INTRODUCTION

Congenital pathologies are those existing at or dating from birth. Occurrence of congenital cystic lesions in the oral cavity is uncommon in neonates. Eruption cyst (EC) is listed among these unusual lesions. It occurs within the mucosa overlying teeth that are about to erupt and, according to the current World Health Organization (WHO) classification of epithelial cysts of the jaws, EC is a separate entity. This paper presents a case of congenital EC successfully managed by close monitoring of the lesion, without any surgical procedure or tooth extraction. Eruption of the teeth involved, primary central incisors, occurred at the fourth month of age. During this time neither the child nor mother had any complication such as pain on sucking, refusal to feed, airway obstruction, or aspiration of fluids or teeth.

Key Words: congenital, eruption cyst, primary teeth, children.

Congenital pathologies are those existing at or dating from birth. Occurrence of congenital cystic lesions in the oral cavity is uncommon in neonates. Eruption cyst (EC) is listed among these unusual lesions. It occurs within the mucosa overlying teeth that are about to erupt and, according to the current World Health Organization (WHO) classification of epithelial cysts of the jaws, EC is a separate entity. Although most EC reports are in the first decade of life, only a few reports have shown this type of lesion in neonates (3-5).

Correspondence: Profa. Dra. Raquel Assed B. da Silva, Faculdade de Odontologia de Ribeirão Preto, Universidade de São Paulo, Avenida do Café, s/n, Monte Alegre, 14040-904 Ribeirão Preto, SP, Brasil. Tel: +55-16-3602-4786. Fax: +55-16-363-0999. e-mail: raquel@forp.usp.br
This paper presents a case of congenital EC successfully managed by close monitoring of the lesion, without any surgical procedure or tooth extraction.

CASE REPORT

A Caucasian male infant, born full-term after an uncomplicated pregnancy was evaluated by his pediatrician at the moment of birth finding an intraoral mass in the anterior sector of the mandible. The patient was referred to the Department of Oral and Maxillofacial Surgery of Zacamil’s Nacional Hospital, El Salvador, San Salvador for evaluation and treatment.

Physical examination revealed a 2x2 cm diameter exophytic, soft, yellowish compressive lesion in the anterior sector of the mandible. The patient did not have feeding problems or other complications. Radiographic examination showed normal primary central and lateral incisors with no evidence of bone pathology (Fig. 1). A needle aspiration biopsy of the lesion was done, obtaining a yellow liquid similar to that obtained from dentigerous cysts. The histopathological evaluation showed the presence of cholesterol crystals compatible with cystic lesions (Fig. 2). The aspiration of the lesion helped to diminish the pressure and the size of it. Also primary central incisors could be palpated under the lesion after aspiration.

The diagnosis of a congenital EC was done through clinical, radiographic and histopathological findings. Due to patient’s age and the absence of feeding problems the treatment of choice was to monitor the lesion. Outpatient follow-up visits were scheduled 15 days later, and then monthly. After 1 month, the size of the lesion had diminished to 1.0 x 0.7 cm, and the color had changed from yellowish to a normal gingival color. By the 4th month, the lesion had disappeared completely and the central primary incisors had erupted without problems (Fig. 3). Radiographic follow up showed normal root development of the central incisors. The patient is still under control with adequate eruption sequence and complete regression of the initial lesion.

DISCUSSION

The etiology of EC is controversial. Some attribute its development to degenerative cystic changes in the reduced enamel epithelium following completion of amelogenesis, while others suggest that the cyst develops from the epithelial remnants of the dental

Figure 1. A 2x2 cm diameter eruption cyst at the moment of birth. Notice the yellowish aspect of the lesion.

Figure 2. Cystic content obtained after needle aspiration biopsy, similar to the content obtained from a dentigerous cyst.

Figure 3. Four-month follow-up showing normal eruption of primary central incisors, without abnormal mobility or other pathology.
lamina overlying the eruption tooth. The pathogenesis
of EC is probably similar to that of DC. The difference
is that, in EC, the tooth is hampered in breaking through
to the surface by the soft tissues of the gingival rather
than the bone (6). O’Hara et al. (7) reported that chronic
administration of cyclosporine to neonatal dogs induced
development of EC, which was reversible once the
treatment was discontinued; however there are no studies
in humans. In the present report, the patient was not
exposed to cyclosporine.

