Eruption hematoma in deciduous and permanent dentition: Case reports

Henrique Castilhos Ruschel
Daniel Homem Braga
Simone Helena Ferreira
Alessandra Dutra da Silva

ABSTRACT

Eruption cyst is a soft tissue cyst, resulting from dilation of the follicular space around the crown of the erupting tooth, caused by the accumulation of fluid or blood. When the cystic cavity surrounding the crown of the tooth contains blood, the lesion is called an eruption hematoma. The objective of this study was to report two clinical cases of asymptomatic eruptive hematomas, one related to deciduous dentition and the other to permanent dentition. The treatment of the cases was based on follow-up, without the necessity of surgical intervention and the correct eruption of the teeth was observed.

Keywords: Odontogenic cysts; hematoma; dental eruption.

Hematoma de erupção em dentição decídua e permanente: relato de casos clínicos

RESUMO

Cisto de erupção é um cisto de tecido mole decorrente de uma dilatação do espaço folicular em torno da coroa do dente em erupção, causado pelo acúmulo de líquido ou de sangue. Quando a cavidade cística que circunda a coroa do dente contém sangue, a lesão é denominada hematoma de erupção. O objetivo deste trabalho foi relatar dois casos clínicos de hematomas de erupção, assintomáticos, um relacionado à dentição decídua e o outro à dentição permanente. O tratamento dos casos foi baseado no acompanhamento, sem necessidade de intervenção cirúrgica e foi observada a correta erupção dos dentes.

Palavras-chave: cistos odontogênicos; hematoma; erupção dentária.

Henrique Castilhos Ruschel – PhD in Pediatric Dentistry from Universidade de São Paulo (USP), São Paulo/SP, Brazil, and Professor at the School of Dentistry, Universidade Luterana do Brasil (ULBRA), Canoas/RS, Brazil.
Daniel Homem Braga – DDS from the School of Dentistry, ULBRA, Canoas/RS, Brazil.
Simone Helena Ferreira – MSc in Public Health from ULBRA, Canoas/RS, Brazil, and professor at the School of Dentistry, ULBRA, Canoas/RS, Brazil.
Alessandra Dutra da Silva – PhD in Oral Pathology from Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre/RS, Brazil and Professor at the School of Dentistry, Universidade Federal de Santa Catarina (UFSC), Florianópolis/SC, Brazil.
Corresponding Author: Henrique Castilhos Ruschel. Rua da República 338, apto, 806. CEP: 90050-320. Porto Alegre/RS. Telephone: (55) 51 9988.6962. E-mail: henrirus@gmail.com

INTRODUCTION

Eruption cyst is a soft tissue cyst, resulting from dilation of the follicular space around the crown of the erupting tooth, caused by the accumulation of fluid or blood. When the cystic cavity surrounding the crown of the tooth contains blood, the lesion is called an eruption hematoma. These lesions occur in the eruptive phase associated with deciduous or permanent teeth (1).

According to the World Health Organization (2017), in the classification of epithelial cysts of the jaws, the eruption cyst is considered a variant of the soft tissue of the dentigerous cyst. While this cyst occurs in soft tissues, the dentigerous cyst develops around the crown of a tooth inside the alveolar bone (2).

Clinically, the eruption cyst presents a volume increase of soft consistency, often with translucent aspect, in the gingival mucosa that covers the crown of the tooth. The coloring can range from normal color of the mucosa to dark blue, depending on the presence of blood in the cystic fluid. In these cases, as already described, these lesions are commonly called eruption hematoma, usually as a result of trauma. Most are asymptomatic, but may be painful on palpation due to secondary factors, such as trauma or infection (1, 3).

The literature reveals a low prevalence of these lesions, which can range from 1-2%. This may be due to the fact that the majority of lesions are asymptomatic and present spontaneous resolution (4, 5). They are most commonly associated with the lower deciduous central incisors and the first permanent molars (1, 2).

In relation to treatment, most cases do not require intervention, because the tooth erupts normally. Therefore, the condition disappears spontaneously and any intervention should be postponed. Surgical intervention is required in cases of pain and discomfort, lack of spontaneous regression and compromising of dental eruption. In addition, monitoring of the eruption of the teeth involved is necessary (6, 7).

Thus, the aim of this study was to report two cases of eruption hematoma, one related to deciduous dentition and the other to permanent dentition.

