



A case series on Mucocele

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Article History

Received: 13 June 2020

Reviewed: 14/June/2020 to 13/July/2020

Accepted: 14 July 2020

E-publication: 21 July 2020

P-Publication: September - October 2020

Citation


Pooja Dhole, Lohe V.K, Ravindra P. Kadu, Ayesha Sayyad, Dhiran Talatule. A case series on Mucocele. *Medical Science*, 2020, 24(105), 2877-2882

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General Note

 Article is recommended to print as color digital version in recycled paper.

ABSTRACT

Lips disclose a diversified group of lesions fluctuating from developmental, ulcerative, inflammatory and neoplastic conditions. In the salivary gland an abnormal change in structure of glands of traumatic origin are, formed due to perforation of main duct of a minor

salivary gland with consequential leakage of the mucus into the fibrous connective tissue resulting in formation of cyst like cavity and this is the mucous retention phenomenon or mucocele. The wall of this cavity is formed by crushed bundles of collagen fibrils and it is filled with mucin. The most frequent location of mucocele is lower lip and mostly the cause is trauma or habit of lip biting. Diagnosis is chiefly clinical because of its pathognomonic appearance. The various sites for mucocele are the lower lip, the floor of mouth and buccal mucosa. These case series present three cases of mucocele found on lower lip.

Keywords: Mucocele, soft tissue swelling on lower lip.

1. INTRODUCTION

Lips reveal a heterogeneous group of lesions ranging from developmental, inflammatory, ulcerative and neoplastic conditions (Gupta et al., 2017; Abdrabuh et al. 2020). There are many conditions which involve lips and mucocele is most commonly found on lip. It is a mucus filled cyst known as mucocele which found in the mouth and paranasal sinuses (Chaitanya et al., 2017; Ozturk et al., 2012; Rao et al., 2013; Laller et al., 2014; Baurmash, 2003). It is the 17th most common salivary gland condition involving the oral cavity (Laller et al., 2014). The word mucocele is resultant from a Latin word, mucus and cocele (Ozturk et al., 2012; Laller et al., 2014; Sukhtankar et al., 2013; Baurmash, 2003). The size of minor salivary glands mucoceles are barely larger than 1.5 cm and are always superficially situated. Inversely, the lesions arising from floor of the mouth are generally significantly larger that may cause local discomfort, problems in speaking, mastication, and swallowing (Baurmash, 2003). Mucocele is caused by obstacles present in mucus gland duct. It can occur at any age; it is most frequently seen in 2nd and a 3rd decade of life. Mucocele is commonly seen on lower and upper lip, palate and the retromolar pad (Baurmash, 2003). The lesions are classified as mucus extravasation or mucus retention cysts, histologically, depending on the presence or absence of epithelial lining (Oliveira et al., 1993; Porter et al., 1998).

Mucocele is the commonest lesions involving the minor salivary glands and characteristically seen as a bluish, fluctuant, non-tender, submucosal swelling with a typical overlying mucosa. The minor salivary glands are seen all over the oral cavity except for the gingiva. Mucoceles are found most frequently on the lower lip due to the higher occurrence of trauma involving this region (Gonsalves et al., 2007). Children including young adults have more chances of getting affected, while these lesions can occur at any age. Both sexes are equally affected. The common clinical history is one of asymptomatic swelling. The condition may be present for months or even years before the patient takes the treatment (Poker & Hopper, 1990). The various treatment modalities include surgical excision, cryosurgery, marsupialization, micro-marsupialization and laser excision (Laller et al., 2014; Sukhtankar et al., 2013).

2. CASE REPORT 1

A 22 years old female patient visited with the complaint of pain-free swelling on the labial part on the vermilion of lower lip for 21 days. Initially the swelling was small in size which gradually increased to peanut size (Figure 1). There was no history of any medical disorders or congenital anomalies. Intra- orally, a round, fluctuant, solitary swelling was seen on the lower lip at the left canine and premolar area of the size 2–3 mm approximately. It was extending toward the lingual vestibule inferiorly. Color of the swelling was pale pink (Figure 1).



Figure 1 Mucocele on Left Corner of Mouth



Figure 2 Excised specimen

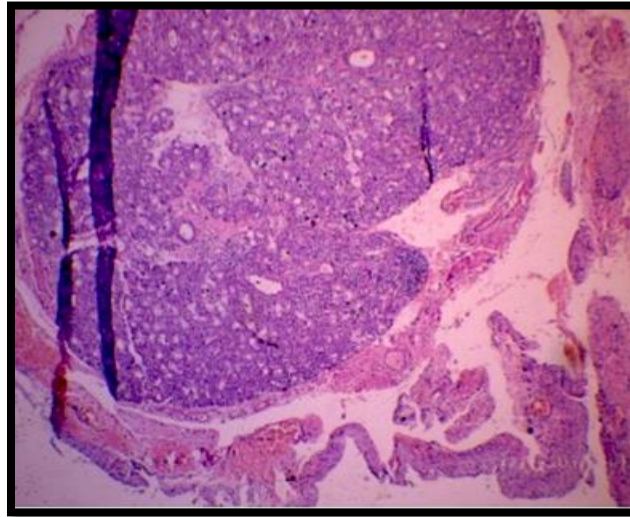


Figure 3 Histopathology showing mucous acini

There was negative history of lip biting. Patient gave no history of difficulty in mastication and speech. On the basis of clinical features the diagnosis of a mucocele was given. As a part of treatment, the lesion was surgically excised (Figure 2) and sent for histopathological analysis. The final diagnosis of mucous extravasation cyst was confirmed histopathologically (Figure 3). The 6 monthly follow up was carried out which revealed no recurrence.

