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RESEARCH ARTICLE

ORAL MUCOCELE : 2 CASE REPORTS AND REVIEW OF LITERATURE

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ABSTRACT

Mucocele is a clinical term that describes swelling caused by accumulation of saliva at site of a traumatized or obstructed minor salivary gland duct. It is basically a pseudocyst which can be classified as extarvasation and retention type. Mucocele can affect the general population, but most commonly young patients (20-30 years old). Clinically they consist of a soft, bluish and transparent cystic swelling which normally resolves spontaneously. The most common location of the extravasation mucocele is the lower lip. Although diagnosis of mucocle is challenging so care should be taken while diagnosis. Treatment frequently involves surgical removal. However it can also be treated by micro marsupialization, cryosurgery, steroid injections and CO2 laser. Here, we will discuss the 2 reported cases of mucoceles treated surgically and review of literature.

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INTRODUCTION

Mucocele is a common lesion of the oral mucosa that results from an alteration of minor salivary glands due to a mucous accumulation (Ata-Ali *et al*., 2010). Mucocele is a clinical term that applies to the mucous extravastion phenomenon. Mucocele is a common lesion of the oral mucosa that results from an alteration of minor salivary glands due to mucous accumulation causing a limited swelling (Thorakkal Shamim, 2009). They present as fluctuant, bluish, non-tender sub mucosal swelling with a normal overlying mucosa. Mucocele can occur as extravasation and retention phenomenon. Extravasation Mucocele results from severance of salivary gland duct and the consequent spillage of mucin into the soft tissues around the gland (Figure 1). Retention Mucocele occur due to decrease or absence of glandular secretion produced by the blockage of the salivary gland ducts. Clinically, there is no difference between extravasation and retention type. When Mucocelelocated in the floor of the mouth it appears as "Belly of a frog" and is called as a 'ranula' (Marathe *et al*., 2014).

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It can occur at any age and most common location is lower labial mucosa, upper labial mucosa, buccal mucosa and palate. Several therapeutic procedures have been described in the literature for mucoceles such as surgical excision with scalpel, ablation with carbon dioxide (CO2) and erbium-doped yttrium aluminium garnet (Er:YAG) lasers, marsupialization, and cryosurgery (Prasanna Kumar Rao *et al*., 2013).

Case reports

Case report 1

A 22 years old male patient (**Figure 1)** reported to department of Oral Medicine and Radiology with chief complaints of swelling on lower left side of lip from 18-20 days **(Figure 2).** Patient was apparently well 18-20 days back when he first noticed swelling on lower left side of lip which is round in shape, gradual in onset; increase in size is present and painless. Patient also gave history of lip biting since 1-2 years back to which is solitary sessile, approx. 1.5 - 0.5 cm oval in shape, having diffuse borders, overlying mucosa appears to be normal. The swelling was soft in consistency, reducibility present and non tender on palpation. Dental caries present irt 16, 36 & 48, generalized stains, calculus present, bleeding on

probing present, generalized soft and edematous gingiva present. Based on the history and clinical examination Mucocele involving lower left labial mucosa was given as provisional diagnosis with a differential diagnosis of ranula, lipoma, salivary glands tumors- mucoepidermoid carcinoma, neurofibroma, nodular fibrous hyperplasia. Patient was advised with haematological investigations (complete haemogram, bleeding time and clotting time) all the values were within normal limits. Exciconl biopsy of leson was done and the histopathological finding revealed cystic cavity surrounded by a connective tissue capsule. Lumen of the cystic cavity was surrounded by connective tissue capsule which is densely arranged with stellate shaped fibrobasts and inflammatory cells predominately of lymphocytes and histiocytes. Many small blood vessels were also evident in the capsule. Numerous mucus salivary glands were also seen (Figure 4). Based on the excisional biopsy a final diagnosis of mucous extravasation cyst involving left labial mucosa was given. Based on all the clinical findings with the histopathological report a final diagnosis of Extravasation Mucocele in lower left labial mucosa was given. Patient was examined after 1 week, post-operatively and was recalled after a period of 1 month wherein no recurrence was noted and now the patient is on regular periodic follow up (Figure 5).

