http://dx.doi.org/10.1590/1981-86372018000100014337

Natal and neonatal teeth: two clinical cases report

Dentes natais e neonatais: relato de dois casos clínicos

Thaisa Cezária TRICHES[1]
ORCID iD 0000-0001-7150-5514
Bruna MONDARDO[1]
ORCID iD 0000-0002-6917-2981
Rodrigo Henrique Cezário TRICHES[2]
ORCID iD 0000-0001-8455-1106
Mabel Mariela Rodríguez Cordeiro[1]
ORCID iD 0000-0002-9209-6710
Marcos Antonio da Silva Cristovam[2]
ORCID iD 0000-0003-2380-790X

ABSTRACT

The aim of this study was to report two cases of newborns with natal and neonatal teeth. Case 1 - a female child presented a natal tooth in the region of lower central incisors since birth. Mother's child reported a family history of this feature. Since the tooth did not present either mobility, prevent breastfeeding, cause discomfort to the child or hurt mother's breast, it was chosen for its maintenance and monitoring. Case 2 - a male child presented, during the first two weeks of life, the eruption of two neonatal teeth in the region of lower central incisors. During the interview, his mother reported no familiar history of this condition. Because the teeth has tapered edges, causing the Riga-Fede's disease, impairing breastfeeding, causing discomfort to the child and injuring the mother's breast, it was decided for its extraction. It may be concluded that the presence of natal and neonatal teeth represent a rare condition that requires further studies to confirm its etiology. Therapeutic approaches must be preceded by a careful clinical evaluation since, as it was seen in this report, both cases were submitted to different treatments showing good evolution.

Indexing terms: *Newborn. Natal teeth. Pediatrics. Pediatric dentistry. Therapeutics.*

RESUMO

O objetivo deste estudo foi relatar dois casos clínicos de recém-nascidos que apresentaram dentes natais e neonatais. Caso 1 - criança do gênero feminino, apresentou ao nascimento, um dente natal na região de incisivos centrais inferiores. Durante a anamnese, a mãe relatou histórico familiar desta alteração. Devido o elemento dentário não apresentar mobilidade, não impedir a amamentação, não causar desconforto à criança e não ferir a mama da mãe, optou-se pela sua manutenção e acompanhamento. Caso 2 - criança do gênero masculino, apresentou na primeira quinzena de vida, o irrompimento de dois dentes neonatais na região de incisivos centrais inferiores. Durante a anamnese, a mãe relatou não haver histórico familiar desta alteração. Devido a esses elementos dentários apresentarem bordas afiladas, causando a doença de Riga-Fede, comprometerem a amamentação, causarem desconforto à criança e ferirem a mama da mãe, optou-se pela sua exodontia. Conclui-se que a presença de dentes natais e neonatais é uma condição rara e mais estudos são necessários para se confirmar sua etiologia. As abordagens terapêuticas devem seguir uma criteriosa avaliação clínica, pois, como visto neste relato, os dois casos foram submetidos a diferentes tratamentos e ambos apresentaram boa evolução.

Termos de indexação: Recém-nascido. Dentes natais. Pediatria. Odontopediatria. Tratamento.

INTRODUCTION

The development of primary teeth begins in the sixth month of intrauterine life. The first primary teeth to erupt in the oral cavity are the lower central incisors, around the child's six months of life, according to eruption chronology[1]. However, some studies report teeth in the cavity (natal teeth) at children's birth, or that erupt in the first month of life (neonatal teeth)[2-5].

In the majority of cases (95%), natal and neonatal teeth are part of the normal primary dentition and, in a few cases (5%), are supernumerary teeth[6]. When compared to each other, the natal teeth are more prevalent than neonatal teeth, in the proportion of 3:1[7]. They are commonly found in the jaw, in the region of central incisors. The eruption of more than two teeth is rare. However, some cases of multiple teeth have been found in the literature[3]. There is no significant prevalence as to the side of the oral cavity that these teeth erupt[8].

