



## Case Report

### Mucocele –A Case Report

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#### ABSTRACT

Mucocele is one of the common lesion of oral mucosa encountered that results from an alteration of minor salivary glands. Two histological types exist - extravasation and retention, with different causative factors such as trauma leading to severance of the duct with spillage of mucin into the adjacent connective tissue and obstruction respectively Clinically they consist of a soft, bluish and transparent cystic swelling which normally resolves spontaneously. Treatment frequently involves surgical removal micro marsupialization, cryosurgery, steroid injections and CO2 laser. As mucocele is a common lesion and affects the general population it is stressed to emphasis and share the perspectives of it.

**Key words:** Retention cyst, Extravasation phenomenon, mucocele.

#### Introduction

Mucocele is defined as mucus-filled cavities, which can appear in the oral cavity, appendix, gallbladder, paranasal sinuses, and lacrimal sac. The term mucocele is derived from a Latin word, mucus and cocele means cavity. <sup>(1)(2)</sup> Mucocele is the 17<sup>th</sup> most common salivary gland lesions seen in the oral cavity <sup>(3)</sup> which result from accumulation of liquid or mucoid material due to the alteration in the minor salivary gland which causes limited swelling. It is characterized by a round, well-circumscribed, transparent swelling which is bluish tinged and is variable in size. Mostly they are soft in consistency and fluctuate on palpation. It is usually painless and has the tendency to relapse.

Mucocele is subdivided into two types: 1. Mucus extravasation type, which is regarded as being a result of trauma, such as lip biting. 2. Mucus retention type, which results from the obstruction of the duct of a minor and/or accessory salivary gland <sup>(1,4 & 5)</sup> Mucocele manifest within few days after minor trauma with diameter ranging from few millimeters to few centimeters, and persist unchanged for months unless it is treated. If not intervened, an episodic decrease and increase in size may be observed, based on rupture and subsequent mucin production <sup>(1,6)</sup>

#### Case Report

A 18 years female patient reported with the chief complaint of swelling in the lower lip for the past 6 months. Patient was apparently normal 6 months back after which she noticed a small swelling in the lower lip which was

initially small in size and progressed to the present size and not associated with pain. Patient gives history of lower lip biting occasionally. On inspection, a soft tissue swelling measuring 2 X 2 cms noticed in the lower lip (labial mucosa) in relation to 41 and 42. Mediolaterally extending from 41 till 42 and superioinferiorly 2 cms from the vermilion border to 2cm from the labial sulcus.. It is oval in shape, pink in colour, well defined and no surface changes noticed. On palpation, the inspeactory findings such as borders and extent of the growth are confirmed. The swelling is soft and fluctuant and non tender on palpation.

**Figure 1:** Dome shaped translucent swelling on the lower lip



**Grossing features**

**Figure 2:** Entire gross specimen measuring 1x1x1 cms grey in colour with lobulated surface.



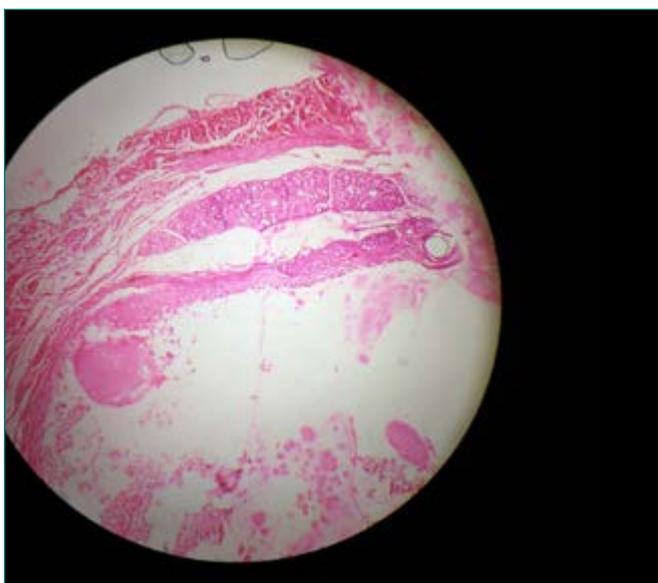
**Figure 3:** Cut surface appears translucent and pale in colour surrounded by capsule



