

CASE REPORT

Eruption Cyst in the Neonate

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ABSTRACT

The pediatric dental approach to the oral cavity of newborns requires special attention, as many aspects are unique and peculiar to this period of life. It is important that pediatricians and pediatric dentists be aware of the characteristics within normal newborn patterns and prepared to make a correct diagnosis of abnormalities at early stages. Congenital eruption cysts (ECs) are rarely observed in newborns, as at this stage of a child's life, tooth eruption is unusual. This study reports a case of EC treated successfully by monitoring of the lesion, without any surgical procedure. In the 4th month, the lesion had completely regressed, and the deciduous central incisors had erupted without problems. The clinical and radiographic monitoring of ECs in newborns seems to be a satisfactory management procedure, similar to what is recommended for older children.

Keywords: Congenital, Eruption cyst, Neonate.

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INTRODUCTION

Eruption cysts are located superficially on the crown of a tooth at the eruption stage, slightly before emerging into the oral cavity.^{1,2} The cyst appears as a bluish, translucent, elevated, compressible lesion in the shape of a dome in the alveolar ridge, as one of the local changes during teeth eruption.³ Discomfort is rare; however, the presence of this lesion can hinder or even harm the appearance of teeth in the oral cavity.⁴

This change involves predominantly deciduous mandibular central incisors and permanent first molars.⁵ On radiographic examination, it is difficult to distinguish the space between the EC and the tooth, as both are closely linked with the soft tissues of the alveolar crest.^{6,7}

This report aims to describe a rare case of congenital EC treated successfully by monitoring of the lesion, without any surgical procedure or tooth extraction.

CASE REPORT

At the Dom Orione Maternity Hospital in the city of Araguaína, Tocantins, Brazil, a male infant newly born through natural child birth, full-term, weighing 3600 gm, presented with gingival bulging in the anterior mandible, equivalent to the presence of central incisors (Fig. 1).

Physical examination revealed an exophytic lesion 2 cm in diameter, compressible, flaccid, and yellow, leading to an initial diagnosis of "congenital EC." The newborn exhibited no feeding problems or other complications. A radiograph of the mandibular anterior occlusal revealed the superficial placement of the deciduous central incisors (Fig. 2). The procedure of choice, based on the patient's age and the clinical diagnosis, was monitoring of the



Fig. 1: Gingival bulge in the anterior mandible, equivalent to the presence of central incisors

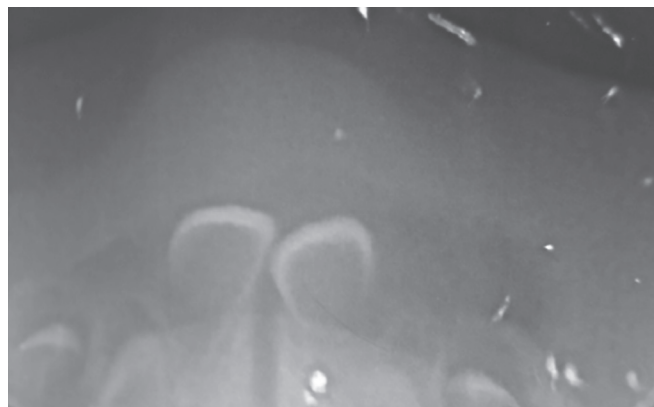


Fig. 2: Radiographic appearance of the reported area

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Fig. 3: One-month follow-up, showing a significant reduction in lesion size



Fig. 4: Four months follow-up, showing normal eruption of the deciduous central incisors

injury. Regardless of this initial decision, the possibility of surgical intervention was not discarded if there was no spontaneous regression.

Follow-up visits were scheduled after 15 days and monthly thereafter. After approximately 1 month, the lesion size had decreased, and the color changed from yellowish to normal gingiva color (Fig. 3). By the 4th month, the lesion had completely disappeared, and the deciduous central incisors erupted without problems (Fig. 4). Follow-up radiographs showed normal root development of the central incisors. The patient is still under control, exhibiting a normal eruption sequence and complete regression of the initial lesion.

DISCUSSION

Eruption cyst is a pathological condition found in the oral cavity during childhood, represented by swelling of the soft tissue located on the alveolar ridge, adjacent to the erupting tooth.^{5,6,8} The origin of the EC is still debated. Certain authors attribute its origin to degenerative changes of the reduced enamel epithelium after the end of amelogenesis or suggest that the cyst develops from the remnants of the dental lamina that coats the erupting teeth.⁵ Regardless of the precise etiology, the term EC is correctly used when the affected tooth is located in the soft tissues lining the alveolar bone during tooth eruption. When the tooth is surrounded by bone, the same lesion should be referred to as a dentigerous cyst, according to the classification adopted by the World Health Organization.^{3,4,9} In this case study, the radiographs showed normal deciduous central incisors with no evidence of bone pathology.

