Case Report

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# Mucocele of lip: A Case Report & Review

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## ABSTRACT

**Background**: Mucocele is a common lesion of the oral mucosa involving salivary glands and their ducts. They result from traumatic severance of a salivary duct, such as that produced by biting the lips or cheek, pinching the lip by extraction forceps. It widely involves lower lip. We report a case of mucocele in a 33 year old male involving the lower lip and also discuss about the differential diagnosis & treatment modalities.

**Keywords:** Mucocele, mucous extravasation cyst, salivary gland cyst.

## INTRODUCTION

Mucocele is a common lesion of the oral mucosa that results from an alteration of minor salivary glands due to a mucous accumulation. Mucocele involves mucin accumulation causing limited swelling [**1**]. Two types of mucocele can appear- extravasation and retention. Extravasation mucocele results from a broken salivary glands duct and the consequent spillage into the soft tissues around this gland. Retention mucocele appears due to a decrease or absence of glandular secretion produced by blockage of the salivary gland ducts [2].

## CASE REPORT

A 33 year old male patient reported to the Department of Oral Medicine & Radiology, complaining of a painless swelling on lower lip with difficulty in mastication and a pus discharge when it comes between teeth. Physical examination showed him to be healthy with unremarkable medical and family history. There was no abnormality detected during extraoral examination. Intraorally the swelling measured 3cm / 5cm swelling was round and the color was redish blue, overlying skin was bluish white & rough in texture. (Fig 1). On palpation the swelling was non tender fluctuant and compressible watery discharge was noted from punctum on pressing the swelling, it was a movable, round swelling, attached to underlying structures. Excisional biopsy was done & sent to the Department of Oral & maxillofacial Pathology.(Fig 2) The tissue was stained with hematoxylin & eosin stains and the histopathological examination reveals a cystic lumen which is filled with mucin and surrounded by a granulation tissue (figure 3) which is composed of collagen fibers, endothelial cells, chronic inflammatory cells and foamy histiocytes (figure 4) The deeper connective tissue showed normal salivary gland(figure 5) & area of hemorrhage( figure 6). The overall clinical & histopathological examination lead to a final diagnosis of mucocele.

## DISCUSSION

Mucoceles (from the Latin terms mucus, or mucus, and coele, or cavity) are defined as mucus-filled cavities that can appear in the oral cavity, appendix, gallbladder, paranasal sinuses or lacrimal sac [3, 4]

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Etiopathogenesis

Yamasoba et al.[5] highlight two crucial etiological factors in mucoceles: traumatism and obstruction of salivary gland ducts. A study by Bagán et al.[1] considering 25 mucoceles suffered in the general population, showed that 5% were retention mucoceles whereas the other 95% were extravasation. They proposed that extravasation mucoceles undergo three evolutionary phases. In the first phase, mucous spills diffusely from the excretory duct into connective tissue where some leucocytes and histiocytes are found. Granulomas appear during the resorption phase due to histocytes, macrophages and giant multinucleated cells associated with a foreign body reaction. In the final phase connective cells form a pseudocapsule without epithelium around the mucosa.

Fig 1: Photograph showing the round swelling extending from left mandibular canine to second premolar measuring 3cm / 5cm and the color is redish blue, overlying skin is bluish white.

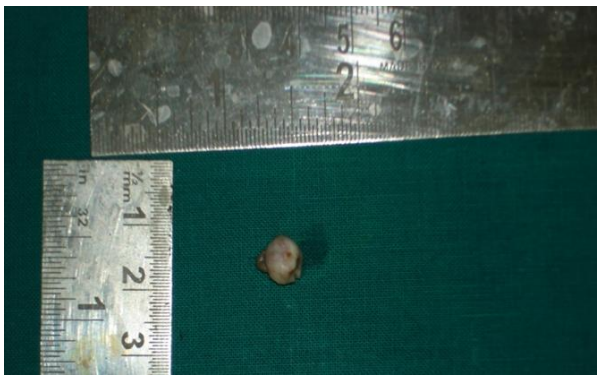

Fig 2: Excised tissue was sent to the Department of Oral & Maxillofacial pathology.

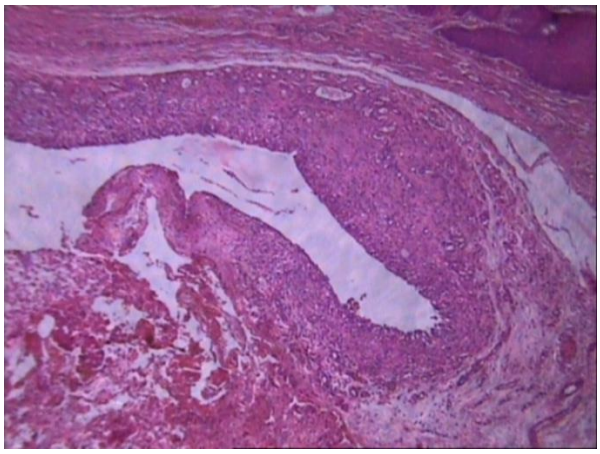

Fig 3: Cystic lumen filled with mucin and surrounded by a granulation tissue (10 X).

