CASE REPORT

A typical clinical presentation of oral mucocele

H. N. Santosh¹, Tejavathi Nagaraj¹, Aditi Bose², Arun Sasidharan³

¹Department of Oral Medicine and Radiology, Sri Rajiv Gandhi Dental College & Hospital, Bengaluru, Karnataka, India, ²Department of Periodontics, Sri Rajiv Gandhi Dental College & Hospital, Bengaluru, Karnataka, India, ³Department of General Medicine, Sri Rajiv Gandhi Dental College & Hospital, Bengaluru, Karnataka, India

Correspondence
Dr. H. N. Santosh, Department of Oral Medicine and Radiology, Sri Rajiv Gandhi Dental College & Hospital, Bengaluru, Karnataka, India. No. 39, Second Cross, Krishna Nagar, Shettyhalli, Jalalhalli West, Bengaluru - 560 015, Karnataka, India. Phone: +91-9448721428, Email: drhnsantosh29@yahoo.co.in

Received 05 October 2014; Accepted 30 November 2014
doi: 10.15713/ins.ijmdcr.16

How to cite the article:

Abstract

Oral mucocele appears bluish if they are superficial. The appearance is similar to that of normal mucosa if it is deep. Mucocele appearing whitish is rare. The probable cause for the whitish appearance could be an underlying fibrosis due to chronic and repeated trauma. This case report intends to present an unusual appearance of mucocele of lower lip. Mucoceles are cavities filled in with mucus and lined by epithelium. Clinically, there are two types of mucocele namely retention and extravasation. Trauma is the frequent cause of mucocele. The clinical presentation of each of these types of mucocele is different depending whether it is retention or extravasation. A 23-year-old man reported with recurrent swelling in the lower labial mucosa. Examination revealed a solitary, whitish appearing, non-fluctuant swelling which was soft in consistency and non-tender. Based on the clinical and histopathological findings, a diagnosis of extravasation mucocele was given. Although mucoceles appear as either bluish or similar to the colour normal mucosa, this case presents an atypical appearance of whitish appearing mucocele.

Keywords: Extravasation mucocele, fibrosis, mucocele

Introduction

Mucocele of the oral mucosa is caused due to an alteration of minor salivary glands due to mucous accumulation.[1] They are cavities that are filled with mucus and lined by epithelium. There are two main types of mucocele namely extravasation and retention type. Extravasation mucocele occurs as a result of ruptured salivary glands duct and the resultant spillage into the soft tissues around this gland.[2] Retention mucocele appears due to a decrease or absence of glandular secretion produced by blockage of the salivary gland ducts. The origin of mucocele remains elusive. A hypothesis suggested that obliteration of the salivary gland ducts as the cause of mucocele.[3] However, this hypothesis has weakened against the traumatic origin of the lesions. The literature is replete with studies that confirm the traumatic etiology of these lesions. A case series implicated trauma and nibbling of fingers in 34% of the cases as the cause for mucocele.[4] The typical location of these lesions is in the lower lip. These areas are more susceptible to accidental trauma or nibbling and suction habits. Presence of the lesion in young patients, and the rare presence of calculi in the minor salivary glands support this etiopathogenic theory.[5]

It was hypothesized that extravasation mucoceles undergo three evolutionary phases.[5] In the first phase, mucous spills from the excretory duct into adjacent tissues where some leucocytes and histiocyte are found. The resorption phase is characterized by presence of granulomas due to foreign body reaction. This is because of the presence of histocytes, macrophages and giant multinucleated cells. In the final phase, cells form a pseudocapsule devoid of epithelium around the mucosa.[5]

There have been no reports in the literature regarding malignant transformation of mucocele. However, mucocele at strategic locations are of aesthetic concerns.[6] Besides, a lump in the oral cavity usually instills cancerophobia. This leads to a psychological fear within the patient. Hence the patients are motivated to get it excised.

