



SINGLE EXTRAVASATION CYST MAYBE JUST A TIP OF THE ICEBERG – A CASE REPORT

Dental Science

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ABSTRACT

Mucocele is a benign salivary gland lesion which occurs as a result of trauma to the minor salivary glands or their ducts. These can be extravasation or retention type. These generally lack epithelium and are lined by inflamed granulation tissue. Though not a very commonly seen condition, it is seen to occur mostly on the lip and also occurs in other locations like tongue, soft palate, buccal mucosa, lower labial mucosa, and retromolar pad. These lesions are usually painless and can be diagnosed clinically.

We present a case of a 27 years old man with multiple salivary duct cysts which clinically presented as an intraoral swelling on the lower lip with a history of trauma and exfoliation of the mandibular anterior teeth 2-3 years back. Histopathological evaluation showed minor salivary gland ducts which were dilated to the point of cyst formation. Hence it was decided to review the clinical characteristics of this multiple extravasation mucocele clinically and histopathologically and formulate a treatment plan.

KEYWORDS

excision, extravasation cyst, lower lip

INTRODUCTION

Mucocele is a common salivary gland disorder usually seen in the oral cavity. They are also reported to be found in gall bladder appendix, paranasal sinuses, and lacrimal sac. In the oral cavity, these comprise 6-9% of salivary gland diseases. The word mucocele is derived from a Latin word, mucus and coele means cavity.^[1] They usually occur due to trauma which results in severance of salivary duct, biting of lips or cheeks, extraction forceps, sports injury and household work. All these lead to the spillage of mucin into the surrounding tissues. Mucous is the main secretory product of the minor salivary glands and the more prominent product of the sublingual salivary gland.

Mucocele is seen on the lower lip usually lateral to the midline. When they are present on the floor of the oral cavity, they are called ranulas. These usually are not seen on the anterior hard palate and attached gingiva as they do not typically possess minor salivary glands. These are pseudocysts without defined epithelial walls.

Mucocele can be superficial (located directly under the mucosa), classic (in the upper submucosa) or deep (in the lower corium).^[2] They can be either single or more than one, present at a time and can be either mucous extravasation or retention types.

Mucus extravasation cysts are characterized by generally asymptomatic single or multiple, spherical, fluctuant nodules. Mechanical trauma to the gland ducts leads to transection or rupture, with consequent extravasation of mucin into the connective tissue stroma. They are seen frequently on lower labial mucosa, buccal mucosa, and retromolar area and are not lined by an epithelial lining.^[3] The mucus extravasation triggers a secondary inflammatory reaction which presents in different forms as single or multiple vesicles.

Case Report

A 42 years old male patient came to the dental office with a chief complaint of swelling in the anterior region of the lower lip. (figure 1) The patient gave a history of trauma which led to exfoliation of the mandibular anterior teeth, 2-3 years back. The swelling present in the right mandibular labial mucosa in relation to the right mandibular canine region presented as a raised, dome-shaped swelling 4 × 2 cm² in size. On palpation, the swelling was firm, nodular, nontender, whitish in colour with no change in temperature. It was asymptomatic,

progressively enlarging and slow in growth.

The patient had been using a removable partial denture since the exfoliation of the teeth.

Management

The treatment of the diagnosed multiple extravasation cysts was performed by first disinfecting the area by asking the patient to rinse with 0.12% chlorhexidine. Following which a superficial horizontal incision was given under local anesthesia in the right labial mucosa in relation to the right mandibular canine region. The multiple cysts were exposed and complete excision was done of the cysts. (figures 2, 3). 4/0 sutures were placed following the excision. The excised sample was sent for histopathological examination.

Histology

Histopathology showed mucous salivary glands with few ducts of varying sizes. Adjacent tissues showed adipose tissue and areas of granulation tissues.

Hyperkeratosis of the epithelium and multiple areas of extravasated mucin were also seen. Inflammatory cells in the form of mucinophages, lymphocytes, and neutrophils were observed. Hence histopathology reported a final diagnosis of multiple extravasation type of Mucocele in the lower labial mucosa. (figure 4)

The clinical and histopathological report when correlated led to the final diagnosis of multiple extravasation cysts. Follow up was done a week later and also after a month with no evidence of any recurrence.