Clinically, natal and neonatal teeth may be of normal size and shape. However, most of the time, they are small, conical and poorly developed, presenting a

[1] Universidade Federal de Santa Catarina, Centro de Ciências da Saúde, Departamento de Odontologia. Rua Delfino Conti, s/n., Trindade, 88040-970, Florianópolis, SC, Brasil. Correspondência para / Correspondence to: TC TRICHES. E-mail: <ttriches@gmail.com>.
[2] Universidade Estadual do Oeste do Paraná, Cascavel, PR, Brasil.

Como citar este artigo / How to cite this article
Triches TC, Mondardo B, Triches RHC, Cordeiro MMR, Cristovam MAS. Natal and neonatal teeth: two clinical cases report. RGO, Rev Gaúch Odontol. 2018;66(1):101-105. http://dx.doi.org/10.1590/1981-86372018000100014337

yellow-brown coloration and enamel hypoplasia[6,9]. The soft tissue around the teeth may be hyperplastic, with edema, hyperemia and/or bleedin[10,11]. Radiographic images show low radiopacity, wide and minimal pulp chamber, or root formation absence[12]. Due to poor root development, these teeth are highly mobile[2], and may cause pain and discomfort to the child during breastfeeding.

The most common complication associated with natal and neonatal teeth is Riga-Fede's disease, which is a traumatic ulceration located in the ventral region of the tongue[13]. Normally, the lesion begins as an ulcerated area which, due to the sharp incisal edge continuous trauma of these teeth may progress to an ulcerative granuloma[14], impairing sucking and feeding which can add to nutritional deficiencies[15].

For some authors, the presence of lingual traumatic ulcers and isolated breast injuries do not ask for the removal of natal and neonatal teeth[7], since a more conservative treatment, such as tapered edge procedures may be enough for the lesion healing[16]. However, when the extraction is the treatment of choice, some care must be taken.

As pediatricians are the health professionals who first treat the child, their knowledge about the normal development of the dentition is of crucial importance so that, if there is abnormality, they can refer it to pediatric dentists, providing early treatment, in order to promote the child's integral health. Although natal and neonatal teeth are rare, and literature has presented few studies on the subject, correct evaluation and diagnosis are important for planning the best treatment option in order to avoid further harm to patients' health.

The present study aimed to report two clinical cases of newborns presenting natal and neonatal teeth.

CLINICAL CASE

Ethical considerations

The two children were included in the study after the Term of Free and Informed Consent was signed by their parents. The project was approved by the Committee of Ethics in Research with Human Beings of Western Paraná State University - UNIOESTE Cascavel Campi (opinion No. 1,942,933).

Patients received medical and dental needs to restore their health and were included in a periodic clinical follow-up program.

In both cases, radiographic examination of the natal and neonatal teeth was not performed once regardless of the possible radiographic result, the treatment decision would be the same. Concerning the clinical point of view, there was no doubt about the diagnosis and the therapeutic approach, thus avoiding to subject babies to unnecessary radiation[17]. Still, due to the small opening of the mouth and the lack of cooperation inherent to babies' age[18-20], the radiographic procedure would be very uncomfortable, adding small benefits to the case.

Case 1

Patient leucoderma, female, born in the Obstetric Center of the University Hospital of the Western of Paraná, where the obstetrician observed, at birth, the presence of a tooth in the anterior region of the jaw.

During the anamnesis, the mother reported prenatal care without complications, in addition to preterm labor, where the child was born at 31 weeks of cesarean section. She also denied having presented any systemic alterations in her or her child. However, in family history, she reported that the daughter of a cousin, on the maternal side, also presented a tooth at birth.

At the extraoral clinical examination, no change was observed, whereas in the intraoral evaluation performed by the pediatric dentist, the presence of a natal tooth was confirmed in the region of lower central incisors, with white coloration, small mobility and absence of traumatic ulceration in the belly of the tongue. The gingival tissue around the tooth was swolled and without bleeding (Figure 1).

Figure 1. Natal tooth located at the anterior region of the jaw.