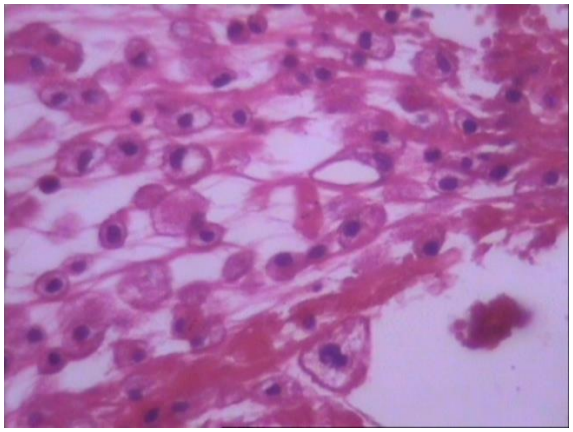

Fig 4: Granulation tissue shows some foamy histiocytes, these foamy histiocytes are nothing but lipid laden macrophages.(40X).

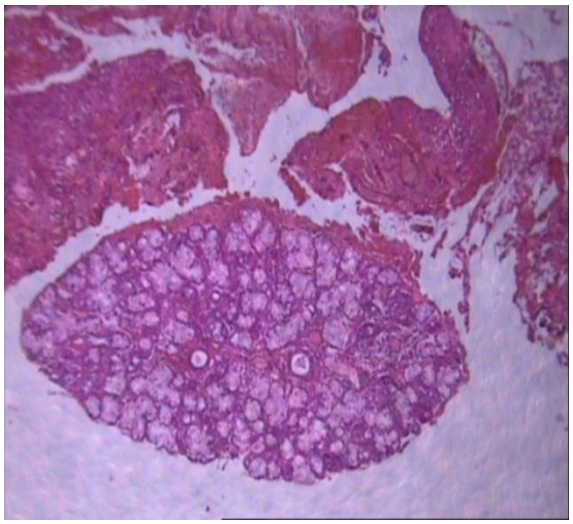

Fig 5: Deeper connective tissue shows normal mixed minor salivary gland (40X).

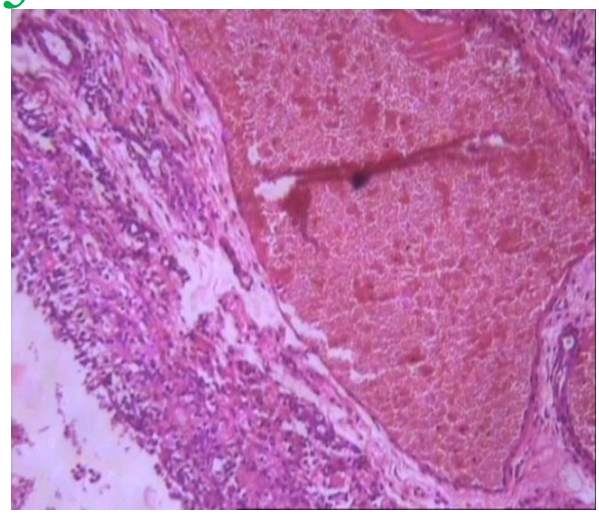

Fig 6: Deeper connective tissue shows area of hemorrhage (40X).

Clinical features

The incidence of mucoceles is generally high, 2.5 lesions per 1000 patients, frequently in the second decade of life [6] and rarely among children under one of year of age. According to many studies.There is no difference between genders [7] there is no clinical difference between extravasation and retention mucoceles. Mucoceles present a bluish, soft and transparent cystic swelling which frequently resolves spontaneously. The blue color is caused by vascular congestion, and tissular cyanosis of the tissue above and the accumulation of fluid below. Coloration can also vary depending on the size of the lesion, proximity to the surface and upper tissue elasticity.[8] Mucoceles can appear at any site of the oral mucosa containing salivary glands.[9]

The two types of mucoceles are more commonly found at different sites. Extravasation mucoceles appear frequently on the lower lip whereas retention mucoceles appear at any other location of the oral cavity. The lower lip is the most frequent site for a mucocele as it is the most probable place for a trauma, especially at premolar level. A study of 312 patients showed 230 lesions on the lower lip (73.7%), with the tongue as the second most common location (15.4%) [10]

Diagnosis

Diagnosis is principally clinical; therefore, the anamnesis should be carried out correctly, looking for previous trauma. The appearance of mucoceles is pathognomonic and the following data are crucial: lesion location, history of trauma, rapid appearance, variations in size, bluish colour and the consistency [11]

Palpation can be helpful for a correct differential diagnosis. Lipomas and tumors of minor salivary glands present no fluctuation while cysts, mucoceles, abscess and hemangiomas do.Hemangiomas can be differentiated by diascopy. [12] A histopathologic study is crucial to confirm the diagnosis and to ensure that glandular tissue is completely removed.

Treatment

Conventional treatment is commonly surgical extirpation of the surrounding mucosa and glandular tissue down to the muscle layer. With a simple incision of the mucocele the content would drain out but the lesion would reappear as soon as the wound heals. Some studies have reported using cryosurgery in treating mucoceles with encouraging results.[13] Some authors have also suggested using intralesional steroid injections.[14] CO2 laser has a high water absorption rate and is well absorbed by all soft tissues with high water content. In addition its effects on adjacent tissues are minimal. These properties make CO2 laser the perfect surgical treatment for oral soft tissues.[15] The key point in avoiding recurrence is to eliminate the adjacent surrounding glandular acini and removing the lesion down to the muscle layer.[16]

## CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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