CASE REPORTS

In this study, both cases described were of patients seen at the Pediatric Clinic of the School of Dentistry of Universidade Luterana do Brasil (ULBRA), located in the city of Canoas, southern Brazil.

Case 1

A one-year-and-six months old male patient came to the clinic, brought by his mother, who reported the "presence of a bluish gum area in her son". The examination showed a small increase of volume in the alveolar mucosa, of bluish-red color, in the

region of the upper right first deciduous molar. The clinical condition characterized an eruption hematoma (Figure 1).

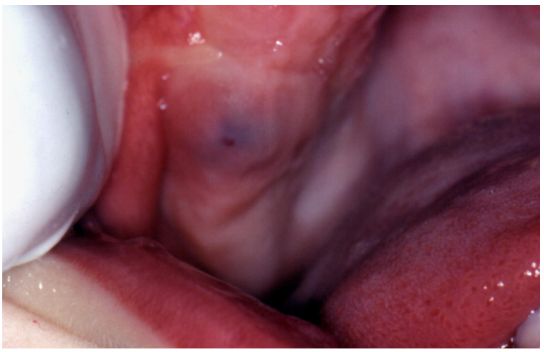

Figure 1 – Clinical image of the eruption hematoma in the alveolar mucosa in the region of the upper right first deciduous molar.

Based on the clinical aspect and the asymptomatic condition, no specific treatment was performed. The parents were told that this lesion was a benign condition and to encourage the use of baby teething toys, since the child was already using these devices.

The evolution of the lesion was monitored and evaluated, and the parents were advised to come back if there were an increase in size, pain or discomfort at in the region. Six months later, the first molar erupted. No clinical change was observed in the tissues adjacent to the tooth (Figure 2).

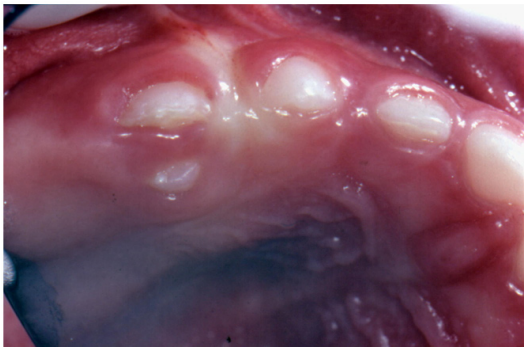

Figure 2 – Clinical image of the eruption of the first deciduous molar and complete regression of the lesion, six months after the initial examination.

Case 2

A nine-year-old male patient came to the clinic with his parents, who were worried by the presence of an "increase in volume of darkened color in the oral cavity of their son".

On examination, an increase in volume of the alveolar mucosa with blue color in the region of the mandibular lower right second premolar, was observed. The patient reported no pain associated with the lesion. The lesion was not of rigid consistency on palpation and presented a smooth surface. Radiographic examination showed no changes in bone tissue in the region. Based on the clinical and radiographic features observed, the diagnosis was eruption hematoma (Figures 3 and 4).

Figure 3 – Clinical image of the eruption hematoma in alveolar mucosa in the mandibular second premolar region on the right side.

Figure 4 – Radiographic image of the tooth associated with the lesion with no sign of bone lesion.

Due to the size of the lesion and parents' concern, a surgical procedure (gingival ulectomy) of the lesion was scheduled. However, the patient did not appear for the procedure. Two months later, the patient returned with the complete regression of the lesion (Figure 5).

Figure 5 – Clinical image of the eruption of the second premolar and complete regression of the lesion two months after the initial examination.

DISCUSSION

This study presents the report of two clinical cases of eruption hematoma in the deciduous and permanent dentitions. The difference between eruption cyst and eruption hematoma is not clear, in the literature. Some authors believe that these conditions are the same pathology (1-3). The two cases described were diagnosed as eruption hematoma due to their bluish color associated with volume increase of alveolar mucosa.

The cyst or eruption hematoma can occur in different age groups, i.e., it can correspond to the normal period of eruption of deciduous or permanent teeth; from newborns, associated with natal teeth, to young patients (7-9). There is no agreement in the literature in relation to gender preference, with studies showing controversial results. Some authors show a higher prevalence in men, in agreement with the present study (9, 13).

Such lesions do not present bone involvement, so the radiographic exam has no critical value in the diagnosis. However, it is important for the observation of the eruptive process and to establish the differential diagnosis with the dentigerous cyst (2, 10). No biopsy was performed in the two clinical cases described here, because for this pathology the diagnosis is clinical.