The presence of the natal tooth did not prevent breastfeeding nor cause discomfort to the child, as no injuring to the mother's breast was observed. The baby's diet consisted exclusively of breast milk. Due to the fact that the tooth presented a good implantation (mobility grade 1), not presenting the risk of aspiration during the feeding, tooth maintenance and follow-up was the chosen as the treatment choice.

The mother was informed about the rare condition that her daughter presented and was oriented regarding oral hygiene technique, prevention of habits and care with the diet.

The patient returned after one month and thereafter every three months for oral health follow-up, as well as the growth and development of the child's occlusion, until the eruption of the permanent successors.

Case 2

Neonate leucoderma, 15 days old, male, was taken to the hospital for the first routine pediatric appointment, where the mother reported nasal obstruction and "birth of two teeth".

During the anamnesis, the mother reported no intercurrences during pregnancy, and the child was born of normal delivery at 39 weeks. She also denied presenting any systemic alterations in her or the child and showed no relevant family history.

In the extraoral clinical examination, no alteration was observed, whereas in the intraoral one, during the pediatric dentistry evaluation, the presence of two neonatal teeth was confirmed in the region of the lower central incisors, with white coloration, tapered edges and presence of small traumatic ulceration in the belly of the tongue - Riga-Fede's disease. The gingival tissue around the teeth was swollen and without bleeding (Figure 2).

Extraction was the treatment of choice once the presence of neonatal teeth compromised breastfeeding causing, discomfort to the child, besides injuring the mother's breast.

The mother was informed about the rare benign condition that her son presented and was guided regarding the technique of oral hygiene, prevention of habits and care with the diet.

The patient returned after one month and thereafter every three months in order to monitor oral health, as well as the growth and development of the child's occlusion. And it is in periodic clinical follow-up until the eruption of the permanent successors.

Figure 2. Neonatal teeth located at the anterior region of the jaw causing Riga- Fede's disease.

DISCUSSION

According to the literature, the presence of natal and neonatal teeth is very rare[5]. Some authors[7] have shown a prevalence ranging from 1:1,000 to 1:30,000. For other authors, this prevalence varies from 1:401 to 1:3,500[5,21,22]. These differences may have occurred due to the type of study, the methods used in the data collection or by the population studied.

The present work reported a case of a natal tooth in a female child and a case of two neonatal teeth in a male child. Some studies[4,22] have shown a higher prevalence of natal and neonatal teeth in female children. Another study concluded[5] no significant difference regarding the sex of the baby. However, the variation in this prevalence depends on the population and methods used in the different studies[23].

As to the location, studies have shown that most of the teeth are in the region of lower incisors [5], which is in agreement with the two cases reported here. According to some authors[24], 85% of the teeth involved are inferior incisors, 11% are upper incisors, 3% are canines and lower molars, and only 1%, canines and maxillary molars. The strong incidence for

the lower incisors may be related to the fact that they are usually the first teeth to erupt.

Although its etiology is unknown, many studies agree that the occurrence of these natal and neonatal teeth is due to a superficial position of the dental germ associated with a hereditary factor[25]. The high incidence of positive family history for these teeth has been observed in previous reports, presenting frequencies varying from 8% to 48%[26]. In the present reports, only the case of the natal tooth presented a family history.

Clinically, it could be noticed that the natal and neonatal teeth were small, undeveloped and presented white coloration. Although they are poorly developed, these other characteristics differ from those reported in the literature: yellowish-colored conical teeth with high mobility[2,9]. According to some authors[6], these teeth have poor or absent root development and, histologically, present enamel with different degrees of hypoplasia and irregular dentin. Other authors[10], have demonstrated that the hypoplasia detected in these teeth is due to premature exposure to the oral cavity, which eventually resulted in metaplastic alterations of the enamel epithelium.

One of the main complications of natal and neonatal teeth is the presence of Riga-Fede's disease[13,14], as presented in the second clinical case. It has been observed in the literature that, in most cases, the extraction of these teeth is the treatment of choice. The decision whether or not to maintain the tooth in the oral cavity should take into account factors such as degree of implantation and dental mobility, problems during suctioning, interference with breastfeeding, the possibility of traumatic injury and the dentition to which the tooth belongs: normal primary or supernumerary[2].