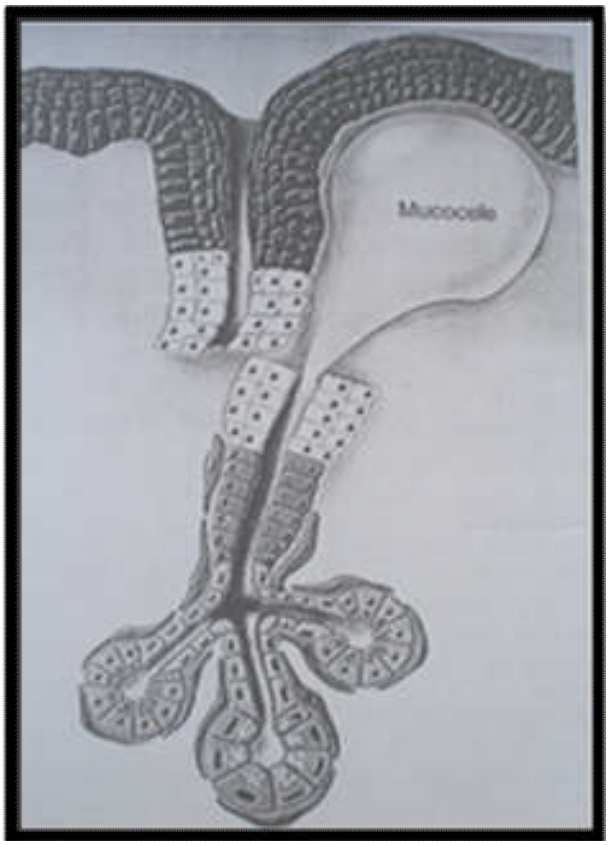

Figure 1. To show Mucocele

Case Report 2

A 32 year old male (Figure 1) reported to department of Oral Medicine and Radiology, Teertahnker Mahaveer Dental College and Research Centre , Moradabad with a complaint of chief complain of growth on lower left inner side of lip since 1 month (Figure 2). Patient also gives history of surgical removal of this growth from dentist at PGIDS, Rohtak 2 years back, but it reoccurred. Patient also gives history of lip biting at same place since 3 years. On Inspection, solitary diffuse growth present on lower left inner side of labial mucosa of approx. 1x1 cm , overlying mucosa appears to be keratotic and adjacent mucosa appear to be normal. Growth was soft to firm in consistency and non tender on palapation. Based on the history and clinical examination Mucocele involving lower left labial mucosa was given as provisional diagnosis with a differential diagnosis of ranula, lipoma, salivary glands tumors- mucoepidermoid carcinoma, neurofibroma, nodular fibrous hyperplasia. Patient was advised with haematological investigations (complete haemogram, bleeding time and clotting time) all the values were within normal limits. Further investigation like diascopy was found to be negative (Figure 8). Hence lesions of vascular origin were ruled out; therefore excisional biopsy was advised and performed (Figure 9). Excisional biopsy of lesion was performed by placing an incision vertically; therefore splitting the overlying mucosa and then resecting the lesion from the base so that chances of reoccurrence are less, sutures were placed and the histopathological finding revealed cystic cavity surrounded by a connective tissue capsule. Lumen of the cystic cavity was surrounded by connective tissue capsule which is densely arranged with stellate shaped fibrobasts and inflammatory cells predominately of lymphocytes and histiocytes. Numerous mucous salivary glands were also seen. Based on the excisional biopsy findings a final diagnosis of mucous extravasation cyst involving left labial mucosa was given. Regular recall and checkup for the reoccurrence of the lesion were done.

DISCUSSION

Rodrigo Alexandre Valério *et al*. (2013) reported several cases of mucocele and traumatic firomas and concluded that mucocele is more commonly found in children and young adults, and the most frequent site is the lower inner portion of the lips. Fibroma, on the other hand, is a benign tumor of fibrous connective tissue that can be considered a reactionary connective tissue hyperplasia in response to trauma and irritation. They usually present hard consistency, are nodular and asymptomatic, with a similar color to the mucosa, sessile base, smooth surface, located in the buccal mucosa along the line of occlusion, tongue and lip mucosa. Conventional treatment for both lesions is conservative surgical excision. Recurrence rate is low for fibroma and high for oral mucoceles. This report presents a series of cases of mucocele and fibroma treated by surgical excision or enucleation and the respective follow-up routine in the dental clinic and discusses the features to be consider ted in order to distinguish these lesions from each other.

