

Surgical Excision of Mucocele in the Lower Lip Region - A Case Report

Dr. Saswati Sarmah*, Dr. Roopa D A^{1*}, Dr. Saranik Sarkar*, Dr. Rahul Katiyar*

¹Professor and HOD,

*Post Graduate Student, Department of Periodontology, Rama Dental College Hospital and Research Centre, Kanpur

Corresponding Author: Saswati Sarmah

ABSTRACT

Mucocele is defined as a mucus-filled cyst that may appear in the oral cavity, appendix, gall bladder, paranasal sinuses, or lacrimal sac. It results from accumulation of mucus due to alteration in the minor salivary glands. A 23 yrs old male patient reported with a mucocele on the left lower lip area, noticed 3 months back. The lesion was excised with scalpel. The patient was reviewed after 3 months. No postoperative complication or recurrence of the lesion was observed. The diagnosis of the lesion was based on the clinical and histological examination.

Keywords: mucocele, surgical excision, minor salivary gland, marsupialisation, histocytes

INTRODUCTION

Mucocele is the most common disorders of the minor salivary glands typically presenting as single bluish or translucent asymptomatic nodules, especially on the lower lip. [1]

On the basis of their microscopic characteristics, these lesions can be classified as mucous retention or mucous extravasation cysts, former being characterized by the presence of epithelial tissue while later by a covering with granulation tissue. [2]

Mucous extravasation cyst is generally regarded as being of traumatic origin, such as lip biting while the mucous retention cyst results from obstruction of the duct of a minor or accessory salivary gland. [3] Extravasation mucoceles account for over 80% of all mucoceles and are more common in individuals under 30 years of age. In contrast, retention mucoceles are less

frequent and are seen particularly in elderly patients. [4]

On rare occasions, mucoceles are seen on the upper lip, retromolar pad and palate. Though there is no specific age for mucocele to appear, but they are usually found in 2nd and 3rd decade of life. [5] This lesion has no sex predilection and occurs more frequently in children, adolescents and young adults. Mucoceles appear as discrete, small, translucent, soft, painless swelling of the mucosa ranging from normal pink to deep blue in color. Tissue cyanosis and vascular congestion associated with stretched overlying tissue and the translucency of the accumulated fluid beneath results in the deep blue colour. [6]

The characteristics features of mucocele are discrete, small, translucent, soft, painless swelling of the mucosa with a color variation of normal pink to deep blue. Deep blue color is due to tissue cyanosis and vascular congestion, which is a result of stretching of overlying tissue and the translucency of the accumulated fluid. Minor salivary glands are most frequently associated with mucocele formation. They appear as a fluctuant, bluish, non-tender, submucosal swelling with a normal overlying mucosa. Due to higher incidence of mechanical trauma in the lower lip region, the chance of mucocele formation in this region is very high. [7]

CASE REPORT

A 23 years old male visited the department of Periodontology, Rama Dental College Hospital and Research Centre,

Kanpur with the chief complaint of localised swelling in the left lower lip. The patient noticed a small, localized vesicle which has reached to the present size within 3 months. No pain was there and patient gave no history of fever or malaise also.

On clinical examination, the mucosal swelling was 7mm in length and 4mm wide. The lesion appeared as vesicular, soft, oval shaped with a sessile base. The surface of the lesion had bluish translucent hue. Based on the clinical appearance and history, provisional diagnosis of mucocele was made. The lab investigations like HB, TLC and DLC were carried out before the excision and the values were found to be normal.

After patient's consent for the procedure was obtained, presurgical screening was performed. 2ml of anaesthetic solution was infiltrated. Under local anesthesia, surgical excision of lesion was done using scalpel blade and sutures were placed. Specimen was sent for histopathological analysis that confirmed the diagnosis. Patient was recalled at 1day and 1 week to check for wound healing. The patient presented with uneventful healing. No post operative oedema or post bleeding was reported.

The patient was reviewed after 3months. No postoperative complication or recurrence of the lesion was observed.