If the tooth presents good implantation and is part of the normal primary dentition, the first treatment of choice will be the maintenance of the tooth in the oral cavity, as long as it does not cause harm to the child[4], as reported in the first clinical case. However, if it is interfering with breastfeeding or presenting great mobility, with risk of displacement and aspiration, the tooth must be removed[3,4,11], as in the second clinical case. Although some authors report the possibility of aspiration of these teeth, there are no reports in the literature confirming this occurrence[4].

When Riga-Fede's disease is present, two treatment options can be performed: extraction or regularization of the sharp incisal edge of the teeth[16], followed by triamcinolone in orabase in traumatic ulceration[27,28]. Some authors[7] report that the presence of Riga-Fede's disease by itself is not an indication for the extraction. In the second case reported, extraction was the treatment of choice, since the presence of neonatal teeth was compromising breastfeeding and causing discomfort to the child, besides injuring the mother's breast. According to other authors[12], mild to moderate irritation on the tongue and a small mobility of these teeth can be resolved with a more conservative treatment, i.e. treating the sharp edges of the teeth in question with abrasive instruments. Addition of composite resin may also be a viable treatment alternative[14].

In the case of a large ulcerated area, even after having treated the incisal edges, the teeth can still traumatize the tongue during breastfeeding, delaying healing. Thus, for a rapid resolution of the lesion, the extraction should be performed[14].

When exodontia is required, it should be avoided until the newborn is 10 days old in order to avoid the risk of bleeding, considering the inability of the child's intestinal flora to produce vitamin K necessary for the production of prothrombin, essential in the coagulation process[3,10]. If immediate tooth extraction is required, the dental surgeon should request an evaluation by the pediatrician for prophylactic prescription of the appropriate dose of vitamin K which should be administered before the surgical procedure in order to provide safe extraction[29].

CONCLUSION

The presence of natal and/or neonatal teeth is a rare condition and requires further studies in order to confirm its etiology. Clinically, they are small, yellow-white in color and Riga-Fede's disease is their most common complication. The therapeutic approaches should follow a careful clinical evaluation, as observed in the two cases of this report, presented different clinical conditions and were submitted to different treatments, with good results.

Collaborators

TC TRICHES, performed the pediatric dentistry test, contributed in the elaboration, critical review and final edition of the manuscript. B MONDARDO, contributed to the preparation of the manuscript. RHC TRICHES, performed the obstetric children's care and

contributed to the preparation of the manuscript. MMR CORDEIRO, designed and elaborated the study, guided the study and preparation of the manuscript. MAS CRISTOVAM, performed the pediatric assistance of the babies, guided the study and helped in the preparation of the manuscript.

