

Mucous Extravasation Cysts: A Report of Two Cases

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ABSTRACT

The mucocele, or mucus retention phenomenon, is a salivary gland lesion of traumatic origin that forms by the traumatic severance of a salivary gland duct with subsequent extravasation of mucus into the fibrous connective tissue. Ranula is a clinical term for a mucocele occurring on the floor of the mouth after trauma to the components of the sublingual glands. Both these minor salivary gland lesions are common in young children and adolescents. The treatment options include marsupialization, surgical excision, dissection, laser ablation, cryosurgery, electrocautery, intra-lesional steroid injections and irradiation. Here, we report one case each of a mucocele and ranula.

KEYWORDS: Mucocele, Ranula, Surgical Excision, Marsupialization

INTRODUCTION

Oral mucocele is the most commonly seen lesion in relation to the lower lip. Other sites of occurrence include floor of the mouth and buccal mucosa. They rarely occur on the upper lip, retromolar pad, or palate. It occurs due to the traumatic severance of a salivary gland duct due to accidental biting of lips or cheeks. No sex predilection is noted.^{1,2}

Ranula, on the other hand, which is a type of mucocele, commonly occurs at the floor of the mouth. Ranula was first reported by Hippocrates and Celcius.³ The name is derived from the Latin word *rana*, which means frog's translucent underbelly.⁴ It characteristically appears as a translucent blue, dome-shaped, fluctuant swelling in the tissues of the floor of the mouth. Ranula also forms after a local trauma. Ranula may exist as either a cystic or a pseudocystic variant (also known as mucocele). The common variant is the pseudocystic type.

CASE REPORT 1

A 12 year old male child reported to the Department of Pediatric Dentistry, KMCT Dental College, with the chief complaint of swelling in the lower lip due to trauma from upper incisors. The swelling was soft, fluctuant, well-defined and was the same color as the surrounding mucosa (Figure 1). No history of pain was present. It was approximately 4 mm in diameter. Based on the clinical examination, a provisional diagnosis of mucocele of the lower lip was arrived at. Initially the incisal edges of 11 and 21 were rounded off to eliminate the cause of trauma, but the child reported back with an increase in the size of the swelling. At this point, an incision and drainage was performed under topical anesthetic administration. The child reported back three months later with a recurrence of the swelling at the same site. It was then decided to excise the lesion to prevent recurrence.



Figure 1 – Pre-operative picture of mucocele on the lower lip

Under local anesthesia, the lesion was completely excised right down to the muscle layer and the borders were approximated and sutured (Figure 2). The child was recalled a week later for suture removal. The healing was satisfactory (Figure 3). Regular recall visits were scheduled for several weeks following the surgery. No evidence of any recurrence was seen.

On histopathological examination, the earlier diagnosis of mucocele was confirmed.



Figure 2 – Post operative picture after surgical excision

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Figure 3 – One week recall visit

CASE REPORT 2

A 11 year old male child, reported to the Department of Pediatric Dentistry, KMCT Dental College, with the chief complaint of a swelling in the floor of the mouth since 2 weeks, which was increasing in size. The swelling was dome shaped, non-tender, fluctuant with a slight bluish hue (Figure 4). It measured about 3X3 cm in size with well-defined borders. The lesion was located on the floor of the mouth in relation to 34, 35, 36 region. There was no associated paresthesia or enlargement of adjacent lymph nodes.



Figure 4 – Preoperative image of the ranula

On soft tissue examination, the tongue showed migratory glossitis. Other dental findings included pink tooth of mummery in relation to 85. Based on the clinical findings, a provisional diagnosis of ranula was made.



Figure 5 – Marsupialisation of the ranula

Under local anesthesia, an incision was placed at the most prominent point of the lesion. A yellow clear exudate was produced after which marsupialization was performed, and the lining of the cystic cavity sutured to the surrounding normal mucosa (Figure 5). The patient was put on analgesics, antibiotics and mouth wash for a period of one week after which he was recalled for suture removal. A week later when the patient reported, healing was good, and the patient had no other associated symptoms (Figure 6).



Figure 5 – One week recall visit

DISCUSSION

Oral mucoceles are benign soft tissue lesions and are characteristically seen as either single or multiple, painless, soft, translucent and fluctuant nodules, which are usually asymptomatic. They represent the 17th most common lesion of the oral cavity.² They are classified as extravasation or retention type. The extravasation cyst results from salivary glandular duct rupture, with mucin leakage into the surrounding peri-glandular soft tissue. Retention cysts, on the other hand, may be caused by a glandular duct obstruction that may ultimately result in a reduction or complete absence of secretion from the glands.⁵ Extravasation mucoceles appear frequently on the lower lip whereas lesions appearing on any other location in the oral cavity may be identified as retention mucoceles. Trauma of the lower lip is the main cause for appearance of mucoceles at this site.⁶

Ranula results due to the leakage of mucin into the tissues of the floor of the mouth following trauma to the sublingual glands. The pseudocystic variant of ranula forms as a result of extravasation of mucus into the fibrous connective tissue after a tear in a sublingual gland duct. Plunging ranula is the term used to describe the condition wherein extravasated mucus dissects through the mylohyoid muscle and along the fascial planes of the neck, producing a swelling evident on the neck.¹

Shira et al. advocated aspiration of the fluid contents of a mucocele, followed by injection of an irreversible hydrocolloid impression material. This distends and maintains the integrity of the lesion so that surgical excision can be more readily undertaken without involving adjacent uninvolved structures.⁷

Complete excision, marsupialization, dissection, cryosurgery, carbon dioxide lasers, electrocautery, intra-lesional injection of sclerosing agent OK-432 or steroid injection are different methods for managing this condition.⁸ Ranulas are mainly treated by marsupialization or micromarsupialization.

CONCLUSION

In conclusion, as these lesions of the salivary glands have a high rate of occurrence, the main aim of treatment should be to avoid recurrence of the lesion once it is removed. Hence, it is important to have a good knowledge of the clinical as well as treatment options prior to the beginning of any form of treatment.

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