

Surgical treatment of mucocele in an 11 month-old baby: a case report

Robson Frederico Cunha* / Ana Elisa De Mello Vieira** / Daniela Maria Carvalho Pugliesi*** / Monique Guimaraes Correia**** / Marcelo Macedo Crivelini*****

The present report describes the occurrence of mucocele in the lower lip of an 11 month-old baby. The treatment instituted was the excision of the lesion. Microscopic examination confirmed the diagnosis of mucocele. Three months after surgery, no sign of recurrence was observed.

J Clin Pediatr Dent 26(2): 203-206, 2002

INTRODUCTION

One of the major objectives of dentistry for babies, in addition to providing guidance to the parents about prevention including oral hygiene,¹ is the early diagnosis of lesions that might occur in this age range.

Among the most prevalent benign lesions involving the oral cavity of children is the mucocele (also called mucus retention phenomena).^{2,4} Such lesions occur in all age ranges, including babies,⁵ with a higher incidence during the second decade of life.⁶ Mucocele consists of a volumetric increase caused by the accumulation of mucus inside the tissues. The preferential localization is the lower lip, and this possibly is related to a higher incidence of mechanical trauma, such as by biting, in this region.⁷ It may also be found on the tongue, palate and buccal mucosa.⁸

The major etiological factor is related to trauma, which provokes rupture and/or occlusion of the excretory duct of the salivary gland involved, leading to extravasation and accumulation of salivary mucus inside connective tissue.⁶

The lesions have a sessile or pedicle base, are of flaccid or fibrous consistency and may reach more than 1cm in size. They have clearly defined limits and a smooth surface and are usually lined with a thin mucosa. Evolution is rapid or slow and painless, with periods of remission and exacerbation. If the lesion is localized superficially, it presents a bluish coloring due to the superficial capillary network that appears through it.⁶ When located more deeply in tissues, the color is similar to that of the mucosa.⁸ In the presence of trauma the surface may become irregular with a pink coloring.

Microscopic analysis usually reveals the presence of granulation tissue, which may contain leukocytes, lymphocytes, plasma cells and foamy histiocytes. The lumen of the cavity is filled with an eosinophilic material containing a varied number of inflammatory cells.⁹

Prognosis is favorable and several treatments have been proposed in the literature, such as excision of the lesion associated or not with removal of the gland involved,⁸ cryosurgery,^{10,11} laser,¹² and micro-marsupialization.^{6,13}

The objective of the present report is to describe the occurrence and treatment of a benign lesion of the mucocele type in an 11 month-old baby.

CASE REPORT

An 11 month-old boy was referred to Baby Clinic of the School of Dentistry at Araçatuba - Paulista State University (UNESP), with a main complaint of volumetric increase in the lower left labial mucosa. The mother reported that she had noted the lesion, while performing oral hygiene on her baby and that the

* Robson Frederico Cunha, DDS, PhD, Assistant Professor, Department of Pediatric Dentistry, School of Dentistry, Paulista State University - UNESP, Aracatuba, SP, Brazil.

** Ana Elisa De Mello Vieira, DDS, Post-graduate student in Pediatric Dentistry at Paulista State University - UNESP, Aracatuba, SP, Brazil.

*** Daniela Maria Carvalho Pugliesi, DDS, Post-graduate student in Pediatric Dentistry at Paulista State University - UNESP, Aracatuba, SP, Brazil.

**** Monique Guimaraes Correia, DDS, Student of the Extension Course in Pediatric Dentistry.

***** Marcelo Macedo Crivelini, DDS, PhD, Assistant Professor, Department of Oral Pathology, School of Dentistry, Paulista State University - UNESP, Aracatuba, SP, Brazil.

Send all correspondence to Dr. Robson Frederico Cunha, Department of Pediatric Dentistry, School of Dentistry, Paulista State University - UNESP, Rua Jose Bonifacio no 1193, CEP 16015-050, Aracatuba, Sao Paulo - Brazil.

