# Treatment of oral mucocele in a baby under local procedures

• **Camilla Vieira Esteves** Department of Stomatology, School of Dentistry, Universidade de São Paulo (USP), São Paulo, SP, Brazil • **Wladimir Gushiken de Campos** Department of Stomatology, School of Dentistry, Universidade de São Paulo (USP), São Paulo, SP, Brazil • **Vinícius Teixeira** Department of Stomatology, School of Dentistry, Universidade de São Paulo (USP), São Paulo, SP, Brazil • **Graicy Vital dos Santos** Odontopediatrics at a Private Clinic, Trevo Saúde, São Paulo, SP, Brazil • **Marília Trierveiler Martins** Department of Oral Pathology, School of Dentistry, Universidade de São Paulo (USP), São Paulo, SP, Brazil • **Celso Augusto Lemos Júnior** Department of Stomatology, School of Dentistry, Universidade de São Paulo (USP), São Paulo, SP, Brazil

**ABSTRACT** | Mucocele is a benign oral lesion, occurring due to partial or complete obstruction of the duct of a minor salivary gland. Obstruction of the salivary gland duct results in saliva retention in the septum and underlying tissues, forming a lesion. The lesion is asymptomatic and often regresses on its own. It may be transparent or purplish in color. It occurs in patients of all ages, from babies to the elderly. *Objectives:* To report a case of oral mucocele treatment in a baby, performed locally . *Materials and methods:* A 4-month-old male baby was referred for evaluation with a lower lip lesion present since birth. The diagnosis suggested a lower lip mucocele, and cryosurgery was performed. *Results:* After 2 months, we noted lesion recurrence, and the patient returned to dental care. A conventional surgical excision of the mucocele was performed. After one year of follow-ups, no recurrences were noticed. *Conclusion:* This case report highlights the importance of a multidisciplinary team for effective treatment in patients and diagnosis.

**DESCRIPTORS** | Mucocele; Pediatric Dentistry; Dental Care for Children.

**RESUMO** | **Tratamento local de uma mucocele oral em um bebê** • Mucocele é uma lesão oral benigna que ocorre graças a obstrução parcial ou completa do duto de uma glândula salivar menor. A obstrução do duto da glândula salivar resulta em retenção de saliva no septo e tecidos subjacentes, formando uma lesão. A lesão é assintomática e frequentemente regride por si só. Ela pode ser transparente ou arroxeada. Ocorre em pacientes de todas as idades, de bebês a idosos. Objetivos: Relatar o tratamento de um caso de mucocele oral em um bebê, realizado localmente. Materiais e métodos: Um menino com quatro meses de idade foi referido para avaliação com uma lesão no lábio inferior, presente desde seu nascimento. Após o diagnóstico sugerir mucocele no lábio inferior, uma criocirurgia foi realizada. Resultados: Depois de dois meses, notamos recorrência da lesão e o paciente voltou ao serviço odontológico. Uma excisão cirúrgica convencional da mucocele foi realizada. Depois de um ano de acompanhamento, nenhuma recorrência foi observada. Conclusão: Este relato de casa ilustra a importância de uma equipe interdisciplinar para o diagnóstico e tratamento efetivos de pacientes.

**DESCRITORES** | Mucocele; Odontologia Pediátrica; Assistência Odontológica para Crianças.

**CORRESPONDING AUTHOR** | **Camilla Vieira Esteves** Stomatology Department, School of Dentistry, Universidade de São Paulo • **Avenida Professor Lineu Prestes, 2227** Butantã, São Paulo, SP, Brasil • **05508-000** E-mail: camilla.santos@alumni.usp.br

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## INTRODUCTION

Mucoceles are benign lesions originating in minor salivary glands, most often in the lower lip, but also in other regions of the oral cavity. This lesion can occur through two mechanisms: leaked saliva into tissue interstices, or through salivary retention.[1] Most reported cases are of single lesions in the oral cavity; however, multiple mucocele lesions may be present.[2]

It appears as a well-defined, painless, bladder-shaped lesion that varies from clear to blue-purple, being more common in children and young adults, affecting both genders equally.[3]

There are several forms of treatment for this lesion, such as surgical excision, marsupialization, micro-marsupialization, intralesional corticoid injection, electrocauterization, and ablation with CO2 laser or Diode laser.[4,5]

The aim of this study is to report a case of a 4-month-old baby treated at the Stomatology Clinic of the School of Dentistry at the Universidade de São Paulo.

## CASE REPORT

A 4-month-old white male baby was referred to the Stomatology Clinic of the School of Dentistry at the Universidade de São Paulo, with an oral lesion in his labial mucosa. Intraoral examination revealed a pedunculated soft nodular lesion of approximately 1 cm, and translucid coloration on the right side of the lower lip. The diagnosis suggested mucocele, but the mother did not remember any episode of local trauma. Since the lesion was present since birth, the mother reported it hindered breastfeeding. The treatment proposed was cryosurgery, a minimal intervention technique, due to the baby's young age (Figure 1).