Clinically, the EC appears as a circumscribed, floating, often translucent volumetric increase in the alveolar impeller at the site of tooth eruption. When the circumcoronal cystic cavity contains blood, the swelling appears purplish or dark blue and is called an eruption hematoma.⁷

The clinical findings observed in this case are characterized by a fluctuating and compressible swelling suggestive of fluid retention, resembling a mucocele. However, secondary salivary glands are not found in the alveolar impeller, excluding this hypothetical diagnosis.⁴

Although most reports of ECs are in the first decade of life, only a few studies have shown this type of lesion in newborns.¹⁰

Alemán Navas et al³ reported a case of neonate presenting a lesion 2 × 2 cm in diameter, exophytic, soft, yellowish, and compressible in the anterior mandibular region. The diagnosis of EC was made by clinical, radiographic, and histopathological examination. At 4 months, the lesion had completely disappeared, and the deciduous central incisors had erupted without problems.

Ricci et al⁴ described a case of EC in a newborn, in which clinical follow-up was adopted. Forty-five days after the first consultation, the lesion had nearly disappeared. Complete regression was observed after 60 days, and 4 months after the initial examination, the central incisors had already erupted, showing small hypoplastic areas on the incisal edges.

Peters and Schock¹¹ reported a case of a newborn presenting two symmetrical lesions in the anterior dome of the mandible alveolar ridge. Treatment was established, and periodic follow-up visits were scheduled. At 2 months, both incisors were completely erupted.

Although the EC cannot be detected on radiographic examination due to the lack of bone involvement, radiography is recommended to evaluate the morphology of the affected tooth and its surrounding bone.^{3,5,6} Radiographic examination in this case revealed normal deciduous central incisors, with no evidence of bone pathology.

Eruption cysts may be associated with natal or neonatal teeth and have been classified as mature natal or neonatal teeth when the tooth is almost or fully developed and has relatively good prognosis to be maintained or as immature natal or neonatal teeth when the tooth has

incomplete or nonstandard structure, resulting in poor prognosis.³ When poorly implemented, the natal or neonatal tooth is dangerous to the newborns, as it can loosen during breastfeeding and be aspirated; thus, extraction is indicated.^{3,12,13} In the clinical case in question, the central incisors were palpable in the cyst; however, the decision to preserve them was made because they did not present hypermobility, did not interfere with feeding, and did not cause discomfort in the mother or the child.³

The treatment options for EC have been thus far no procedure and monitoring,^{3,4,9,11} marsupialization,¹⁰ or surgical extraction of the involved tooth.^{3,5,10} When these cysts prevent the eruption of a deciduous tooth, marsupialization may be considered. Extraction is indicated when the teeth present mobility or interfere with lactation.¹¹ In this case of congenital EC, the treatment of choice was monitoring of the lesion, without any surgical intervention or tooth extraction.

In newborns, clinical and radiographic monitoring of the EC seems to be adequate, similar to the procedure recommended for older children.

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REFERENCES

1. Abanto J, Raggio DP, Alves FB, Corrêa FN, Bönecker M, Corrêa MS. Oral characteristics of newborns: report of some oral anomalies and their treatment. *Int J Dent* 2009 Jul-Sep;8(3): 140-145.
2. Friend GW, Harris EF, Mincer HH, Fong TL, Carruth KR. Oral anomalies in the neonate, by race and gender, in an urban setting. *Pediatr Dent* 1990 May-Jun;12(3):157-161.
3. Alemán Navas RM, Martínez Mendoza MG, Leonardo MR, Silva RA, Herrera HW, Herrera HP. Congenital eruption cyst: a case report. *Braz Dent J* 2010 Sep;21(3):259-262.
4. Ricci HA, Parisotto TM, Giro EM, de Souza Costa CA, Hebling J. Eruption cysts in the neonate. *J Clin Pediatr Dent* 2008 Spring;32(3):243-246.
5. Bodner L, Goldstein J, Sarnat H. Eruption cysts: clinical report of 24 new cases. *J Clin Pediatr Dent* 2004 Winter;28(2): 183-186.
6. Aguiló L, Cibrián R, Bagán JV, Gandía JL. Eruption cysts: retrospective clinical study of 36 cases. *ASDC J Dent Child* 1998 Mar-Apr;65(2):102-106.
7. Dhawan P, Kochhar GK, Chachra S, Advani S. Eruption cysts: a series of two cases. *Dent Res J (Isfahan)* 2012 Sep;9(5): 647-650.
8. Nagaveni NB, Umashankara KV, Radhika NB, Maj Satisha TS. Eruption cyst: a literature review and four case reports. *Indian J Dent Res* 2011 Jan-Feb;22(1):148-151.
9. Hayes PA. Hamartomas, eruption cyst, natal tooth and Epstein pearls in a newborn. *ASDC J Dent Child* 2000 Sep-Oct;67(5):365-368.
10. Clark CA. A survey of eruption cysts in the newborn. *Oral Surg Oral Med Oral Pathol* 1962 Aug;15:917.
11. Peters RA, Schock RK. Oral cysts in newborn infants. *Oral Surg Oral Med Oral Pathol* 1971 Jul;32(1):10-14.
12. Singh S, Subba Reddy VV, Dhananjaya G, Patil R. Reactive fibrous hyperplasia associated with a natal tooth. *J Indian Soc Pedod Prev Dent* 2004 Oct-Dec;22(4):183-186.
13. Sharma A. Non syndromic multiple erupted natal teeth with gingival swelling: a rare case report. *Arch Oral Sci Res* 2013;3(1):56-64.