Phone#55 18620 3235-Fax#55 186244890
Email: cunha@foa.unesp.br



Figure 1. Mucocele on the lower lip in an 11 month-old baby. Clinical appearance.



Figure 2. Local anesthesia around the lesion.



Figure 3. Appearance after the ellipsoid wedge-shaped incision.

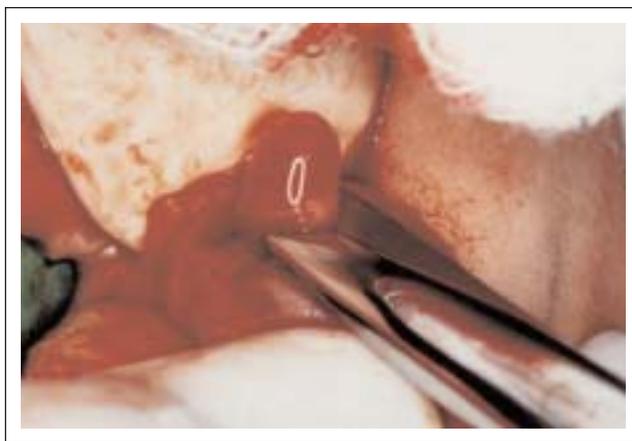


Figure 4. Removal of the entire lesion.

lesion was increasing in size. When asked about the occurrence of trauma at the site that might have given origin to the lesion, she stated that she could not remember any such episode.

Intraoral examination showed the presence of a single cylindrical nodule about 0.5cm in diameter with a pedicled implantation. The lesion presented a smooth surface, little mobility, regular contours with sharp limits, and soft consistency (Figure 1). According to the clinical characteristics observed, the diagnostic hypothesis was a mucus retention phenomenon (mucocele) and the treatment instituted was excision of the lesion associated with removal of the glands involved.

The technique was performed as follows: the area was disinfected with 0.1% iodine; a topical anesthetic (Emla, prilocaine and lidocaine - Astra) was applied to cover the entire lesion for approximately three minutes and a local anesthesia around the lesion was done (Figure 2). Then an ellipsoid wedge-shaped incision was made (Figure 3). After removal (Figure 4), the mucosa was sutured and the removed tissue was sent for

histopathological examination. This examination revealed granulation tissue lining cavities containing numerous foamy histiocytes and mononuclear inflammatory cells (Figure 5). This confirmed the diagnosis of mucocele.

The mother of the baby reported loosening of the suture after four days. A slight inflammation in the area was observed. There were no signs of local hemorrhage or infectious processes (Figure 6). The mother also reported that there was no change in the behavior of the baby after surgery.

Follow-up has been done since the performance of the technique. Three months after surgery, the mucosa presented normal characteristics and no evidence of recurrence (Figure 7).

DISCUSSION

In the Baby Clinic at the School of Dentistry at Araçatuba, invasive procedures are performed only with local anesthesia associated with physical restraint, without the use of sedation or general anesthesia. This work requires a well-prepared dental and

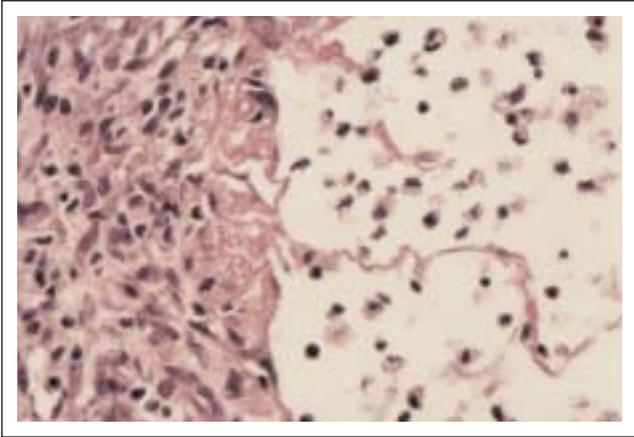


Figure 5. Histologic aspects of the lesion, showing cavity lined by granulation tissue, containing foamy histiocytes. H.E. 400x.



