

Mucocele on Lower Lip: A Case Series

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. We report a case series of mucocele in children treated by conventional surgical excision of the lesion.

Keywords: Lower lip, mucous, salivary glands

Introduction

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

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.^[7] 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.^[6] Blockage of the salivary gland ducts causing decrease or absence of glandular secretion causes retention mucocele.^[3,6,8,9]

Clinical appearance of both extravasation and retention mucoceles is similar. 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.^[6] When located on the floor of the mouth, these lesions are called ranulas because the inflammation resembles the cheek of a frog.^[3,6,8,9]

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.^[4,5]

This article describes a case series of mucocele on lower lip treated by surgical excision method using scalpel blade.

Case Reports

Case 1

A 10-year-old girl reported with the chief complaint of painless swelling on the inner aspect of the lower lip since 3 weeks. Swelling was small initially and then was

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increasing gradually to attain the present size. There was no significant medical history.

On intraoral examination, a round, solitary, fluctuant swelling was seen on the inner aspect of the lower lip at the right central incisor region. Swelling was 2–3 mm below the vermilion border of the lower lip and extending inferiorly toward the lingual vestibule, measuring approximately 6–8 mm. Color of the swelling was the same as that of the adjacent mucosa [Figure 1a]. No other oral anomalies were detected. Patient had a positive history of lip biting habit. There was no difficulty in speaking or chewing.

The lesion was diagnosed as a mucocele based on the clinical features and history of lip biting habit. It was treated under local anesthesia using scalpel by placing an incision circumferentially [Figure 1b]. Lesion was resected from the base and sent for histological analysis [Figure 2a]. Intermittent sutures were placed [Figure 2b], and suture removal was done after 1 week. Histopathological report confirmed the diagnosis as mucocele [Figures 3 and 4]. On 6-month follow-up, there was no history of recurrence of the lesion.

Case 2

A 13-year-old boy reported with complaint of swelling on the lower lip since 1 month. Child had a history of trauma

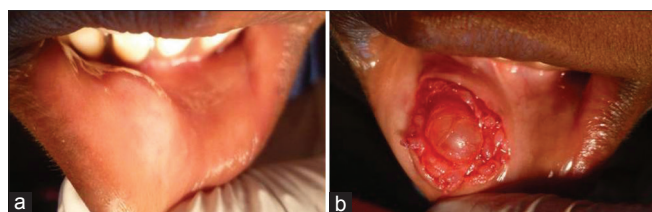


Figure 1: (a) Mucocele on right side of the lower lip; (b) lesion on surgical exposure

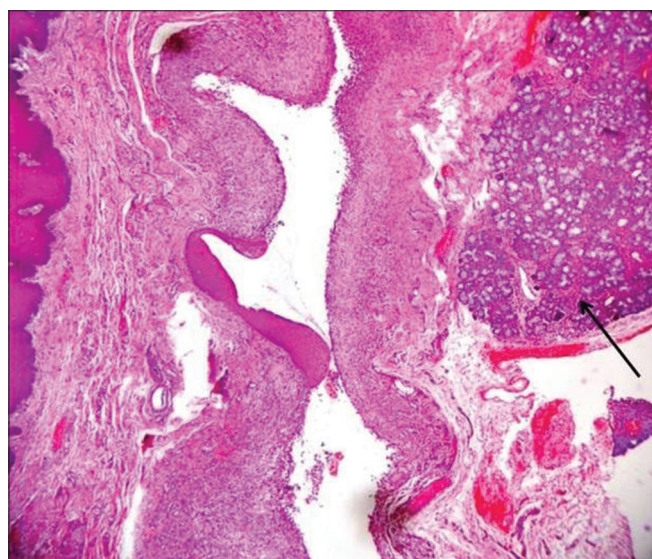


Figure 3: Hematoxylin and eosin section (×4 magnification) showing mucin pooled regions in central luminal area surrounded by granulation tissue. Periphery of the lesion shows salivary gland acini (indicated by arrow)

1 month back and there was a fracture in the upper left central incisor (Ellis class II fracture). 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 child presented with uneventful healing on 3-month follow-up.

Case 3

An 8-year-old boy reported with complaint of swelling on his lower lip. He first noticed the swelling 3 months back, and there was history of episodic fluctuation in its size. Intraoral examination revealed soft, asymptomatic nodule on the left side of labial mucosa. There was no history of any systemic disease. Based on the clinical findings, provisional diagnosis of mucocele was made. Lesion was surgically excised with scalpel blade under local anesthesia. Intermittent sutures were placed. Histopathological report confirmed swelling as mucocele. There was no recurrence of lesion on follow-up evaluation of 1 year.

Discussion

The incidence of mucoceles in the general population is 0.4–0.9%. There is no gender predilection.^[4] 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,

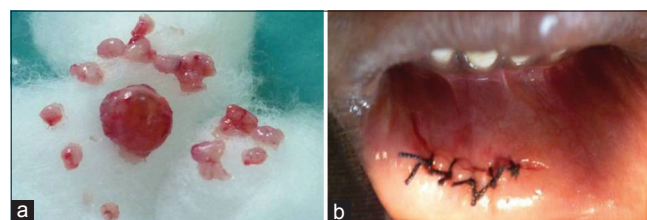


Figure 2: (a) Excised lesion; (b) sutures placed

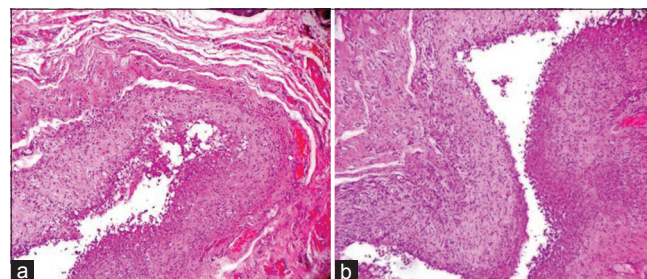


Figure 4: Hematoxylin and eosin section under (a) ×10 and (b) ×40 magnification showing granulation tissue encapsulated by dense fibrous connective tissue

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.^[9] 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.^[3,6,10]

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.

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Conflicts of interest

There are no conflicts of interest.

References

1. Baumash 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. J Dent Med Med Sci. Nov 2012;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, Peñarrocha M, Peñarrocha 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 Health Comm Dent 2007;1:56-8.