***Case report***

# MUCOCELE -A CASE REPORT


## ABSTRACT

A mucocele is a prevelant benign lesion of the oral cavity that typically appears when mucus builds up due to the rupture or blockage of tiny salivary gland ducts. According to this case study, a 25-year-old male patient developed a bluish, fluctuating painless growth on his lower lip that grew larger over the course of a week. The clinical examination and history pointed to a mucocele.A mucocele was suggested by the history and clinical examination(1).Under local anesthesia, small salivary glands were surgically excised (3). Histopathology were suggestive of a mucocele.(6) Surgical excison of minor salivary glands was performed underlocalanesthesia(3).Histopathological evaluation confirmed the diagnosis of a mucocele. The patient showed uneventful healing with no recurrence during the follow-up period. This report highlights the clinical presentation, differential diagnosis, and effective management of oral mucoceles. Our case report aimed to explain the history, clinical features and surgical removal of mucocele using a simple surgical technique, which helps to enhance the knowledge of the general dental practitioner.


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## INTRODUCTION

Mucoceles are one of the most frequuent benign soft tissue masses that occur in the oral cavity (1).It is described as 'mucus-filled' cyst that may present in oral cavity. It can cause accumulation of mucus due to changes in the minor salivary glands. Mucocele is 17 the most prevalent condition affecting salivary glands in the oral cavity(1,2).There are two kinds of mucocele that can develop in the oral cavity: extravasation and retention. While retention-type mucoceles are extremely uncommon in children, extravasation mucoceles are frequently observed. A damaged salivary gland duct that allows saliva to leak into the soft tissues surrounding the gland causes extravasation mucocele. Three stages of evolution are experienced by these extravasation mucoceles. Mucus diffusely leaks into the connective tissues from the excretory duct during the first phase. Granuloma formation happens in the subsequent phase, known as the resorption phase, as a result of the foreign body reaction. During the last stage, a pseudocapsule—which lacks an epithelial lining—forms around the mucosa. Retention mucocele results from blockage of the salivary gland ducts, which reduces or eliminates glandular output.Mucoceles are transparent, blue, and soft swellings that often go away on their own. Vascular

congestion, cyanosis of the tissue above, and fluid buildup below are the causes of the blue color. However, the lesion's size, proximity to the surface, and the flexibility of the surrounding tissue can all affect pigmentation.

CASE PRESENTATION

A 25years old male patient came to the " department of oral medicine and radiology" report with complaints of a swelling in his lower lip for the past 6 months. Patient was apparently normal before 6 months and On eliciting history. Patient initially noticed a small swelling in his lower lip region which was initially small in size. The Swelling was filled with clear water like fluid that rupture on it's own before 2 months . It gradually progressed to it's current size . No evidence of pain and No evidence of lip biting habit . No relevant medical history . First dental visit. Patient brushes onces everyday using toothbrush and tooth paste.

On examination of the lesion, a solitary growth of size approximately 0.5 cm in diameter is seen in the left labial mucosa located medio laterally 0.2 mm lateral to the midline and In relation to 31 32 region 1 cm away from the left commissure of the lips , superio inferiorly 1 cm above the left anterior labial vestibule and 1 cm from the vermillion border of lower lip. It is roughly oval in shape appears pale pink in color,surface appears smooth and regular.

On intra-oral examination, dental caries in 17 27 36 46 47 .There was widespread dental plaque and calculus in the lower anterior region .The results of the routine blood tests fell within the usual range.

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## A. Preoperative stage

B. Excisional biopsy was performed under local anaesthesia inrelation to left mandibular labial mucosa

C.Post-surgical excision

Fig .1 Intra-oral surgical experiments

INVESTIGATION

Advised haematological investigation:
Bleeding time:02 minutes 30 seconds.
Clotting time:4minutes 45 seconds.
Haemoglobin:11.8 gm%.

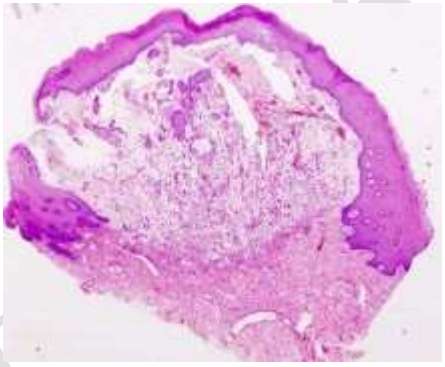
Based on clinical characteristics, the case was ultimately determined to be a mucocele in the lower labial mucosa. The patient was informed and given a plan for the treatment. During their first clinical visit, oral prophylaxis was initially administered. The lesion was surgically removed by making a vertical incision while under local anesthesia. This caused the mucosa to split over, and the mucocele was then removed from the base. As a result, the likelihood of recurrence is reduced. After seven days of intermittent monitoring, the suture was put in place and taken out. Patients were told to attend routine recall visits and to be examined every month; for more than a month, there was no recurrence.