Figure 6. Follow-up of 7 days.



Figure 7. 3 months postoperative there is normal healing and no evidence of recurrence.

auxiliary team so that rapid and successful procedures may be executed.

When providing care to babies, a detailed clinical examination is necessary even before the eruption of the first teeth because of the possible occurrence of lesions involving soft tissues.

After the early detection of such lesions, the professional should obtain an accurate clinical history, since the information provided by the parents can be of great value for the final diagnosis.

Babies often have sucking and biting habits that may lead to the onset of the mucus retention phenomenon. In the specific case of mucocele, it is important to question the parents about periods of remission and probable traumatic injury to the lower lip.

More conservative treatment, such as the micro marsupialization cited by Delbem *et al.*¹³ was not indicated in the present case because this was a lesion with a pedicled base and because of the inability of the patient to cooperate during the postoperative period.

After the removal of the lesion, the suture must not be placed too deeply in the mucosa so the underlying tissue is not reached. Otherwise damage to and obstruction of the adjacent salivary duct may be the cause of a recurrence.¹⁰

This case has been reported because of the occurrence of such a lesion in an 11 month-old baby. Spontaneous rupture could have emptied the swelling, but surgical intervention was the choice, since the child was provoking additional traumas to the lesion. Poker and Hoper also reported that the development of such a large cyst in a small infant leads to immediate concern from the parents and the rapid increase to a large size was very alarming.⁵

REFERENCES

1. Cunha RF, Delbem ACB, Percinoto C, Saito TE. Dentistry for babies: a preventive protocol. *J Dent Child* 67: 89–92, 2000.
2. Skinner RL, Davenport Jr WD, Weir JC, Carr RF. A survey of biopsied oral lesions in pediatric dental patients. *Pediatr Dent* 8: 163–167, 1986.
3. Das S, Das AK. A review of pediatric oral biopsies from a surgical pathology service in a dental school. *Pediatr Dent* 15: 208–211, 1993.
4. Maia DMF, Merly F, Castro WH, Gomez RS. A survey of oral biopsies in Brazilian pediatric patients. *J Dent Child* 67: 128–131, 2000.
5. Poker ID, Hopper C. Salivary extravasation cyst of the tongue. *Br J Oral Maxillofac Surg* 28: 176–177, 1990.
6. Castro AL. Glândulas salivares. In *Estomatologia*, 2ª Ed. São Paulo. Santos, pp 152–154, 1995.
7. Harrison JD. Salivary mucoceles. *Oral Surg Oral Med Oral Pathol* 39: 268–278, 1975.
8. Shafer WG, Hine MK, Levy BM. Lesões físicas e químicas da cavidade bucal. In *Tratado de Patologia Bucal*. 4ª Ed. Rio de Janeiro: Guanabara, pp 512–515, 1985.
9. Neville BW, Damm DD, Allen CM, Bouquot JE. *Oral and maxillofacial pathology*. 1st Ed. WB Saunders Company, pp 322–323, 1995.
10. Kamata H, Kobayashi S, Shimura K. Surgical treatment of a mucocele. *Bull of Kanagawa Dent Coll* 17: 187–190, 1989.
11. Twetman S, Isaksson S. Cryosurgical treatment of mucocele in children. *Am J Dent* 3: 175–176, 1990.

12. Neumann RA, Knobler RM. Treatment of oral mucous cysts with an argon laser. *Arch Dermatol* 126: 829–830, 1990.

13. Delbem ACB, Cunha RF, Vieira AEM, Ribeiro LLG. Treatment of mucus retention phenomena in children by the micro-marsupialization technique: case reports. *Pediatr Dent* 22: 155–158, 2000.