

## *Surgical removal of large mucocele in a young patient: case report*

### *Remoção cirúrgica de mucocele volumosa em paciente jovem: relato de caso*

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#### **ABSTRACT**

Mucocele is a term applied to the clinical manifestation of phenomena that may affect the minor salivary glands. There are different forms of treatment reported in the literature, including total enucleation. The objective of this study is to describe a surgical technique for removal of Mucocele in a teenage patient. A 16-years-old, female, attended the sector of Pediatric Dentistry of Camilo Castelo Branco University - campus São Paulo / SP. The patient's main complaint was "a bubble in the mouth that punches and fills again, feeling salty taste." At the clinical examination, a circumscribed, mucosa-like, floating-palpation lesion was observed, with a 1.7 cm diameter in the lower lip, with characteristics similar to Mucocele. In the planning of the case, we opted for the surgical removal treatment with anatomopathological analysis. The prognosis for the surgical removal of the lesion was very favorable due to some established criteria: age of the patient, location, depth and size of the lesion.

**Indexing terms:** Adolescent. Mucocele. Pediatric dentistry. Surgery, oral.

#### **RESUMO**

*Mucocele é um termo aplicado à manifestação clínica de fenômenos que podem afetar as glândulas salivares menores. Existem diferentes formas de tratamento relatadas na literatura, entre elas, a enucleação total. O objetivo do trabalho é descrever uma técnica cirúrgica para remoção de Mucocele em uma paciente adolescente. Paciente de 16 anos, gênero feminino, compareceu a clínica de especialização de Odontopediatria da Universidade Camilo Castelo Branco – campus São Paulo / SP. A queixa principal da paciente era "bolha na boca que fura e enche de novo, sentindo gosto salgado". Ao exame clínico, foi constatada uma lesão circunscrita, de*

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coloração semelhante a mucosa, flutuante a palpação, com 1,7 cm de diâmetro no lábio inferior, com características semelhantes à Mucocele. No planejamento do caso, optou-se pelo tratamento de remoção cirúrgica com análise anatomopatológica. O prognóstico para a remoção cirúrgica da lesão foi bastante favorável devido a alguns critérios estabelecidos: idade do paciente, localização, profundidade e tamanho da lesão.

**Termos de indexação:** Adolescente. Mucocele. Odontopediatria. Cirurgia bucal.

## INTRODUCTION

Mucocele is a term applied to the clinical manifestation of two phenomena that may affect the minor salivary glands: the mucous extravasation cyst and the retention cyst, both of which are clinically identical and histologically distinct. The mucous extravasation cyst consists of a cavity circumscribed by connective tissue and not coated by epithelium, so it is called pseudocyst; it is more prevalent, usually occurring due to trauma in the lower lip region, being more common in children and young adults. Since the retention cyst has an epithelial lining and is more frequent in the upper lip, jugal mucosa and floor, and rarely appears in the lower lip, patients with advanced age are the most affected [1-7].

There are reports in the literature of different forms of treatment for Mucocele, among them: marsupialization (superficial reduction of the mucosa over the lesion, by suturing of the epithelium of the salivary duct to the buccal so that the drainage is maintained - presents a chance of recurrence) [3,4]; micro-marsupialization (a silk thread is passed through the interior of the lesion to empty its contents until regression - high relapse rate [5,8,9]; Shira's technique (precise injection of hydrocolloid material inside the lesion to delimit it and thus removing it completely - prevents episodes of relapse) [10], cryosurgery (freezing with cryogenic agents - a technique that is easy to perform, does not require the use of anesthesia, indicated for young children, and usually does not have relapses) [3,11]; CO<sub>2</sub> laser vaporization (fast procedure, of easy acceptance by children, intercurrents are minimal in the postoperative period) [12-16], and total enucleation of the lesion (most commonly used surgical technique, since it does not usually lead to relapses) [5,8,9,15,17].

However, it is difficult to find reports in the literature on large Mucocele, considering young patients. Therefore, the objective of the study was to describe a surgical technique for removal of the lesion in an adolescent patient.

## CASE REPORT

A 16-year-old female patient was accompanied by her guardian at the Pediatric Dentistry Clinic at Camilo

Castelo Branco University - Campus São Paulo / SP. The patient's main complaint was "a blister in the mouth that sticks and fills again, feeling salty".

During anamnesis, the guardian denied the presence of systemic diseases. However, he described a history of trauma to the lower lip within fifteen days prior to the onset of the blister.

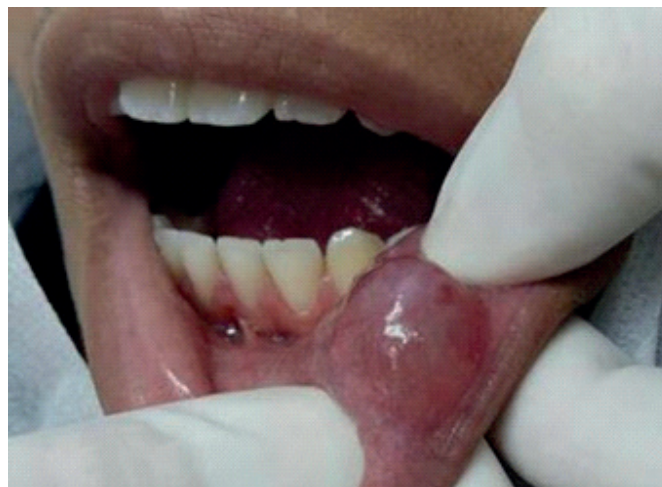
In the clinical examination, a circumscribed, mucosa-like, floating palpation lesion with 1.7 cm diameter was observed in the lower lip, with similar characteristics to the Mucocele (figure 1).