DISCUSSION

Mucocele is defined as swelling like a sac that is due to the distension of a hollow organ or cavity with mucus. These are the 17th most common lesions of the oral cavity.^[5] According to the study conducted by Santosh et al, the prevalence of lip lesions in India was 18.8%. The lesions most commonly seen were those due to various infections, which affected 32.6% of the population. Mucocele was observed to be 29.8% and premalignant lesions and conditions affected 20.6% of the population.^[6]

The incidence of mucoceles in the general population is 0.4–0.9% with minimum variation between genders.^[7]

Swelling of the lips can be due to the pathology of connective tissue, nerves, blood vessels adipose tissues and salivary glands present in them. Other swellings which appear in the lip include fibroma, lipoma, sialolith, phlebolith, and salivary gland neoplasm. But these can be distinguished from mucocele based on their various clinical features which include the etiology, color, consistency, and the location.^[7] Mucoceles can be of extravasation type, which generally lacks epithelium and are lined by inflamed granulation tissue or retention type, which are lined by epithelium. The mucous extravasation cysts can present as single or multiple cysts.

The extravasation mucoceles are formed when causes like trauma to the duct lead to mucous spilling diffusely from the duct into the surrounding tissues where leucocytes and histiocytes are present. The histiocytes, macrophages and giant multinucleated cells cause granulomas to be formed due to the foreign body reaction. This finally leads to the formation of pseudocapsule without epithelium around the mucosa.^[8,9]

Tal et al., and Dent et al., stated in their respective studies that cystic lesions of the salivary glands which develop due to a traumatic defect or severance of salivary duct which leads to extravasation of mucin to the connective tissue stroma should be termed as mucous extravasation cyst and those that develop due to obstruction of salivary ducts should be termed as mucous retention cysts.^[10,11]

Mittal HC et al., and A F Gatti et al reported cases of congenital mucoceles which were surgically removed under general anesthesia at 11 months of age and the diagnosis was confirmed by histopathological examination as congenital mucous extravasation phenomenon.^[12,13]

Surgical removal is the most commonly practiced method to treat a mucocele. An elliptical incision is given to decrease the extent of mucosal tissue loss and to decrease the formation of scars. It also helps to prevent the spillage of the cystic content, which usually is responsible for recurrence.

To avoid recurrence, the lesion should be removed up to the muscle layer along with the surrounding glandular acini. Care has to be taken to avoid damage to the adjacent gland and duct while placing sutures.^[14,15,16] In the case of small-sized mucoceles marginal glandular tissues are removed alongside and in the case of large-sized lesions, marsupialisation is done. Latest treatment options like intralesional steroid injections, CO2 laser, and cryosurgery, are also used.

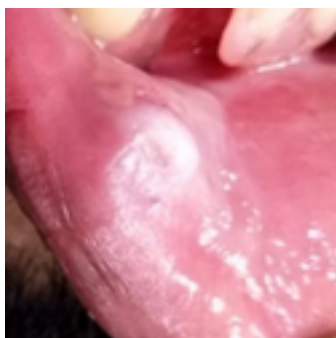


Figure 1: Initial presentation of the lesion in the right anterior region of the lower lip



Figure 2: Horizontal incision exposing the multiple extravasation cysts



Figure 3: Surgical excision of the multiple extravasation cysts

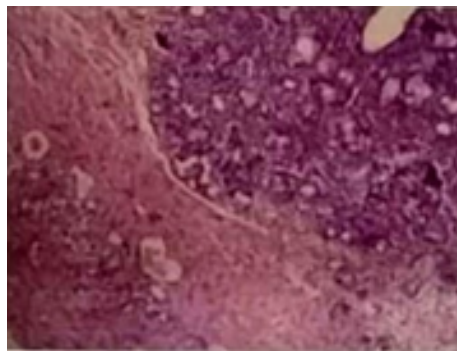


Figure 4: Histopathological presentation showing adipose tissue, areas of granulation tissues and also areas of Mucinophages, lymphocytes, and neutrophils

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