

# Mucocele (Mucus Retention Cyst) On Lower Lip: A Case Study

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**Abstract:** *Mucocele is a common salivary gland disorder that can appear in the lacrimal sac, paranasal sinuses, oral cavity, appendix or gall bladder. These lesions occur due to mucous accumulation resulting from the alteration of minor salivary glands. Lower lip is the most common site of occurrence of these lesions in the oral cavity and most probable cause is trauma or habit of lip biting. Diagnosis is mainly clinical due to its pathognomonic presentation. I am reporting a case of mucocele on a lower lip in a 25 years old male patient treated by conventional surgical excision of the lesion.*

**Keywords:** Lower lip, mucous, salivary glands

## 1. Introduction

Mucocele is defined as a mucus-filled cyst that may appear in the oral cavity, appendix, gall bladder, paranasal sinuses, or lacrimal sac.<sup>1, 2, 3, 4</sup> The term mucocele was derived from a Latin word, mucus, or mucus and coele or cavity.<sup>1, 5</sup> Mucocele is seventeenth most common salivary gland lesion in the oral cavity.<sup>4</sup> It results from accumulation of mucus due to alteration in the minor salivary glands.<sup>3, 6</sup>

Two types of mucocele can appear in the oral cavity, namely, extravasation and retention type. In children, extravasation mucoceles are common and retention type of mucoceles are very rarely found.<sup>7</sup> Extravasation mucocele results from a broken salivary gland duct causing spillage into the soft tissues around the gland. These extravasation mucoceles undergo three evolutionary phases. In the first phase, mucus spills diffusely from the excretory duct into the connective tissues. In the next phase, i.e., resorption phase, because of foreign body reaction, formation of granuloma occurs. In the final phase, there is formation of pseudocapsule (without epithelial lining) around the mucosa.<sup>6</sup> Blockage of the salivary gland ducts causing decrease or absence of glandular secretion causes retention mucocele.<sup>3, 6, 8, 9</sup>

Clinical appearance of both extravasation and retention mucoceles is similar. (Figure 1) Mucoceles present as bluish, soft, and transparent cystic swelling that frequently resolve spontaneously. Blue color is due to vascular congestion, cyanosis of the tissue above, and accumulation of fluid below. However, coloration may vary depending on the size of the lesion, proximity to the surface, and elasticity of overlying tissue. Extravasation mucoceles appear frequently on the lower lip followed by the tongue, buccal mucosa, and palate and are rarely found in the retromolar region and posterior dorsal area of tongue; in contrast, retention mucoceles appear at any site in the oral cavity.<sup>6</sup> When located on the floor of the mouth, these lesions are called ranulas because the inflammation resembles the cheek of a frog.<sup>3, 6, 8, 9</sup> Mucoceles are usually asymptomatic but sometimes can cause discomfort by interfering with speech, chewing, or swallowing. Treatment options include surgical excision, marsupialization, micromarsupialization, cryosurgery, laser vaporization, and laser excision.<sup>4, 5</sup> This article

describes a case of mucocele on lower lip treated by surgical excision method using scalpel blade.(Figure 2, 3)

## 2. Case Report

A 25 years old male came to the Dental OPD with complaint of swelling on the lower lip since 2 months. patient had a history of trauma 2 months back and there was a fracture in the upper left central incisor (Ellis class II fracture) and injury to lower lip for which he got treatment. Swelling was soft, oval, sessile, and painless which was fluctuating in size. Based on the clinical appearance and history, diagnosis of mucocele was made. Under local anesthesia, surgical excision of lesion was done using scalpel blade and sutures were placed. Specimen was sent for histopathological analysis that confirmed the diagnosis. The patient presented with uneventful healing on 3-month follow-up. Figure 4

## 3. Discussion

The incidence of mucoceles in the general population is 0.4–0.9%. There is no gender predilection.<sup>4</sup> The appearance of mucocele is pathognomonic. Location of lesion, history of trauma, rapid appearance, variation in size, bluish color, and the consistency, history, and clinical findings lead to the diagnosis of superficial mucocele. Lip contains adipose, connective tissue, blood vessels, nerves and salivary glands, and hence, pathology of any of these tissues can produce swelling on the lips. Mucocele, fibroma, lipoma, mucus retention cyst, sialolith, phlebolith, and salivary gland neoplasm appear as swelling on the lip. However, these can be distinguished from mucocele based on their clinical appearance, color, consistency, etiology, and their location of occurrence.

Conventional surgical removal is the most common method used to treat mucocele. Elliptical incision is the most popularly used treatment procedure. This helps to decrease the extent of mucosal tissue loss, decreases the incidence of formation of large fibrous scars, and helps to prevent spilling of the cystic content, which could be responsible for recurrence.<sup>9</sup> To reduce the chance of recurrence, lesion should be removed down to the muscle layer, all the surrounding glandular acini must be removed, and damage to the adjacent gland and duct should be avoided while placing the suture.<sup>3, 6, 10</sup>

#### 4. Conclusion

Because of high chances of recurrence, management of mucocele is a challenging task. However, surgical excision with dissection of surrounding and contributing minor salivary gland acini proved to be successful with least recurrence. Simple surgical excision is the treatment of choice, and when done with care, is the best treatment alternative.

#### References

- [1] Baurmash HD. Mucoceles and ranulas. *J Oral Maxillofac Surg.* 2003;61:369-78.
- [2] Ozturk K, Yaman H, Arbag H, Koroglu D, Toy H. Submandibular gland mucocele: Report of two cases. *Oral Surg Med Oral Pathol Oral Radiol Endod.* 2005; 100:732-5.
- [3] Rao PK, Hegde D, Shetty SR, Chatra L, Shenai P. Oral Mucocele – Diagnosis and Management. *JDentMedMedSci.* Nov2012;2:26-30.
- [4] Laller S, Saini RS, Malik M, Jain R. An Appraisal of Oral Mucous Extravasation cyst case with Mini Review. *J Adv Med Dent Sci Res* 2014; 2:166-70.
- [5] Sukhtankar LV, Mahajan B, Agarwal P. Treatment of lower lip Mucocele with Diode Laser – A Novel Approach. *Ann Dent Res* 2013; 2(Suppl 1):102-8.
- [6] Ata-Ali J, Carrillo C, Bonet C, Balaguer J, Peñarocha M, Peñarocha M. Oral mucocele: Review of literature. *J Clin Exp Dent* 2010;2:e18-21.
- [7] Bodner L, Manor E, Joshua BZ, Shaco-Levy R. Oral Mucoceles in Children – Analysis of 56 New Cases. *Pediatr Dermatol* 2015; 32:647-50.
- [8] Singh RK, Singh A, Vivek R, Tripathi AA. Mucocele: Review and a case report. *Healthtalk* 2012;4:38-9.
- [9] Madan N, Rathnam A. Excision of Mucocele: A surgical Case Report. *Bio Biomed Rep.* 2012;2:115-8.
- [10] Gupta B, Anegundi R, Sudha P, Gupta M. Mucocele: Two case reports. *J Oral HealthCommDent* 2007; 1:56-8.

#### Figures



**Figure 1:** A large mucocele on lower lip.



**Figure 2:** Surgical removal of mucocele



**Figure 3:** mucocele excised in one piece



**Figure 4:** Post operative view after 3 months