REFERENCES

1. Lunt RC, Law DB. A review of the chronology of eruption of deciduous teeth. J Am Dent Assoc. 1974;89(4):872-9. doi: 10.14219/jada.archive.1974.0484
2. Cunha RF, Boer FA, Torriani DD, Frossard WT. Natal and neonatal teeth: review of the literature. Pediatr Dent. 2001;23(2):158-62.
3. Leung AKC, Robson WLM. Natal teeth: a review. J Natl Med Assoc. 2006;98(2):226-8.
4. Rafael NC, Sierra CG, Andrade MSR. Manejo de los dientes natales y neonatales: reporte de dos casos. Rev ADM. 2016;73:92-5.
5. Wang CH, Lin YT, Lin YTJ. A survey of natal and neonatal teeth in newborn infants. J Formos Med Assoc. 2017;116(3):193-6. doi: 10.1016/j.jfma.2016.03.009
6. Galassi MS, Santos-Pinto L, Ramalho LT. Natal maxillary primary molars: case report. J Clin Pediatr Dent. 2004;29(1):41-4.
7. Zhu J, King D. Natal and neonatal teeth. ASDC J Dent Child. 1995;62:123-8.
8. Basavanthappa NN, Kagathur U, Basavanthappa NR, Suryaprakash TS. Natal and neonatal teeth: a retrospective study of 15 cases. Eur J Dent. 2011;5(2):168-72.
9. Uzamis M, Olmes Z, Ozturk H, Celik H. Clinical and ultrastructural study of natal and neonatal teeth. J Clin Pediatr Dent. 1999;23:173-7.
10. More CB, Patel HJ, Adalja CJ. Natal and neonatal teeth: a review. Ind J Dent. 2014;5:77-81.
11. Martins AA, Ferraz C, Vaz R. Um caso raro de dentes neonatais. Acta Med Port. 2015;28:773-5.
12. Delbem AC, Faraco Júnior IM, Percinoto C. Natal teeth: case report. J Clin Pediatr Dent. 1996;20:325-7.
13. Goho C. Neonatal sublingual traumatic ulceration (Riga-Fede disease): reports of cases. ASDC J Dent Child. 1996;63(5):362-4.
14. Hegde RJ. Sublingual traumatic ulceration due to neonatal teeth (Riga-Fede disease). J Indian Soc Pedod Prev Dent. 2005;23:51-2.
15. Campos-Muñoz L, Quesada-Cortés A, Corral-De la calle M, Arranz-Sánchez D, Gonzalez-Beato MJ, De Lucas R, et al. Tongue ulcer in a child: Riga-Fede disease. J Eur Acad Dermatol Venereol. 2006;20:1357-9.
16. Nogueira JSE, Gonçalves Filho AJG, Moda LB, Oliveira RP. Doença de Riga-Fede: relato de dois casos - um conservador e outro radical. Rev Assoc Paul Cir Dent. 2014;68:100-4.
17. Martins AA, Ferraz C, Vaz R. Um caso raro de dentes neonatais. Acta Med Port. 2015;28:773-5.
18. Ruschel HC, Spiguel MH, Piccinini DD, Ferreira SH, Feldens EG. Natal primary molar: clinical and histological aspects. J Oral Sci. 2010;52(2):313-7.
19. Mangla N, Khinda VIS, Bajaj N, Vats S. Dentitia praecox: a case report. Ind J Compr Dent Care. 2013;3:462-4.
20. Dahake PT, Shelke AU, Kale YJ, Iyer VV. Natal teeth in premature dizygotic twin girls. BMJ Case Rep. 2015; doi: 10.1136/bcr-2015-211930
21. Bjuggren G. Premature eruption in primary dentition. A clinical and radiological study. Swed Dent J. 1973;66(4):343-55.
22. Kates GA, Needleman HL, Holmes LB. Natal and neonatal teeth: a clinical study. J Am Dent Assoc. 1984;109(3):441-3.
23. Seminario AL, Ivancaková R. Natal and neonatal teeth. Acta Med (Hradec Kralove). 2004;47:229-33.
24. Bodenhoff J, Gorlin RJ. Natal and neonatal teeth: folklore and fact. Pediat. 1963;32:108-93.
25. Hats E. Natal and neonatal teeth: histologic investigations in two brothers. Oral Surg. 1957;10(5):509-21.
26. Anneroth G, Isacsson G, Lindwall AM, Linge G. Clinical, histologic and micro-radiographic study of natal, neonatal and pre-erupted teeth. Scand J Dent Res. 1978;86(1):58-66.
27. Hong P. Riga-Fede disease: traumatic lingual ulceration in an infant. J Pediatr. 2015;167:204. doi: 10.1186/1824-7288-38-20
28. Moreira FCL, Gonçalves IMF. Dentes natais e doença de Riga-Fede. RGO, Rev Gaúch Odontol. 2010;58:257-61.
29. Rusmah M. Natal and neonatal teeth: a clinical and histological study. J Clin Pediatr Dent. 1991;15(4):251-3.

Received on: 3/3/2017
Final version resubmitted on: 16/5/2017
Approved on: 27/7/2017