3. CASE NO 2

A 24 years old male patient reported with the complaint of swelling involving the lower lip since 30 days. He noticed a painless swelling on lower labial mucosa, which was initially small in size and has now grown to present size. The swelling was asymptomatic, oval in shape, soft in consistency and fluctuating (Figure 4).



Figure 4 Mucocele on Lower left Side of Lip



Figure 5 Excised specimen

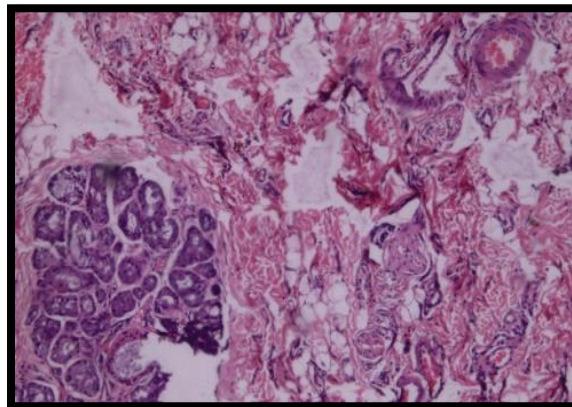


Figure 6 Histopathology showing mucin spillage with inflammatory cells.

On the basis of the clinical characteristics and history, the provisional diagnosis of mucocele was given. The surgical excision of lesion was done under local anaesthesia (Figure 5). Suturing was done and patient was recalled after 1 week for removal of sutures. The final diagnosis of mucocele was confirmed histo-pathologically (Figure 6).

4. CASE NO 3

A patient aged 24 years visited to dental department with complaint of a nodular swelling involving lower labial mucosa since one month. He noticed painless swelling on lower labial mucosa, which was initially small in size and has grown to the present size (Figure 7). There was no history of blood or pus discharge. There was no history of trauma during mastication. The excisional biopsy was done (Figure 8). The final diagnosis of mucocele was confirmed histopathologically (Figure 9). The 6 monthly follow up was carried out which revealed no recurrence.



Figure 7 Mucocele Seen On Lower Right Side Of Lip



Figure 8 Excision Of Lesion

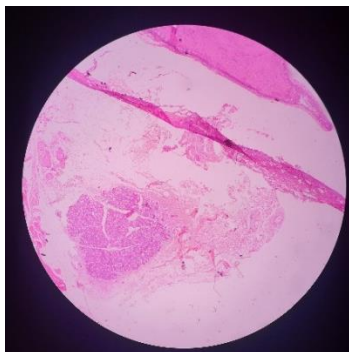


Figure 9 Microscopic Under 40X

5. DISCUSSION

The salivary gland lesions are soft tissue lesions of which central lesions are rare (Chandak et al., 2017). The Mucocele may be seen as a fluid filled vesicle on the oral mucosa or as a fluctuant nodule or it may be present deep within the connective tissue. There can

be impulsive drainage of the mucin which is especially accumulated in superficial lesions. This may be followed by ensuing recurrence. The long-term lesions could show fibrosis (McDonald & Avery 2004).

There is no gender preference for mucocele. In the general population, the incidence of mucocele is 0.4–0.9% (Laller et al., 2014). The appearance of mucocele is easily recognized and in the present case also the appearance of lesion was clinically diagnosable. The history, quick appearance like site of lesion, its size, bluish colour, the consistency lead to the diagnosis of mucocele; in all three cases the lesions was superficial. Lip contains connective tissue, adipose, salivary gland, blood capillaries, nerves hence, any pathology involving salivary gland tissues can result in mucocele on the lips. Sialoliths, mucocele, salivary gland tumour, lipoma, phlebolith may show as swelling on the lip and fibroma and salivary gland tumour can be seen on lips and palate (Lohe et al., 2011; Bhalerao et al., 2017). The mucocele can be differentiated on the basis of their clinical presentation, aetiology, colour, consistency, and their site. This supports to reduction in the degree of mucosal tissue loss, declines the incidence large fibrous scars formation which aids to avoid spillage of the cystic content, whichever might be behind its recurrence. Standard surgical excision is the most regular treatment modality for mucocele. The most commonly used treatment procedure is elliptical incision (Madan & Rathnam 2012). The lesion has to be incised up to the muscle layer; complete removal of adjacent glandular acini should be done, and injury to the adjacent gland and duct need to be kept away while suturing will decrease the chance of recurrence (Rao et al., 2012; Ata-Ali et al., 2010; Gupta et al., 2007). Removal of the adjacent surrounding glandular acini up to the muscle layer will avoid the recurrence (Huang et al., 2004; Bahadure et al., 2012).

6. CONCLUSION

The lips are the common site for trauma causing injury to minor salivary glands of lips and may lead to formation of mucocele. Exploring the history of trauma and clinical presentation frequently guides to the diagnosis. Surgical removal of mucocele is challenging as it can injure adjacent minor salivary glands and lead to recurrence.

Conflict of Interest

The authors declare that they have no conflict of interest.

Informed Consent

Appropriate signed consent was taken from the patient before writing this case report (Identity of the patient was not revealed in this case series).

Funding

This research not received any external funding.

Data and materials availability

All data associated with this study are present in the paper.

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