



ROLE OF DUNLOP’S PSYCHOTHERAPY AIDED SURGICAL EXCISION FOR CHILDREN WITH LIP BITING HABITS- A CASE REPORT OF THE RECURRENT ORAL MUCOCELE

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ABSTRACT

Trauma to the salivary excretory duct results in the oral mucocele which accounts to be most common salivary gland lesions of the benign variant. They appear fluctuant, nodular with colour variations ranging from normal mucosal colour to deep blue. They have the characteristic soft texture and have no specific sex predilection but occurs more commonly in children with lip biting habit. Here we present a case of recurrent mucocele of the lower lip, which was surgically excised after which habit intervention in the form of 4-week session of the Dunlop’s psychotherapy was given.

KEYWORDS: Children, Oral cavity, Mucocele, Dunlop’s psychotherapy

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INTRODUCTION

Mucocele is a benign oral cavity disease caused by mucus collection inside the tissues.^{1,2} In terms of classification, they are pseudocysts, which can be classed as either mucous retention or granulation tissue-covered cysts, depending on the presence of epithelial tissue or granulation tissue.³ Mucous extravasation cysts are often thought to be caused by trauma, such as lip biting, whereas mucous retention cysts are caused by obstruction of a minor or auxiliary salivary gland's duct. Cysts of the mucous extravasation type account for more than 80% of all mucoceles and are more prevalent in children and young adults.³ Clinically, these appear as a soft, discrete, non-painful swelling of the mucosa. The lesion has no sex predilection and occurs more frequently in children, adolescents, and young adults.⁴ The lower labial mucosa is the common site of involvement, but given its origin, it can develop anywhere as the minor salivary glands are seen in the soft palate, retromolar region, and even the buccal mucosa. The mucocele is rapid or slow in progress and often painless, with periods of remission and exacerbation. This is more common in children who are prone to lip biting habits and who are often exposed to traumatic events.^{4,5} The hue of the lesion depicts the depth and need for surgical treatment. The lesion which is superficial and localized has a bluish color and when located more deeply in tissues, its color is similar to that of the mucosa. The lesion has a good prognosis, and it is traditionally treated by removing the gland and its surrounding mucosa and glandular tissue upto the layer of muscle beneath it. We present a case of mucocele excised by surgery, with no post-operative events after its removal & habit counselling was provided.

CASE REPORT

A 9-year-old boy reported to the Department of Pedodontics and Preventive Dentistry, of a tertiary care dental hospital, with

a chief complaint of painless swelling on the left side of lower lip (Figure 1A). Patient's guardian reported that he noticed the swelling two months back which increased in size with passage of time, to the present size (3cm x 3cm). The patient had a lip biting habit, and his medical and family history was not contributory. The habit was reported to persist for 3-4 years with a frequency of 2-3 times a day, more so when child was doing his homework. Dental history revealed history of previous excision by local dental surgeon for same swelling at same site 8 months ago. There was history of rupture of the swelling, followed by recurrence. On examination, a well circumscribed, transparent, slight bluish clouded, swelling was seen on lower labial mucosa with a smooth surface and blue hue. [Figure 1A]. Also, erythematous indentations/ ulceration corresponding to lip biting habit were identified on inspection of lower lip nearly adjacent to mucocele. The swelling showed no local rise in temperature, was flaccid and non-tender.

The preliminary diagnosis pointed out the lesion to be a recurrent lower lip mucocele, which necessitated surgical excision. The patient's blood report came back with no abnormalities. Under ring local anaesthesia, the mucocele was surgically removed, (Local infiltration of 2% lidocaine hydrochloride with 1:100,000 adrenaline barbiturate, Neon Laboratories Ltd, India) after obtaining informed and written consent from the patient's parents. The lesion was completely excised, and 3-0 silk sutures were placed. [Figure 1B, C] The specimen was sent for histopathological examination, which confirmed it as mucocele. The sutures were removed after 7 days with uneventful healing. [Figure 1D] Behaviour therapy was given in order to prevent further recurrences and similar surgical needs. Behaviour therapy was given in the form of a psychological approach based on the Dunlop's hypothesis. The patient was advised to practice the lip biting habit in front of the mirror for 20-30 minutes daily and was reviewed after 4 weeks. The lip biting habit was verified for its cessation from patient's guardian's feedback and lack of indentations on lower labial mucosa.