In the case planning, the surgical removal treatment was chosen because of the size of the evaluated lesion, considering also its location in the lower lip.

In this way, the patient's guardian freely signed an informed consent form, authorizing the use of her images and clinical case for scientific publications. The Ethics Committee, in the referred institution, approves the clinical work by procedural document 0026/2013.

The clinical stages of surgical removal developed at the pediatric dentistry clinic were:

1. Local asepsis with 2% Chlorhexidine, topical anesthesia with Benzocaine 200mg/g, followed by

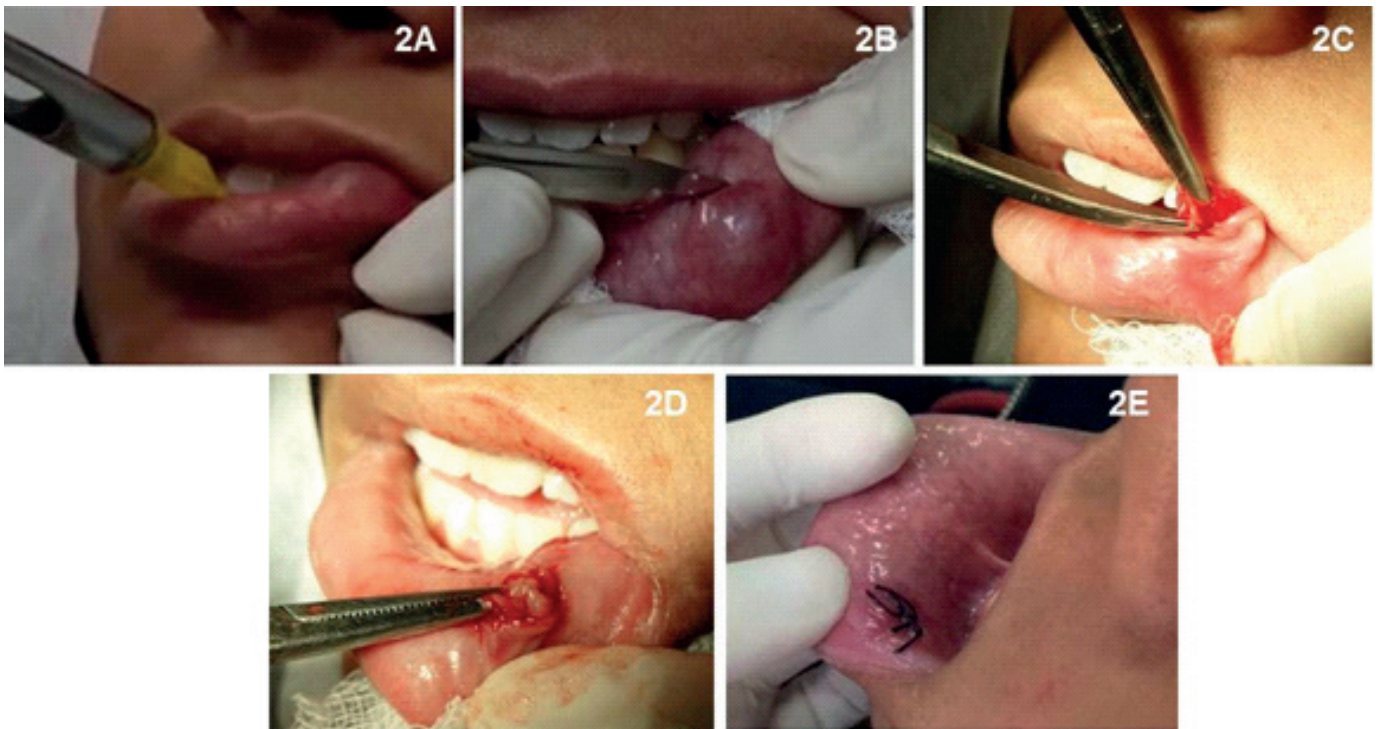


**Figure 1.** Initial appearance of the lesion.

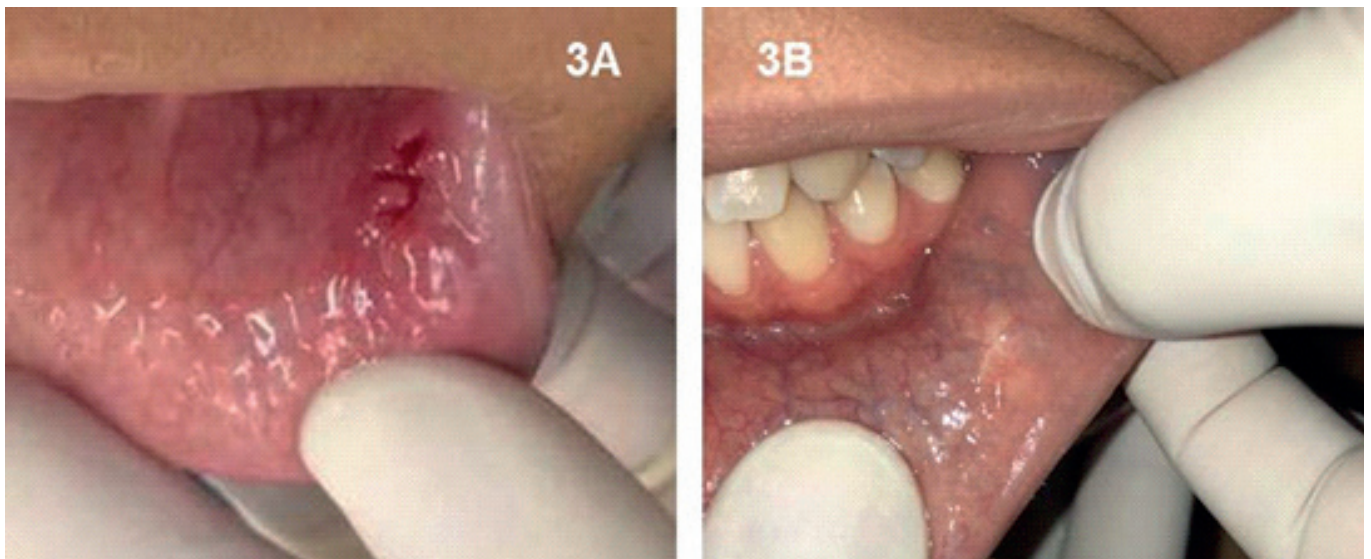
infiltrative anesthesia around the lesion, with 2% Lidocaine with vasoconstrictor (figure 2A); 2) delicate incision in semilunar format with scalpel blade #15, for excision of the lesion (figures 2B and 2C); 3) removal of accessory glands to prevent recurrence of the lesion (figure 2D); 4) suture of single isolated stitches with 4-0 silk thread (figure 2E);

5) postoperative medication: dipyron sodium 500mg/ml, every 6 hours, if there was pain in the first 48 hours.

The excised tissue was fixed in 10% formalin and sent for anatomopathological analysis. As a result, the initial diagnosis of Mucocele was confirmed, as mucous extravasation cyst.



**Figure 2.** Clinical stages of surgical removal. (A) Infiltrative anesthesia. (B) Incision. (C) Exertion of the lesion. (D) Removal of accessory glands. (E) Suture.



**Figure 3.** Postoperative control after seven days (A) and 18 months (B).



The postoperative control occurred in two moments, after seven days and 18 months, figure 3A and 3B, respectively, observing good healing of the surgical wound and absence of recurrence of the lesion.

## DISCUSSION

For a favorable prognosis of surgical removal of Mucocele, it is necessary, firstly, to determine the clinical diagnosis of the lesion, knowing characteristics of fundamental lesions of the Odontological Semiology, since the Mucocele presents characteristics similar to other neoplastic lesions of the oral cavity [2,12,18].

