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Mucocele on Lower Lip: A Case Report

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ABSTRACT

Introduction: The mechanical trauma to the Salivary Glands'(SG) excretory duct causes the most prevalent benign lesion of minor glands named the oral mucocele. The most vital cause for the lesions was the trauma or lip-biting habit that occurs most commonly in the Lower Lip (LL). Mucous extravasation development and mucous retention type were the 2 varieties. The most prevalent one is extravasation type.

Case Report: Here, a case study of a 32-year-old male patient with a painless bulge on the LL's right aspect for the past two weeks, together with a lip-biting history for a 1-month duration was reported.

Conclusion: In any population, Mucocele can be generated. Therefore, if possible, they should be accurately treated and prohibited.

Key Words: Mucocele, Lower lip, Mucous salivary glands, Mucous extravasation cyst, Vital cause, Painless bulge

INTRODUCTION

The accumulation of mucous caused the most prevalent SG lesion named mucocele. Since the LL is more prone to trauma, it happens ordinarily in the LL. Histologically, it may end in the extravasation phenomenon that concludes in duct severance along with mucin spillage into the adjoining Connective Tissue (CT). The most prevalent reason for mucous retention type of cyst is duct blockage.[1] An inflammatory reaction was successfully initiated by the spillage of mucin into the CT. This reaction concluded in the generation of CT composed of granulation tissue, which is a trial to confine the mucin spillage area. Mucin pooling is not lined by epithelial tissue since mucin pooling happens on the far side of the salivary ducts' confinement. Hence it is pondered as a pseudocyst. In 3 evolutionary phases, the reactions to the spilled mucin are articulated to occur.[2,3] From simple surgical excision to micro marsupialization, cryosurgery, steroid injections, CO2 laser, etc., the normal treatment modality varies.[4]

CASE REPORT

A chief complaint of a painless bulge on the LL's right side for 2 weeks was reported to D.Y. Patil University, School of Dentistry, Nerul, Navi Mumbai by a 32-year male patient. A history of LL biting since 1 month back was revealed by the patient. The swelling was found to be initially small which gets enlarged progressively to achieve the current size. The swelling was painless.

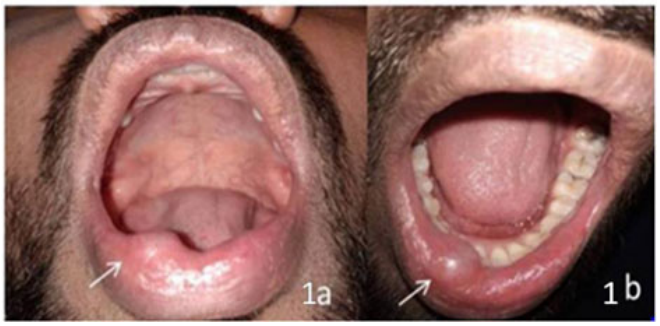

Figure 1: (a) & (b) Pre operative images.

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Figure 2: Post-operative image.

No noteworthy abnormality was exhibited by the extraoral investigation. Approximately 2 cm away as of the lip's commissure, a well-defined pinkish white spherical shaped sessile swelling of size 2.3 cm x 1 cm x 1 cm on the right of the LL was illustrated by the intraoral examination [Figure 1a&1b]. It was non-tender on palpation and soft in consistency. The teeth's generalized attrition was illustrated by the hard tissue investigation. Good oral hygiene was found.

Grounded on the clinical identifications, a Mucocele's provisional diagnosis was done. Under 2% lignocaine local anesthetic solution, the lesion's surgical excision was done [Figure 2]. It was submitted to the Oral and Maxillofacial Pathology Department for histopathologic examination.

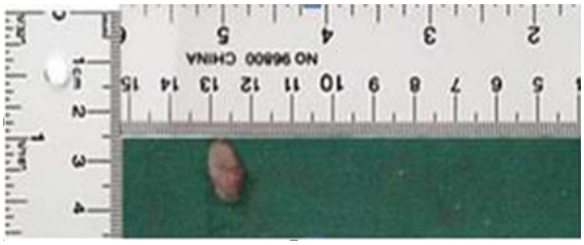

Figure 3: Macroscopic Examination of a tissue.

A single bit of soft tissue specimen, measuring about 0.8 x 0.5 x 0.3 cm in dimension, oval in shape, and white in color was exposed by the microscopic investigation [Figure 3]. Hyperplastic para-keratinized stratified squamous epithelium with an underlying inflamed CT stroma was exhibited by the hematoxylin and eosin-stained sections [Figure 4 a, b, c].