Mucous

Indra Z. Mustapha and Indra Z. Mustapha (2004) reported a case which was diagnosed as a mucocele of the left upper lip, an uncommon location for this lesion. A mucocele of uniform size of such long-standing duration is rare.

Fig. 1. Profile picture

Fig.2. To show mucocele

Fig.3. To show excision of mucocele

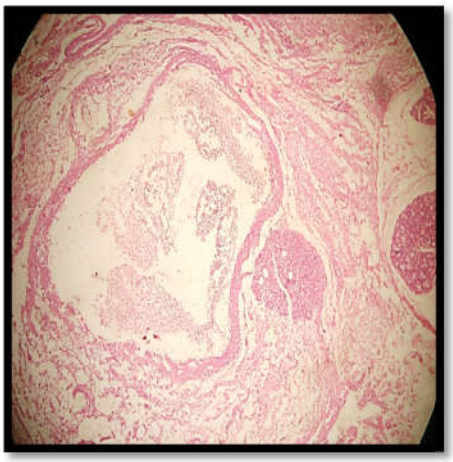

Fig. 4. Histopathological picture of mucocele

Fig. 5. To show postopetatiive picture after 14 days

Fig.6. to show profile picture

Fig.7. To show mucocele

Fig.8. To show diascopy test

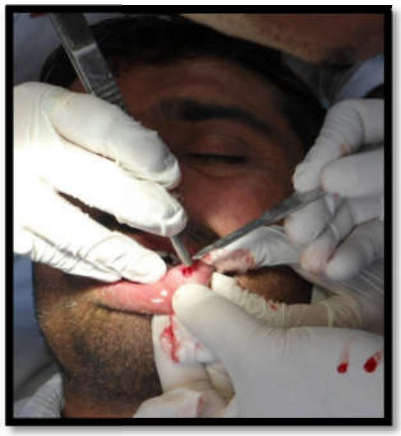

Fig. 9. To show excision of lesion

Because of the possibility that a lesion in this location might be a tumour, excision is warranted for definitive diagnosis. When possible, it is beneficial to identify and remove the glands associated with the lesion to reduce the rate of recurrence. If a benign or malignant tumour is diagnosed, then referral to an appropriate specialist is warranted, as further surgery (to obtain clear margins), radical neck dissection, radiation therapy or chemotherapy may be indicated. In the present cases mucocele were present on the lower left labial mucosa which is a common site of its occurrence. **Denis Tostes, Alberto Consolaro and Franciso Jose Guimaraes Freitas (1993)** did a clinical and microscopic study on 112 cases of diagnosed

mucocele in department of Oral Pathology, School Of Dentistry Of Sao Paulo. In this study, microscopically it was found that the mucous extravasation cyst was most commonly found (92.45%); however mucous retention cysts were also observed (7.54%). Inflammatory cells mainly polymophonuclear leukocytes nd macrophages were also found in the inner part of the mucus. The minor salivary glands involved showed degeneration and metaplasia. In the present case report both the cases are mucous extravasation type cyst (mucocele) involving lower left labia mucosa.

Bhavna Gupta *et al.* (2007) reported two case reports of mucocele involving lower right labial mucosa and mid of labial mucosa. In present case report, 2 cases were reported involving lower left labial mucosa.

Nitin Singh, Pratik Chandra and Sugandha Agarwal (2014) reported a case of mucocele involving lower right labial mucosa which was treated surgically similar to present case reports.

Swati Marathe *et al.* (2014) reported a rare case of an oral Mucocele which is present at a rare site of the oral cavity i.e. at the lower buccal vestibule, which to our knowledge is second case reported in review till date.

B N Rangeeth, Joyson Moses and Kishore Kumar Reddy (2010) reported a case of multiple swelling on the lower labial mucosa which was diagnosed clinical as well as histopathologically as mucocele and fibroma.

Kamal Sagar1, Cheena Singh, Ritika Arora (2016) reported a case of mucocele at the lower left labial which was excised with diode lazer.

Conclusion

Mucocele is one of the commonest soft tissue benign lesions found in oral cavity. It is most prevalent in male under the age of 20 to 30 years arising due to trauma from lip or check biting. The main treatment modality is surgical although can be treated with diode lazer, cryotherapy. Recurrence rate of the lesion is less.

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