“Case Report”

Mucocele Treatment in Pediatric Patient at RSGM UMY

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Abstract

Background : Mucoceles is minor salivary gland lesion. The extravasation mucocele, commonly referred to as a "mucous retention cyst," does not have an epithelial lining or a well-defined boundary. An extravasation mucocele is believed to be caused by damage to a tiny salivary gland excretory duct. Saliva accumulates in the adjacent submucosal tissue due to a tear in the duct, leading to swelling. Retention type mucocele occurs when a small salivary gland duct is blocked, often by a sialolith, periductal scarring, or tumor. Salivary flow blockage leads to the accumulation of saliva and the enlargement of the duct.

Objective : To provide treatment for mucocele in a pediatric patient at RSGM UMY

Case Report : A 9-year-old patient came to RSGM UMY accompanied by his mother, complain he has swelling on lower lip. He often bite the lower lip for a long time. It is painless and sometimes increases in size. His experiencing discomfort due to the bump.

Method : The mucocele was excised using infiltration anesthetic and a blade no. 15. Surgical sutured silk braided was utilized for postoperative wound closure. The patient was provided with post-operative instructions and prescribed antibiotics and analgesics. The patient was scheduled for a follow-up appointment after one week to have the sutures removed.

Result : No complaints after control 1 month and 3 months after treatment

Conclusion : Surgical removal remains the optimal choice for treating mucoceles due to its simplicity and cost-effectiveness compared to laser ablation, cryosurgery, and electrocautery.

Keywords: Mucocele; cyst; minor salivary gland; treatment

INTRODUCTION

Mucoceles, which are minor salivary gland lesions, are a frequent mucosal lesion that affects the general population. The prevalence rate of mucoceles is 2.4 cases per 1000 persons, with the highest percentage (70%) occurring in those ranging from 3-20 years old.(1) The two primary etiological factors for the lesion are trauma and blockage of the salivary gland duct. There are two types of mucocele, each with a different etiology: painless, asymptomatic swellings that enlarge and then appear to involute due to the rupture of the contents into the oral cavity or resorption of the extravasated mucus or retention of the mucin. The patient may recall a recent or distant trauma to the mouth or face, or the patient may have a propensity of biting the lower lip.

The lesion normally lasts 3-6 weeks, however it can last anywhere from a few days to many years in rare cases.(2,3) The Incidence of Mucocele 0.4% to 0.8% of the general population, Lower lip is considered to be the most frequently affected location (40% to 80% of all cases), followed by the cheek mucosa and floor of the mouth.(4,5)

It is frequently caused by a traumatic incident that causes a salivary gland excretory duct rupture and manifests as a single fluctuant non-tender swelling in the canine bicuspid region with a normal pink or bluish color. In this case, the patient had a history of lip biting in the 32, 33 area, which resulted in mucocele development at the location owing to repetitive trauma. The diagnosis of mucocele is determined by its unique historical and clinical characteristics. A fine needle aspiration is
used to identify the presence of mucus retention, histiocytes, and inflammatory cells. The chemical analysis of the affected area shows high levels of amylase and protein content at coordinates.\(^{(6,7)}\) Chemical analysis shows high amylase and protein content. Radiographs are the contributing factors in cases of ranulas.\(^{(6)}\) The localization of these abnormalities is achieved by the use of Computed Tomography and Magnetic Resonance Imaging.\(^{(6,8)}\)

**CASE REPORT**

A 9-year-old child arrived to Rumah Sakit Gigi dan Mulut Universitas Muhammadiyah Yogyakarta with his mother, complaining of a lump on his lower lip. Patients frequently bite their lips since the lump has been there for a few months. It doesn't hurt and occasionally grows in size. The lump bothers the patient.

**CASE MANAGEMENT**

The dentist will do minor surgery to remove the mucocele. Minor surgery is performed with infiltration anesthesia in around mucocele and then we used blade no. 15 for excision of the mucocele, for postoperative wounds we used surgical sutured silk braided. Post-operative instructions were given antibiotics and analgetic were prescribed. Patient was recalled after 1 week for the removal of sutures. No recurrence was seen after a follow up at 1 week and 3 months.
DISCUSSION

Mucocele is classified into two distinct types: 1. Mucus extravasation type is considered to be caused by trauma, such as biting the lip. 2. Mucus retention type occurs when the duct of a minor and/or auxiliary salivary gland is blocked, leading to blockage.(5) Mucoceles often appear within a few days following mild injury, with sizes ranging from a few millimeters to a few centimeters. Unless treated, they remain unaltered for several months. Without intervention, one may detect a fluctuation in size over time due to rupture and subsequent generation of mucin.(2,5)

The histopathologic analysis of mucocele often shows the development of a clearly defined, cyst-like cavity surrounded by granulation tissue. Additionally, the collapsed wall of the granulation tissue commonly contains mucinophages.(9,10) In order to limit the likelihood of the lesion recurring, it is important to remove the nearby salivary gland tissue along with the mucocele and its feeder glands/ducts. The current instance was histopathologically characterized as a mucus extravasation cyst.(9)

The most frequent approach of treating mucocele is surgical removal. The most often utilized therapeutic method is elliptical incision. This helps to reduce the degree of mucosal tissue loss, the occurrence of extensive fibrous scar formation, and the leaking of cystic fluid, which may be responsible for recurrence.(11) To limit the likelihood of recurrence, the lesion should be excised down to the muscle layer, all surrounding glandular acini eliminated, and injury to the neighbouring gland and duct avoided while inserting the suture.(2,8,12) Other treatment options include CO2 laser ablation, cryosurgery, intralesional corticosteroid injection, micro marsupialization, marsupialization and electrocautery.(2,3)

In our case, we used a scalpel to remove the lesion. We didn't have much bleeding, and the healing process went smoothly. We chose this method since it is simple and less expensive than laser ablation, cryosurgery, and electrocautery. Some tumors that resemble mucoceles based on clinical examination may be found to be malignant when examined histopathological. It is necessary to obtain information regarding the patient’s and their family’s health history of non-communicable diseases. A complete subjective and objective examination can determine the success of the treatment plan.

CONCLUSION

Management of mucocele become a challenge for clinicians especially in pediatric patient. Identifying and treating the related behaviors is crucial due to the fact that trauma is the primary cause. The majority of these abnormalities are observed in the lower lip, which can cause functional disturbances and be aesthetically displeasing to the patient. Surgical excision is the preferred treatment option, and when performed meticulously, it is the most effective method for reducing the patient's anxiety and discomfort.

REFERENCE

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