The clinical appearance of mucocele is bluish and transparent cystic swelling which frequently resolves spontaneously.[7] The cause for blue colour is vascular congestion and cyanosis of the tissue above it.[8] The variation in color depends on the size of the lesion, proximity to the surface and upper tissue elasticity.[9] However, once the mucocele is fibrosed due to repeated trauma, the mucocele undergoes fibrosis, thus changing the clinical appearance.[4] This case reports a similar such situation leading to a platform to discuss the unusual differential diagnosis for mucocele.
Case Report

A 23-year-old male patient visited the Department of Oral Medicine and Radiology at Sri Rajiv Gandhi College of Dental Sciences with a chief complaint of swelling in the lower lip since 15-20 days. Patient gave history of recurrent swelling in the lower labial mucosa. The swelling appeared each time the patient occasionally bit his lower lip. The initial presentation of the swelling was watery that later ruptured without any symptoms. One contributory fact in personal history was unprotected sexual intercourse of the patient with commercial sex worker 4 months back. On examination, a solitary dome shaped swelling was present adjacent to the facial surface of 43 measuring about 1 cm × 2 cm. The surface appeared whitish with surrounding mucosa appearing normal [Figure 1]. On palpation, the swelling was non-tender, smooth, firm in consistency and non-fluctuant. Besides, the occlusal profile showed increased overjet and overbite associated a deep mentolabial sulcus. This could account for the frequent trauma to the lower lip. Based on the clinical examination, a provisional diagnosis of mucocele was given. A differential diagnosis of keratosis, papilloma and minor salivary gland neoplasm were considered. The patient was subjected to routine hematologic evaluation before the surgical excision of the lesion. The patient was also subjected to enzyme-linked immunosorbent assay and venereal disease research laboratory to evaluate exposure to human immunodeficiency virus and human papillomavirus. Both were however seronegative.

An elliptical incision was placed with a 15 size BP blade on the area of the lesion. Blunt dissection of the submucosa was done in order to excise the accessory minor salivary gland along with the mucocele [Figure 2]. This was done to prevent a recurrence. The specimen was obtained and transported in 10% formalin solution. Hemostasis was achieved, and two interrupted sutures were placed. The H and E stained slide showed parakeratinized stratified squamous epithelium supported by connective tissue stroma [Figure 3]. The connective tissue stroma was mature and contained numerous collagen fibers indicating towards a possible fibrosis [Figure 4]. Minor salivary glands with dilated ducts were present along with chronic inflammatory cells in the stroma [Figure 3]. Based on the histopathology report, a final diagnosis of fibrosed mucocele was given. The patient was reviewed after 1 week. The biopsy site showed granulation tissue formation [Figure 5].

Discussion

The most common location of mucocele is the lower lip. Extravasation type of mucocele is more prevalent than retention type.[3] Our case presented in line with the common epidemiology of mucocele. Clinical appearance of mucocele is characteristic, and the following data are crucial: Lesion location, history of trauma, rapid appearance, variations in size, bluish color and the consistency.[5] However, appearances can be deceptive. This case presented a unique appearance, unlike mucocele. The whitish appearance of the lesion can be attributed to the repeated trauma.

Figure 1: Pre-operative photograph showing solitary whitish swelling in lower labial mucosa

Figure 2: Photograph of surgical excision of the lesion with an elliptical incision on lower labial mucosa

Figure 3: Hematoxylin and eosinophilic stained slide at ×40 magnification showing parakeratinized stratified squamous epithelium supported by connective tissue stroma. The connective tissue stroma is mature and contains collagen fibers. Chronic inflammatory cells are seen in the stroma
to the same area which would have contributed to fibrosis. The presence of mature collagen fibers in the connective tissue stroma is implicative of it. Fibrosed mucocele is non-fluctuant,\(^4\) which was similar to our case. Surgical excision is the treatment of choice for mucocele. In order to prevent recurrence, marginal glandular tissue must be excised along with the affected duct.\(^6\) Smaller mucoceles can be excised, but larger mucocele requires marsupialisation. Cryosurgery and laser are other surgical modalities to treat mucocele. Co\(_2\) laser is an ideal modality as the chances of scar formation are less.\(^7\) However, the key to prevent recurrence is to excise the surrounding glandular tissue which can be achieved even by scalpel blade surgery.

**Conclusion**

Mucocele causes more of aesthetic and psychological concerns to the patient. In this case, it was the psychological concern which motivated the patient to undergo a surgical excision. Besides, the personal history and clinical appearance of the case were deceptive. However, it was the clinical course of the lesion which gave a clue to arrive at a correct diagnosis of mucocele.

**Clinical significance**

This case report suggests that all mucocele will not have pathognomonic features. Existence of clinical variants makes a simple lesion like mucocele appear differently.

**References**