**Microscopic features**

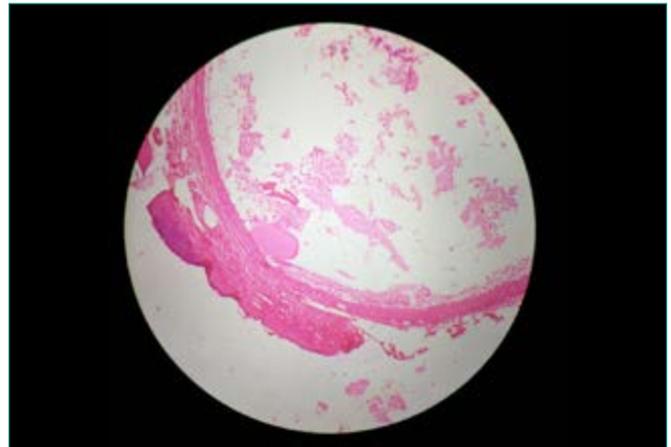
The microscopic features exhibited connective tissue with spilled mucin infiltrated with inflammatory cells such as lymphocytes and plasma cells. Adjacent minor salivary glands predominantly of serous type are also present.

**Figure 4:** Low power view exhibiting the spillage of mucin and minor salivary gland surrounded by fibrous capsule



Dense fibrous connective tissue resembling a capsule is also appreciated. Based on these findings and correlating with the clinical findings, the histopathology is diagnosed as Mucocele (Extravasation phenomena type)

**Figure 5:** Low power view exhibiting the capsule, spillage of mucin and inflammatory cells



**Etiopathogenesis**

There are two etiological factors proposed that is responsible in mucocele. One is trauma related (extravasation ) and other cause is obstruction of salivary gland ducts (retention). Extravasation mucoceles are caused by extravasation of fluid into the surrounding tissue from the ducts or acini and elicit inflammatory changes. The obstruction type may be due to salivary calculi that causes retention of the saliva hence dilation of the duct. Literature states that among the two types of 95% were extravasation and also it undergoes three evolutionary phases.

1. Mucous spills diffusely from the excretory duct into conjunctive tissues where some leucocytes and histiocytes are found.
2. Granulomas appear during the resorption phase due to histocytes, macrophages and giant multinucleated cells associated with a foreign body reaction.
3. Connective cells form a pseudo capsule without epithelium around the mucosa

**Discussion**

Mucoceles, of minor salivary gland origin, is one of the common mucosal lesion affecting the general population. Trauma and obstruction to the salivary gland duct are the

two main etiological factors responsible for the lesion. There are two types of mucocele which have different etiological factors, that are painless, asymptomatic swellings that have a relatively rapid onset, enlarge and then appear to involute because of the rupture of the contents into the oral cavity or resorption of the extravasated mucus or retention of the mucin. The patient may relate a history of recent or remote trauma to the mouth or face, or the patient may have a habit of biting the lip. The duration of the lesion is usually 3-6 weeks; however, it may vary from a few days to several years in exceptional instances.<sup>(6,8)</sup> Often, an individual may rupture or unroof the vesicles by creating a suction pressure. In such situations the affected individual reports a chronic and recurrent history.<sup>(6,7)</sup>

There are few strong contributing factors that aid in the diagnosis of mucocele such as the appearance, clinical findings; consistency. Literatures suggest that lip biting is one of the common factors responsible that causes mucocele. The role of radiograph has minimal contribution, ruling out for any calcified structure such as sialolith would definitely contribute to the pathogenesis for the type of mucocele especially for the Retention type<sup>(9,10)</sup>. Histopathologically the extravasated type is not lined by the epithelium (pseudo cyst) and in case of retention type (true cyst) it is lined by epithelium. In our case report correlation of the clinical findings, history of lip biting and based on the histopathology the final diagnosis was in favour of Mucous extravasation phenomenon. Moreover positive findings of history of lip biting and histopathologically absence of epithelial lining and with the presence of spilled mucin and granulation tissue it was diagnosed as Mucocele of extravasation type.

Conventional surgical removal is the most common method used to treat this lesion. Other treatment options include CO<sub>2</sub> laser ablation, cryosurgery, intralesional corticosteroid injection, micro marsupialization, marsupialization and electrocautery.<sup>(6,7,8)</sup> The importance

of this article is clinically the lesion is mistaken for benign salivary gland tumors and salivary gland duct cyst that requires different treatment plan.

## Conclusion

Mucocele are mostly benign and self-limiting nature, diagnosed based on clinical findings followed by definitive diagnosis based on the histopathological investigation. Trauma and habitual lip biting is proposed to be one of the etiological factors. Hence the importance of the lesion may be emphasised as a part of awareness as the lesion is common in general population.

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