

CASE REPORT

Management of Mucocoele in a 10 Year Old Female Patient -A Case Report with Review of Literature

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ABSTRACT

Mucocoele is a common pathologic entity in the oral cavity occurring due to blocked salivary gland. Mucocoeles are painless but can be bothersome for patients to eating and speaking. Most mucocoeles are visually identified. Only a few of mucocoeles goes away without any special treatment, but most of mucocoeles are removed by surgical process. The proper treatment can remove mucocoeles without side effects. It is essential for a dentist to visually recognize oral lesions such as mucocoele and for the proper treatment. In the present case report; we have reported a case of Mucocoele occurring in 10 year old female patient treated by surgical removal and the result was no recurrence.

Key words: Mucocoele, Management, Surgical.

Received: 3 December 2018

Revised: 26 December 2018

Accepted: 28 December 2018

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This article may be cited as: Kunnummal S, T Rajamani, Ephraim R, Ayilliath A. Management of Mucocoele in a 10 Year Old Female Patient -A Case Report with Review of Literature. J Adv Med Dent Scie Res 2019;7(1):28-30.

INTRODUCTION:

Mucocoele is defined as mucus-filled cavities, which can appear in the oral cavity, appendix, gallbladder, paranasal sinuses, and lacrimal sac. The term mucocoele is derived from a Latin word, mucus and coele means cavity.¹⁻³

Mucocoele is the 17th most common salivary gland lesions seen in the oral cavity. This is the result of accumulation of liquid or mucoid material due to the alteration in the minor salivary gland which causes limited swelling, which are characterized by a rounded, well-circumscribed, transparent, and bluish-colored lesion of variable size.^{4,5}

Mucocoeles occur on the tongue, inside the cheeks, the roof of the mouth, the floor of the mouth, or around tongue or lip piercings. Most mucocoeles are painless but can be bothersome because patients are sensitive to the bumps in their mouth. Mucocoeles can get in the way of eating or speaking and are prone to biting. Shallow mucocoeles may burst and release straw-colored fluid. Deeper ones can last longer and are more likely to bother patients. Mucocoeles are benign. However, if they are left untreated, they can organize and form a permanent bump on the oral surface.⁶

Our case report aimed to explain the history, clinical features, and surgical removal of mucocoele using a simple surgical technique, which helps to enhance the knowledge of the general dental practitioner.

CASE REPORT

A female patient aged 10 years old came to the department of pediatric and preventive dentistry with her parents with the complaints of a swelling on lower right lip region since 3 months. Initially it was a small swelling, then gradually progressed to large swelling and this swelling irritate during speech and chewing. Sometimes it will rupture and reduce the size, later it will progress into same size. But patient have no pain and no other history of trauma. Present illness showed that it was large elevated lesion present on inner aspect of lower right lip at the region of 41 and 42 respectively. (Figure 1 and 2) She underwent a surgery from a private dental clinic 8 months back from the same site.

On examination it was soft, oval shaped fluctuant lesion which was palpable but no pain on palpation and patient

was cooperative. After taking a detailed case history it was revealed that patient has lip biting habit. So, the etiological factors and treatment plan and prevention explained and proper counseling given to both patient and parents. Patient was advised routine blood examination, and the values were found to be normal.



Figure 1: Extra-oral photograph showing swelling of lower lip



Figure 2: Intra oral photograph showing oval shaped swelling on right side of lower lip



Figure 3: Surgical excision of lesion

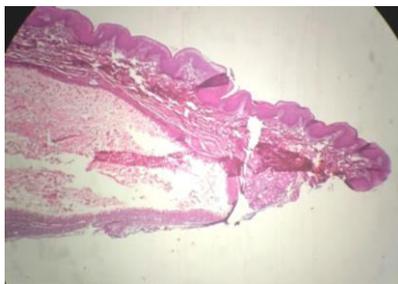


Figure 4: Histopathologic photograph showing mucocoele

Based on history and clinical examination the lesion was diagnosed as oral Mucocoele on right lower lip in relation to 41, 42. The treatment was planned under local anesthesia after obtaining consent from parents. In-order to prevent further recurrence of lesion planned for excision of oral Mucocoele with associated minor salivary glands. Surgical removal of lesion was done by placing an incision vertically above the lesion so it split overlying mucosa followed by excision of Mucocoele from base, and also excised the associated minor salivary gland. So the chance of recurrence will be less. (Figure 3) The biopsy sent for histo-pathological examination and the suture was placed, it removed after 1 week and proper counseling and postoperative instructions given. The histo-pathological report showed the stratified squamous Para keratinized epithelium and underlying connective tissue with acantholysis in the superficial layer of the epithelium. The underlying connective tissue stroma contains mucin pooling showed eosinophilic coagulum surrounded by granulation tissue. The granulation tissue shows numerous inflammatory cells, endothelium lined blood vessels and mucinophages. Salivary glands with mucous acini and intercalated duct were seen in connective tissue stroma. So based on these features in correlation with clinical findings were suggestive of extravasated Mucocoele. (Figure 4) Follow-up is ongoing since 8 months. Within this span, lip biting habit is completely terminated.

