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Clinical Case Report on Oral Mucocele: Presentation, Diagnosis, and Management

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Abstract: ***Mucocele is one of the most common salivary gland disorders and can occur in various locations, including the oral cavity, gallbladder, appendix, lacrimal sac, or paranasal sinuses. These lesions typically arise from the accumulation of mucus, often triggered by trauma, habitual lip - biting, or dysfunction of the minor salivary glands. While mucoceles can appear anywhere in the oral cavity, the lower lip is the most common site of occurrence. They can affect individuals of all age groups but are most frequently observed in younger patients, with no gender predilection. This report discusses a case involving a young adult with a mucocele of the lower lip, its clinical presentation, surgical management, and histopathological findings. The case emphasizes the importance of early diagnosis and effective treatment to prevent recurrence.***

Keywords: oral mucocele, salivary gland disorders, case report, surgical excision, histopathology

1. Introduction

A mucocele is defined as a mucus - filled blister that can appear in the oral cavity, appendix, gallbladder, paranasal sinuses, or lacrimal sac [1, 2,]. The term "mucocele" originates from the Latin words mucus (mucus) and coele (cavity). It is one of the most common salivary gland lesion observed in the oral cavity. [3] resulting from the accumulation of mucus due to alterations in minor salivary glands [3, 6].

Mucoceles are common salivary gland disorders and are considered the second most frequent benign soft tissue tumors of the oral cavity [5]. They are characterized by the collection of mucoid material, appearing as rounded, transparent, soft, and fluctuant asymptomatic swellings with well - defined margins. These lesions have a rapid onset and can vary in size from a few millimeters to several centimeters.

Mucoceles are classified into two types:

1) Mucous Extravasation Mucocele: Caused by the leakage of mucous material from damaged salivary gland ducts or acini into surrounding tissues, typically due to trauma or lip - biting.
2) Mucous Retention Mucocele: Occurs due to obstruction of a salivary gland duct caused by a sialolith or dense mucosa.

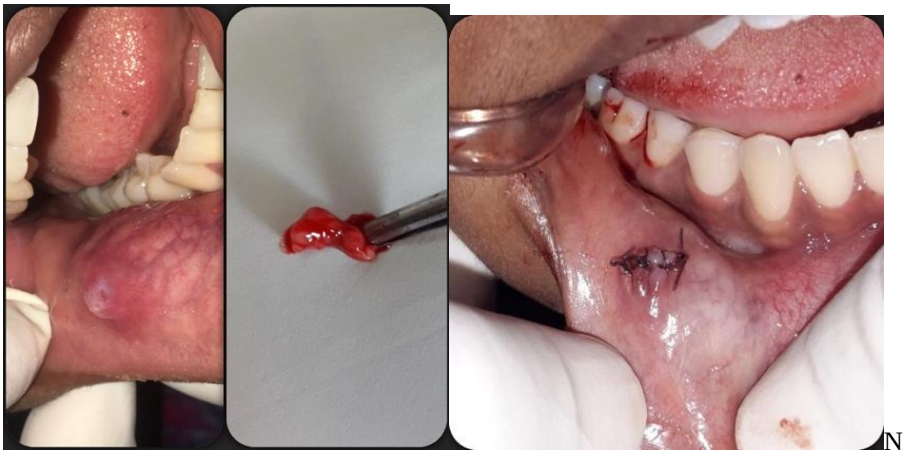
Clinically, both types appear similar. Mucoceles most commonly occur on the lower labial mucosa but can also appear on the buccal mucosa, tongue, palate, retromolar pad, or floor of the mouth. Mucoceles on the floor of the mouth resemble the underbelly of a frog and are referred to as ranula.

2. Case Report

A 21 - year - old female presented with a chief complaint of swelling on the inner part of her lower lip for approximately two months. Initially small, the swelling had gradually increased in size. Clinical examination revealed a soft, rounded, solitary, fluctuant, asymptomatic lesion on the right buccal mucosa. Intraoral examination also identified generalized soft debris and calculus in the lower anterior region. Routine blood investigations were performed and showed values within normal limits.

Based on the history of trauma and clinical features, a diagnosis of mucocele was established. A comprehensive treatment plan was explained to the patient. After obtaining informed consent, treatment began with complete scaling during the first visit. Surgical removal of the lesion was planned for the second visit.

A vertical incision was made using a No.15 Bard - Parker blade. The overlying mucosa was split, and the mucocele was excised at its base. Vertical sutures were placed, and the patient was prescribed antibiotics for five days. Sutures were removed after seven days. The patient was advised to return for regular follow - up visits to monitor for recurrence.



(a) (b) (c)

Figure: (a) mucocele on the lower right buccal mucosa (b) surgically removed mucocele (c) Sutured area

3. Discussion

Mucocele is a common salivary gland disorder that affects individuals of all ages and shows no gender predilection. The etiology is primarily attributed to mucous accumulation due to trauma, salivary gland alteration, or ductal obstruction. Diagnosis is based on clinical findings, including the lesion's pathognomonic appearance, history of trauma, site, onset, consistency, and color.

Conventional surgical excision is the treatment of choice, with an elliptical incision being the most commonly used approach. The lesion should be excised down to the muscle layer, along with surrounding tissues and salivary acini if present. Care must be taken to avoid damaging adjacent salivary glands or ducts while placing sutures. Alternative treatments include marsupialization, cryosurgery, laser ablation, and electrocautery.

Histopathological investigation of the excised specimen is essential to confirm the diagnosis and rule out salivary gland tumors. In this case, histopathological analysis confirmed the diagnosis of mucocele.

This case highlights the prevalence of oral mucoceles and the role of surgical excision as an effective treatment option.

4. Conclusion

Mucoceles are common salivary gland disorders that can be diagnosed clinically. They are predominantly seen in young patients. Histopathological evaluation should always be performed to exclude malignancies. Since mucoceles are asymptomatic, dentists play a crucial role in their diagnosis and management.

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