Fig 1: PRE OPERATIVE



Fig 2: DURING PROCEDURE



Fig 3: AFTER EXCISION



Fig 4: AFTER SUTURING



Fig 5: 3 MONTHS POST-OPERATIVE

HISTOPATHOLOGICAL APPEARANCE

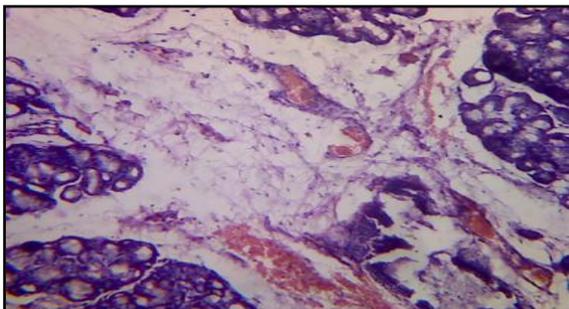


Fig 6: Histopathological Appearance

The mucocele shows an area of spilled mucin surrounded by a granulation tissue response with numerous foaming histocytes. The adjacent minor salivary gland containing chronic inflammatory cell infiltrate and dilated ducts are seen.

DISCUSSION

Mucocele can appear either as a fluid filled vesicle or blister in the superficial mucosa or as a fluctuant nodule deep within the connective tissue. There is a high chance of recurrence of mucocele especially after draining the inspissated mucin from the superficial lesions. The surface of long standing lesions may show fibrosis.^[9]

Disturbance in the free flow of saliva from the secretory apparatus of salivary gland is the most common cause of developing mucocele. Traumatic ductal insult, such as crush type injury and the rupture of excretory duct of minor salivary gland causes extravasation of mucus into the adjacent soft tissue, which leads to the formation of mucocele. Another possible mechanism is the severance of acinar structure by hypertension from ductal obstruction.

Mucocele are painless, asymptomatic swellings with a rapid onset of progression and a fluctuation in size. The patient may relate a history of recent or past trauma to the mouth or face, or the patient may have a habit of biting the lip. Tongue thrusting habit increases the severity of lesions present on the anterior ventral surface of the tongue. In addition to trauma, patients with superficial mucoceles usually

report small fluid filled vesicles on the soft palate, the retromolar pad, the posterior buccal mucosa, and, occasionally, the lower labial mucosa. Generally, small and superficial mucoceles do not require treatment because they often heal after spontaneous rupture. However, excision is the treatment of choice in most of the cases. The lesions can be completely excised, including the associated salivary gland tissue as well as any marginal glands, before primary closure, reducing the incidence of recurrence. Ranulas can be treated by marsupialization, but there are high chances of recurrence of extravasation type of mucocele. So, in most cases, the lesions are treated by excision, including the sublingual gland.^[10]

Mucocele are a fairly common oral pathological condition in children. Although not associated with significant morbidity. They can be the cause of discomfort. Although the recurrence rate is reported to be about 14%,^[8] definitive treatment often involves excision of the minor salivary glands.

Differential diagnosis of mucocele are Blandin and Nuhn mucocele, Ranula, Oral Hemangioma, Benign or malignant salivary gland neoplasms, Oral Lymphangioma, Lipoma, Venous varix or venous lake, Soft irritation fibroma, Gingival cyst in adults, Oral lymphoepithelial cyst, Soft tissue abscess, Cysticercosis (parasitic infection), Bullous lichen planus and Minor aphthous ulcers. Superficial mucoceles may be confused with Cicatricial pemphigoid.

The present case report had no systemic involvement although the lesion was grown larger in size in a short duration. Hence histological examination was conducted to rule out the diagnosis.

The lower lip mucocele can be treated by a number of approaches. These include excision by a scalpel, laser ablation (co2, Er:Cr:YSGG), electrosurgery, cryosurgery, medication (gamma – linolenic acid[GLA]), micro-marsupialization and watchful watching if the lesion is not

problematic for the patient. This last approach can be used for superficial mucoceles. Generally, small and superficial mucoceles do not require treatment because they often heal after spontaneous rupture. Excision is the most common choice of treatment. Complete excision of the lesion along with salivary gland tissue and marginal glands reduce the chances of recurrence.^[6]

Large lesions may be marsupialized to prevent significant loss of tissue or to decrease the risk for significantly traumatizing the labial branch of the mental nerve. Moderate-sized lesions with thick fibrous wall may be treated by dissection. Adjacent minor salivary glands must be removed during surgery.

In this case report we used surgical excision of the mucocele with scalpel. The patient had no complains of bleeding, pain, swelling after 24 hrs. Patient was comfortable with no adverse effect of laser therapy. Patient was recalled after 15 days, excellent healing without scar formation was observed. The patient was reviewed for 3months. No postoperative complication or recurrence of the lesion was observed.

CONCLUSION

Management of mucocele is a challenging task due to high chances of recurrence of such case. Surgical excision with dissection of surrounding and contributing minor salivary gland acini proved to be successful with least recurrence. Simple surgical excision is the treatment of choice, and when done with care, is considered the best treatment alternative.

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