DISCUSSION

Two types of distinct entities described are the true retention cyst, which is lined by epithelium and the other is the mucous extravasation cyst, which occurs because of the pooling of mucus. It does not have any epithelial lining and is surrounded by compressed connective tissue cells; in some cases only granulation tissue is present. The two main etiological factors for mucocoele are: 1) Traumatic injuries 2) Obstruction of salivary gland duct.⁷

In our case report, the patients were 10 year old female. The incidence of mucocoeles in the general population is 0.4-0.8%, with scant differences between males and females.⁸s. In any case, the typical location of these lesions in the lower lip (more susceptible to accidental traumatism or nibbling and suction habits), their presence in young patients, and the exceptional presence of calculi in the minor salivary glands, all support this etiopathogenic theory. As regards mucocoele location in the oral cavity, most investigators consider the lower lip to be the most frequently affected location (40-80% of all cases), followed by the cheek mucosa and floor of the mouth. The tongue, palate and upper lip are infrequent locations. The present study coincides with these observations, since 73.5% of the lesions were in the lower lip, with very little involvement of other locations.⁹

Lip contains adipose, connective tissue, blood vessels, nerves and salivary glands, and hence, pathology of any of these tissues can produce swelling on the lips. Mucocoele,

fibroma, lipoma, mucus retention cyst, sialolith, phlebolith, and salivary gland neoplasm appear as swelling on the lip. However, these can be distinguished from mucocoele based on their clinical appearance, color, consistency, etiology, and their location of occurrence.¹⁰

In the present case, the patient was treated with surgical excision. Conventional surgical removal is the most common method used to treat mucocoele. Elliptical incision is the most popularly used treatment procedure. This helps to decrease the extent of mucosal tissue loss, decreases the incidence of formation of large fibrous scars, and helps to prevent spilling of the cystic content, which could be responsible for recurrence. To reduce the chance of recurrence, lesion should be removed down to the muscle layer, all the surrounding glandular acini must be removed, and damage to the adjacent gland and duct should be avoided while placing the suture.^{11, 12}

A study of 14 pediatric patients describes micro marsupialization techniques with 85% success. The aim of this technique is to drain the mucus and reduce the size of the lesion. This technique consists of passing thick silk thread through the lesion at its largest diameter and then making a surgical knot. The suture is removed after 7-10 days, enough time for the mucocoele to disappear. Some studies have reported using cryosurgery in treating mucocoeles with encouraging result. Some authors have also suggest mucocoeles were removed using intralesional steroid injection. In study of 82 patients suffering from mucocoeles on the lower lip treated with co2 laser observed that 2 lesions reappeared afterwards and one patient suffered temporary paraesthesia.^{13- 16}

In a previous study conducted by Giraddi GB et al, authors evaluated the efficacy of micro-marsupialization technique as an alternative to surgical excision for the treatment of mucocoeles. A total of twenty patients were selected based on clinical diagnosis of mucocoeles and were randomly divided into two groups comprising ten patients each. Micro-marsupialization was done in Group 1 patients and surgical excision in Group 2. Patient's gender, age, size, location, duration, complications, and recurrences were evaluated during various visits. The mean age of the patients in Group 1 was 19.6 ± 9.6 years while in Group 2 was 21.9 ± 11 years. The most common location for mucocoele in Group 1 as well as Group 2 patients was lower lip (60% and 80%, respectively). In Group 1, two patients had recurrence while in Group 2, one patient had a recurrence. All recurrent cases were subsequently treated by surgical excision. No statistically significant difference was found between the two methods. Micro-marsupialization technique is as efficacious as surgical excision for the treatment of mucocoele.¹⁷

CONCLUSION

Due to high rates of recurrence, treatment of Mucocoele is a tough task. However, surgical treatment with dissection of adjacent and contributing minor salivary gland acini showed to be effective with least recurrence. Therefore; Simple surgical excision with care is also the treatment of choice.

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Source of support: Nil

Conflict of interest: None declared

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