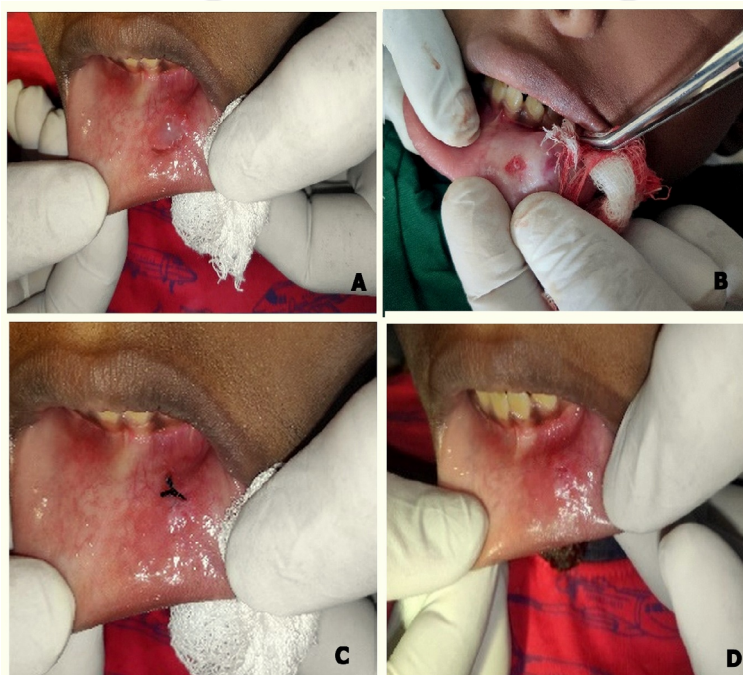


Figure 1: A) Recurrent mucocele on lower labial mucosa with blue hue and indentations/ulceration corresponding to lip biting habit. B) surgical excision C) Sutured lesion site D) healing of the surgical site.

DISCUSSION

Studies reveal that 2.4 out of every 1000 people have mucocele, a cystic mucus retention lesion of the small salivary glands. Seventy percent of those who contract them are under the age of 20.⁶ People over 30 are more likely to develop superficial mucoceles, whereas those under 30 are more likely to develop ranulas.⁴ The tongue, floor of mouth (ranula), and buccal mucosa are the next most prevalent sites of occurrence when site specificity is considered.⁷

Clinically, a mucus cyst seems to be a distinct and fluctuating enlargement of the mucosa that does not cause any discomfort. In most cases, however, lesions are less than one centimetre in diameter, but they may occasionally be as large as several centimetres. Deep lesions have typical mucosal pigmentation and may bleed into the oedema, but superficial lesions have a blue or transparent tint.⁸

The patient may have a history of mouth or face injuries, recent or old, or he or she may tend to bite his or her lips.⁶ It is possible to have a variety of different types of lipomas and soft tissue abscesses, as well as Blandin and Nuhn mucocele.⁹ A superficial mucocele is diagnosed based on the patient's medical history and physical examination results. If the presence of sialoliths is suspected to be a role in the development of oral and cervical ranulas, a radiographic assessment is warranted.¹⁰

Cryotherapy, carbondioxide and erbium lasers, intralesional corticosteroids, and topical gamma-linolenic acid are also options for treating oral mucoceles, but surgical excision remains the gold standard.

In this case, surgical excision and granuloma incision were used to remove the lesion and do histological examination. It also avoids repeating itself. Oral habits such as tongue piercing have been linked to traumatic fibroma, too. A new-born with reactive hyperplasia has been documented, which indicates that local irritation is one of the primary causes of these reactive hyperplastic lesions in young children. Excision of the mucous glands and evacuation of their contents is used to treat small lesions.^{9,10} We were able to use this successfully in our situation. Cryosurgery, laser ablation, micromarsupialization, and steroid injection are all options for treating big lesions. If you want to avoid a recurrence of the lesion, it is recommended that you remove all glands from the lesion.¹⁰

The Dunlop's idea for behaviour reframing was used successfully in our situation. Dental care for children requires both high manual dexterity and a firm grasp of how to interact with them socially. Reframing is a powerful tool for changing children's minds.⁸

The role of reframing in the treatment of habits such as lip biting is widely ignored in routine dental practice. The treatment planned without psychological management for habits, are assumed to be punishment and may make the child adamant.¹⁰ Dunlop's hypothesis, is a psychological approach to sensitize the child to the damage he is causing to himself.⁸ The method involves the child being made to sit in front of a mirror and asked to observe himself as he indulges in the habit and advised to repeat this twice a day everyday till, he completely stopped the habit.

CONCLUSION

The surgical removal of mucoceles, especially in children, is

highly effective. Its advantages include the fact that it is straightforward to do, less intrusive, and tolerated well by patients. It's possible that treating chronic lip-biting behaviour helped in the prevention of recurrence of the events we saw.

DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published, and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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