Cryosurgery was performed under local anesthesia, and 4 30-second cycles of liquid nitrogen were applied until the lesion was totally frozen. After the procedure, the lesion healed. It, however, relapsed after two months.

**FIGURE 1** | The lesion's initial aspect. A pedunculated soft nodular lesion of approximately 1 cm in the lower lip.

Since the parents lived far from the stomatology clinic, his mother took him to a medical center close to their home, and the treatment proposed there was excisional surgery under general anesthesia, which they refused. The parents then returned to our clinic.

The patient was treated under physical restraints. A Pedi-wrap was used to enable immobilization, and surgical precision (Figure 2). The excisional biopsy was performed under local anesthesia with 2% lidocaine with vasoconstrictor epinephrine 1:100,00. The total anesthesia dosage utilized during the procedure was 1/8 of the anesthetic tube, respecting the anesthetic dosage to patient weight ratio. The closure was performed with a 4-0 suture. His mother related that his feeding improved postoperatively.

Histopathological analysis showed atrophic parakeratinized stratified squamous epithelium, exhibiting extravasated mucoid and granulation tissue foci infiltrated by mononuclear cells, compatible with oral mucocele (Figure 3).

After one year of follow-ups, no recurrences were noticed.

**FIGURE 2** | Procedure under local anesthesia. Multidisciplinary team, and patient under physical restraint with the Pedi-wrap.

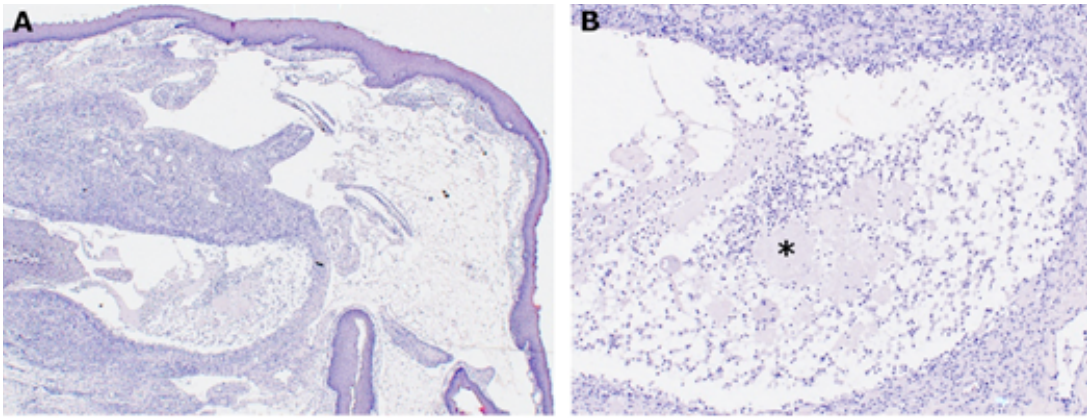


**FIGURE 3** | Histological aspects. A: Mucosa showing a large cavity in the lamina propria that extends from the subepithelial region throughout the section's thickness (25× the original). B: The extravasated mucin (*) inside the cavity is permeated by inflammatory cells – especially foamy macrophages, and surrounded by granulation tissue (100×). Hematoxylin and eosin were used as staining agents.

## DISCUSSION

Mucoceles are common soft tissue lesions that occur in the oral cavity, whose most affected anatomical regions are the lower lip (81.9%), the floor of the mouth (5.8%) (also called ranula), and the ventral surface of the tongue - also called mucocele of the glands of Blandin-Nuhn (5%).[6] The anatomical region affected in this study's patient was the lower lip. There are few cases reported in the literature of mucoceles in newborn babies.[7]

One of the available procedures for newborns would require general anesthesia, but there are still considerable risks of perioperative complications or morbidities for this age group, justifying the ambulatorial treatment.[8] For Vitale et al.,[9] Diode Laser is an option for treating mucoceles on the lower lip of a newborn, 4-month-old baby, since it is fast, effective and safe. Unfortunately, we could not use it due to equipment unavailability at the time.

The treatment initially proposed was cryotherapy.[4] The patient presented lesion recurrence after two months. As it is a lesion most frequently found on the lower lip, a region subject to mechanical stimuli such as the act of sucking for breastfeeding, lip suction, or

lesion suction, we believe that these factors may have contributed to the recurrence of this pathology. This lesion's recurrence rate is 12.8%, with most recurrences occurring in the ventral surface of the tongue, followed by the lower lip.[1]

The second removal surgery was performed by a multidisciplinary dental team composed of a pediatric dentist, stomatologist, and maxillofacial surgeon; a fact that highlights the importance of multidisciplinary care, and especially of the presence of a dentist specialized in baby care to provide safety and tranquility for the patient, professional team, and parents.

## CONCLUSION

There are several ways of treating mucoceles in babies. Treatment under local anesthesia is totally feasible. Relapses can occur and must be treated.

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