesion of traumatic origin, formed when the main duct of a minor salivary gland is torn with subsequent extravasation of the mucus into the fibrous connective tissue so that a cyst like cavity is produced. 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.


Key words: Mucocele, Cyst, Salivary gland, Mucus, Extravasation, Retention phenomenon

Introduction

Mucoceles (Mouco-mucus and coele-cavity), are cavities filled with mucus1. They are one of the most common benign soft tissue masses that occur in the oral cavity. Mucoceles are traumatic in origin. They are most commonly found on the lower lip, lateral to the midline2. They are rarely seen on the upper lip, retro molar pad or palate. They may occur at any age, but are seen most frequently in the second and third decade of life3. These lesions have no sex predilection and occur more frequently in children, adolescents and young adults. Mucoceles can be single or multiple often rupturing and leaving slightly painful erosions that usually heal within few days4. 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 epithelium5.

Case report

A 10 year old female child reported to the Department of Pediatric and Preventive Dentistry in Saraswati Dental College Lucknow, U.P India. She came with a chief complaint of painless swelling on right side of lower lip (Fig.1). The history of present illness consisted of swelling in inner aspect of lower lip in relation to right central incisor region since 2 to 3 months. A detailed history elicited from the accompanying parent showed etiology to be trauma from lip biting. The

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child was observed nonchalantly to see whether lip biting or sucking is present as a habit. Examination of swelling showed it to be oval in shape, soft, fluctuant, palpable with no increase in temperature. It was blue in color and symptomless. The lesion was 1cm in diameter and superficially placed in the inner aspect of labial mucosa of the lower lip (Fig.1).

The patient did not have any difficulty in speech. The child had mixed dentition with calculus and no obvious malocclusion. The lab investigations like HB, TLC and DLC were conducted and the values were found to be normal. The differential diagnoses were Oral ranula, Oral lymphangioma Oral haemangioma and Minor aphthous ulcers. 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. EMLA was applied for 5 minutes to attain psychological and pharmacological benefits which were followed by local anesthesia. An incision was placed vertically (Fig 2); therefore splitting the overlying mucosa and separating the lesion from the mucosa.

The Mucocele was resected (Fig 3) from the base so that chances of reoccurrence are less, sutures were placed (Fig 4). Regular recall and checkup for the reoccurrence of the lesion was done.

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. (Fig. 5)

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. 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. 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. 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. 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. 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. According to Pedron et al, mucocele can be treated by conventional surgery, cryo therapy, carbon dioxide laser surgery or Nd:Yag laser vaporisation. 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 marsupilization can be done prevent vital structures primarily labial extension of mental nerve. EMLA is effective as a Pediatric local anesthesia and for minor soft tissue surgical procedures. 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.

References

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