Hemangioma is also a common lesion in young patients, bringing the need for differential diagnosis with Mucocele. This neoplasm presents similar features of lip location, clinical aspect, and traumatic etiological factor. The differential diagnosis of Hemangioma can be performed by means of vitropression, in which the lesion acquires lip-like coloration, decreasing in size due to emptying [19].

Subsequently, the surgical removal should allow the anatomopathological analysis of the excised tissue, that is, it should be removed completely and intact. The objective of the test is to confirm the initial diagnosis and to rule out other pathologies, and in the specific case of Mucocele, to know which type is: mucous extravasation cyst or retention cyst [1,3].

Among all the techniques for the removal of Mucocele, it is essential to determine which is the most appropriate for each case. Therefore, the correct clinical diagnosis is essential, assessing the size and location of the lesion, besides the age of the patient [10].

Surgery with total enucleation of the cystic lesion is commonly performed because it avoids future relapses, and the prognosis is quite favorable [9]. In addition, the technique is simple, fast and safe. Even so, follow-up is important, since there is a risk of relapse, although not frequent [3].

## CONCLUSION

The diagnosis of mucocele should be based on the triad: anamnesis, clinical examination, and histopathological examination. For the definition of the treatment plan, we must be attentive to the details such as the age of the

patient, location, depth, and size of the lesion so that a beneficial prognosis is established. In addition, the patient should be advised on the etiology of the lesion in order to avoid relapses.

## Collaborators

MSD COSTA, bibliographic research, manuscript writing, article submission. CCS MARTINS, bibliographic research. MGC MOMESSO, bibliographic research, revision of the manuscript. APRCB ANDRADE, bibliographic research, manuscript revision and image editing. RCS MOLINA, clinical procedure. PFL CORAZZA, procedure, work supervision.

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