In relation to the lesion etiology, some authors attribute it to local trauma, infections and use of medications such as Cyclosporine A, which promote changes in the reduced enamel epithelium. The origin of the lesion has also been associated with the epithelial remnants of dental lamina (1, 2, 11, 12). However, in the clinical cases reported, it was not possible to identify an etiologic factor linked to the lesions.

Treatment varies from follow-up of this condition to removal of the tissue that covers the crown of the erupting tooth (gingival ulectomy). The most appropriate therapy choice may vary according to symptoms, lesion size, time of evolution and delayed eruption. The concern of the parents or guardians regarding the lesion also interferes with this decision (6, 7, 13). The same concern was reported by the parents of the second case described in

this study regarding the size of the lesion. However, the parents were advised about the benign condition of the lesion.

In the first case, the treatment was only monitoring and the recommendation of baby teething toys. The use of this device, as well as massaging the lesion area, can promote dental eruption and regression of the lesion (9). In the second report, gingival ulectomy on the site was the recommended therapy, as it was a larger lesion and parents presented great concern with the condition. However, it appears that even larger lesions may disappear with dental eruption.

FINAL CONSIDERATIONS

In the presence of eruption hematoma, the dentist must have the ability to guide the patient or guardians that these lesions are benign conditions and of non-aggressive behavior. More conservative approaches are recommended for asymptomatic cases and with small size lesions, mainly at early ages, associated with the eruption of deciduous teeth. However, if the lesions present painful symptoms and functional problems for the patient, surgical treatments such as ulectomy can be an option for the immediate resolution of the case. The cases described in this paper sought to contribute to the clinical approach of the changes associated with the eruptive process.

REFERENCES

1. Neville B, Dann DD, Allen CM, Bouquot J. Patologia Oral e Maxilofacial. 4.ed. São Paulo: Elsevier, 2016. 972p.
2. EI-Naggar A.K., Chan J.K.C., Grandis J.R., Takata T., Slootweg PJ. Who Classification of Head and Neck Tumors. World Health Organization Classification. 4.ed. IARC: Lyon: 2017.
3. Anderson RA. Eruption cysts: a retrograde study. J Dent Child. 1990;**57**(2): 124-7.
4. Calvet CO, Quadros OS. Estudo da prevalência de cistos odontogênicos de desenvolvimento. Rev Facul Odontol Porto Alegre. 2002; **43**:8-14.
5. Baldani MH, Lopes CMDL, Scheidt WA. Prevalência de alterações bucais em crianças atendidas nas clínicas de bebês públicas de Ponta Grossa/PR, Brasil. Pesqui Odontol Bras. 2001;**15**:302-7.
6. Weber PB, Ilha MC, Borges TS, Ruschel HC, Kramer P, Ferreira S. Eruption cyst associated with tooth rotation on deciduous dentition: A case report. Stomatos 2015; **21**(40): 21-26
7. Hayes PA. Hamartomas, eruption cyst, natal tooth and Epstein pearls in a newborn. J Dent Child. 2000;**67**:365-8.
8. Navas RMA, Mendoza MGM, Leonardo MR, Silva RAB, Herrera HW, Herrera HP. Congenital Eruption Cyst: a case report. Braz Dent J. 2010;**21**(3):259-62.
9. Şen-Tunç E, Açikel H, Şaroğlu-Sönmez I, Bayrak S, Nuray Tüloğlu N. Eruption cysts: A series of 66 cases with clinical features. Med Oral Patol Oral Cir Bucal. 2017; **22** (2):e228-32.

10.Woldenberg Y, Goldstein J, Bodner L. Eruption cyst in the adult-a case report. J Oral Maxillofac Surg. 2004;**33**:804-5
11. O'Hara AJ, Collins T, Howell JM. Gingival eruption cysts induced by cyclosporine administration to neonatal dogs. J Clin Periodontal. 2002;**29**:507-13.
12. Kuczek A, Beikler T, Flemming TF. Eruption cysts formation associated with cyclosporin A. J Clin Periodontol. 2003;**30**(5):462-6.
13. Bodner L, Goldstein J, Sarnat H. Eruption cysts: a clinical report of 24 new cases. J Clin Pediatr Dent. 2004;**28**:183-95.