The underlying CT exhibited lesser cystic spaces comprising mucin and mucinophages, surrounded by condensed CT capsules with a moderate distribution of chronic inflammatory cell infiltrates mainly comprising lymphocytes and plasma cells. Numerous engorged blood vessels, with extravasated RBC, were also seen.

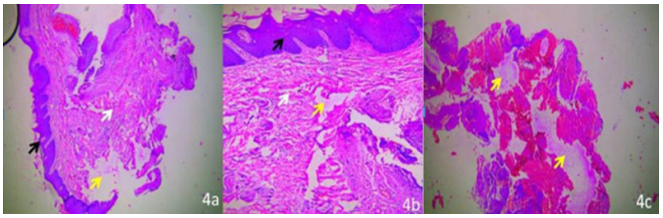

Figure 4: (a, b, c) H&E-stained section shows stratified squamous epithelium (black arrow) and underlying connective tissue (white arrow) and mucous pool (yellow arrow).

CT wall made of granulation tissue surrounded the noticed areas of mucin spillage. Large cells having foamy cytoplasm that resembles macrophages and chronic inflammatory cells were observed in the mucin spillage regions.

The mucous extravasation phenomenon's final diagnosis was given grounded on the histopathological examination.

DISCUSSION

The LL is pondered to be the most often affected region by major reviewers (40% to 80% of all cases) when deeming the mucocele's location in the mouth. The LL is succeeded by the buccal mucosa and mouth floor.[3] The LL is the current case.

Trauma and SG duct obstruction are the '2' major etiological factors that cause mucocele. The extravasation cyst was caused by the trauma; also, the retention type of cyst was caused by duct blockage. Salivary secretion spillage into the surrounding submucosal tissue was caused by physical trauma. In the later stages, owing to the stagnation of secretion, the inflammation may become obvious.

'3' evolutionary phases were undergone by the extravasation mucoceles. Few leukocytes and histiocytes are found in conjunctive tissues into which the mucous diffusively spills from the excretory duct, which is the first phase here. The second phase is the resorption phase where granulomas are formed composed of histocytes, giant multinucleated cells, and macrophages allied with a foreign body reaction.

From the CT, the generation of pseudo capsule around the mucous pool was exhibited in the final phase. A mucous extravasation cyst with multiple areas of mucous pooling was the present case.[5]

A bluish, soft, and clear cystic swelling was presented in Mucoceles that frequently resolves instinctively. Vascular congestion and above tissue's tissular cyanosis and also the accumulation of fluid below caused the blue color. Grounded on the lesion dimension, surface proximity and upper tissue elasticity, the swelling's color can also vary.[3]

As of a few days to 3 years, the lesion may prevail. The minor SGs mucoceles are seldom greater than 1.5 cm in diameter. They are also always superficial. Larger mucoceles are identified in deeper regions along with creating complications in speaking or mastication.

Usually, they're dome-shaped swelling with intact epithelial tissue over it.[6] In our case too, a small finding was observed. The diagnosis of superficial mucocele was done by the history and clinical findings. On reviewing the literature, mucocele, fibroma, lipoma, mucus retention cyst, sialolith, phlebolith, and SG tumor were listed as probabilities by the clinical differential diagnosis. Grounded on their etiology, clinical appearance, consistency, location of incidence, and color, they will be diversified as mucoceles.[7] To verify the diagnosis, a histopathology study is critical. A high amylase together with protein content was exhibited by chemical analysis.

To treat this lesion, the most common model was conventional surgical removal. Carbon dioxide laser ablation, cryosurgery, electrocautery, micro-marsupialization, and intralesional corticosteroid injections, were the alternative treatment choices.[8,9]

Surgical extirpation of the encircling mucous membrane together with glandular tissue right down to the Muscle Layer (ML) is the common conventional treatment. The lesion might be eliminated right down to the ML to diminish the recurrence possibility. All the encircling glandular acini should be eliminated. While inserting the suture, injury to the adjacent gland together with the duct should be discarded. [3,4,6,9]

CONCLUSION

In any population, Mucocele can be generated. Therefore, if possible, they should be accurately treated and prohibited. To prevent mucoceles, the patients are aided by the dentists via diagnosis along with educating and advising them to obtain better treatment for their oral health and to prevent a recurrence.

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