The mean age of patients with EC varies from one
study to another; Bodner et al. (3) reported an average
age of 4.44 ranging from 1 month to 12 years, whilst
others reported an average from 6.66 to 8.18 years (8-
10). Most of the cases were at the first decade of life,
an age when the primary dentition and many of the
permanent teeth normally erupt (3). Reports of EC in
extreme ages are considered rare. There are two reports
of EC in patients aged 40- and 46-year-old (6). ECs are
rarely observed in neonates considering that at this stage
of the child’s life teeth erupting are uncommon. Clark
(4) reported a total of 6 ECs in newborns, on a study of
approximately 3,000 births. Bodner et al. (3) reported
2 cases of neonatal cysts (3). In all cases, the size of the
cysts was not reported and none of them seem to be as
large as our case.

Gender predilection of EC is controversial.
While some authors (3,9) reported a male predilection
(male:female ratio 2:1), others (10) found no gender
differences or a female predilection (8). Our patient
was a Caucasian male coinciding with more recent data
previously reported of male Caucasian predilection.

Treatment options have been: no treatment and
follow up, marsupialization or surgical extraction. The
role of histopathology in establishing the final diagnosis
is not essential, however, it is important to prevent any
misdiagnosis, such as hemangioma, melanoma, unicystic
ameloblastoma, keratinizing cystic odontogenic tumor,
mucocle, mainly when the treatment is marsupialization
or enucleation of the lesion (6).

EC may be associated to natal or neonatal teeth
and has been classified as mature natal or neonatal when
the tooth is nearly or fully developed and has relatively
good prognosis for maintenance, and immature natal or
neonatal when the tooth has incomplete or substandard
structure, implying in poor prognosis. Removal of
natal or neonatal teeth is indicated when they interfere
with feeding, have highly mobility, and/or are poorly
developed (2). Bodner et al. (3) in a clinical report of
24 new cases of ECs reported 2 cysts associated with
natal teeth. In this report, one of the teeth was treated
with extraction and the other one was treated without
extraction. In the present case, after needle aspiration
of the cyst, central incisors where palpable under the
cyst, but the decision of preserving them was taken
because they did not have hypermobility, they were not
interfering with feeding, and did not cause discomfort
to the mother or the child. We waited cyst regression
and normal eruption of teeth, which took place by the
fourth month of age.

Although the histopathological analysis is not
essential to establish the final diagnosis, a needle
aspiration biopsy would definitely confirm the fluid filled
aspect, ruling out solid lesions. The evaluation of the
aspirated cystic content may demonstrate the presence
of cholesterol crystals presenting a slightly yellow color
and low viscosity. As in the present report, cholesterol
crystals have been described as a frequent component
of the cyst capsule and fluid. The cystic content should
present a slightly yellow color and low viscosity (6).

Unlike other odontogenic cysts, where
radiography is essential for diagnosis, EC is not
detectable on radiographic examination because there
is usually no bone involvement. Even so, radiography is
highly recommended for evaluation of the morphology
of the involved tooth or its surrounding jaw bone (6).

The present case of congenital EC was successfully
managed by close monitoring of the lesion, without any
surgical procedure or teeth extraction. Parents were well
informed about the pathology and its implications. Both
child and mother had no complications during feeding
and normal eruption of primary teeth occurred by the
4th month. Although in this case monitoring the lesion
was the ideal approach, the treatment of choice must
be case specific with adequate analysis of clinical and
radiographic findings.

RESUMO

Patologias congênitas são aquelas que aparecem ao nascimento. A
ocorrência de lesões císticas congênitas na cavidade bucal é rara
em recém-nascidos. O cisto de erupção (CE) pode ser considerado
como lesão rara que se localiza na mucosa que recobre um dente
que está próximo do momento de sua erupção. De acordo com
a classificação de cistos epiteliais dos maxilares, descrita pela
Organização Mundial da Saúde (OMS), os CE são considerados
uma entidade distinta. O presente relato descreve um caso clínico
de um cisto congênito de erupção tratado com sucesso somente
pelo acompanhamento da lesão, sem a necessidade de nenhuma
intervenção cirúrgica ou extração dentária. A erupção dos dentes
envolvidos (incisivos centrais deciduos) ocorreu aos 4 meses de idade e durante este período não houve reclamações da mãe e/ou da criança em relação a dor para sucção, recusa para se alimentar, obstrução das vias aéreas e aspiração de fluidos ou de dentes.

REFERENCES


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