Surgical excision: Under local anesthetic, the mucocele should be completely removed.(One cartridge of 2% lidocaine and 1:100.000 epinephrine) The nearby little salivary glands that are feeding the lesion should also be removed to prevent recurrence. (6)Restorative treatment done in 17 27 26 46 47. Sample should be send for Histopathology.Histopathologic report revealed a Hematoxylin and Eosin stained section showing given soft tissue specimen reveals hyperplastic parakeratinized/non-keratinized stratified squamous epithelium. The underlying connective tissue is seen as a delicate fibrocellular matrix with spaces, numerous capillaries of different sizes, and a dilated severed duct is also seen. Inflammatory cell infiltration including both acute and chronic (lymphocytes and plasma cells), macrophages/mucinophages, eosinophils, and few mast cells are also noticed. The deeper connective tissue areas shows aggregates of mucous minor salivary glands with dilated ducts, blood vessels of varying sizes with extravasated RBCs, and a few adipocytes.

A. Excised Mucocele in the left mandibular labial mucosa

B. After suturing

## Histological features



## POST-OPERATIVE

Fig .2 Surgical excision

## Follow up

For over 30 months, our patient underwent thorough reviews at 3-month intervals. The prognosis was favorable throughout review, and no recurrence was discovered.

## DISSCUSSION

A common oral mucosal lesion that may affect the general population is mucocele. A accumulation of mucus can cause small salivary glands to undergo alterations, which might result in mucocele. Fluid escaping from ducts or acini to surrounding tissue is the cause of extravasation mucocele. (8,9) The small salivary glands are frequently home to this kind of mucocele. Saliva may seep into the surrounding submucosal tissue as a result of physical damage. The most frequent etiology of mucocele is trauma.
Mucoceles are frequently caused by biting the lip or buccal mucosa. Lip- sucking, intubation damage, and chronic inflammation from smoking or tobacco usage are other factors. Usually appearing as dome-shaped mucosa swellings, mucoceles can vary in size from a few millimeters to several centimeters. gives the swelling a bluish transparent tint, while darker mucoceles might be typical. It is characterized by fluctuations. Mucocele mostly common seen in children and young adults .Perhaps because younge people are more likely to experience trauma that induces mucin spillage.Location: The mucocele most frequently occurs on the lower lip.The floor of the mouth (ranulas: 5.8%) is a less frequent location; not a single example was identified from the upper lip. . Salivary gland tumors, on the other hand, are quite uncommon in the lower lip but relatively uncommon in the upper lip.An oral mucocele, a type of mucous cyst, is usually diagnosed through a physical examination of the mouth, where its appearance can be quite characteristic. If the diagnosis is unclear, or if the mucocele is unusual, further tests like ultrasound or biopsy might be needed.

Oral mucocele must be distinguished conditions such as" lipoma, oral hemangioma, oral lymphangioma,pyogenic granuloma, and benign or malignant salivary gland neoplasms". The superficial mucoceles can be mistaken for bullous lichen planus, cicatricial pemphigoid, etc.[5,12]

Treatment Options:

Observation: Many mucoceles resolve spontaneously within a few weeks or months.Laser Ablation: A laser is used to vaporize the cyst tissue. Cryotherapy: surgery with cryoprobe is also helpful in managing the mucocele(3).Extreme cold is applied to freeze and destroy the mucocele. Intralesional Corticosteroids: Injections of steroids are used to reduce inflammation and shrink the cyst.Micromarsupialization: A small opening is created in the cyst, allowing it todrain. Other Methods: Electrosurgery and topical steroids are also used. (12)

When to Seek Treatment:

If the mucocele persists beyond a few weeks or months.

If the mucocele becomes painful or significantly enlarged. If you suspect an infection.

## conclusion

The most prevalent benign lesion, mucocele, is self-limiting and is initially diagnosed based on clinical signs before being definitively diagnosed by histological analysis. (1) The majority of published research revealed that lesion formation was followed by trauma and recurrent lip-biting.(5) The simplest therapeutic option has been complete surgical excision; partial removal of the lesion has been linked to recurrence. Compared to conventional surgical excision, oral mucocele ablation using a $CO_2$ laser provides more predictable outcomes an fewer problems and recurrences (3).For over 30 months, our patient underwent thorough reviews at 3- month intervals. The prognosis was favorable throughout review, and no recurrence was discovered.

# REFERENCE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