

CASE REPORT

Neonatal teeth

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Abstract: Teeth that are present at birth are called natal teeth, and teeth that emerge through the gingiva during the first 4 weeks of life are called neonatal teeth. The incidence of the appearance of natal and neonatal teeth has been reported to be between once every 800 and once every 6000 births. Natal and neonatal teeth may be uncomfortable for a nursing mother and present a risk of aspiration and swallowing by the infant if they are loose. Also, they may cause irritation and trauma to the infant's soft tissues. Under these circumstances, natal and neonatal teeth need to be extracted. In this article, a case report of two neonatal teeth in a five week old girl is presented. The teeth were present in the mandibular incisor region and were excessively mobile and caused discomfort for the nursing mother. They were extracted because of the fear of aspiration (Fig. 4, Ref. 10). Full Text in free PDF www.bmj.sk.

Key words: mandibular incisors, natal teeth, neonatal teeth, newborn, newborn dentition.

An anxiously awaited event by the parents in the first year of a child's life is the emergence of the first tooth. Any untoward incident associated with this event brings about a plethora of reactions from the parents, more so when the child has a natal tooth which also sometimes compromises the child's ability to suckle. Tooth eruption at about 6 months of age is a milestone, both in terms of functional and psychological changes in the child's life, and an emotional event for the parents. Natal and neonatal teeth are associated with superstition and folklore, being related to good or bad omens, surrounded by beliefs and assumptions.

Teeth which are present in the oral cavity at the time of birth are called natal teeth and neonatal teeth are those that erupt during the first 30 days of life. The teeth which erupt after 30 days and much before their normal time of eruption (usually one to three and half months after birth) are termed as early infancy teeth. Various terms used to designate teeth that have erupted before their normal time are congenital teeth, fetal teeth, predeciduous teeth, precociously erupted teeth, premature teeth, dentitia praecox and dens connatalis (1).

The presence of teeth in newborns is uncommon, varying from 1:6000 to 1:800 cases, occurring, in general, of two or three teeth (2).

There is no difference in the prevalence between males and females, however a predilection of 66 % for females has been reported (3). Natal teeth are more frequent, approximately three times more common than neonatal teeth, with the most common localization being the mandibular region of central incisors (85

%), followed by maxillary incisors (11 %), mandibular cuspids or molars (3 %), and then maxillary cuspids or molars (1 %). Natal or neonatal cuspids are extremely rare. Most commonly, these teeth are precociously erupted from the normal complement of primary teeth (90–99 %). Only 1 % to 10 % of natal and neonatal teeth are supernumerary (4). In light of this knowledge, these teeth should be left in the mouth to avoid future space management issues. On occasion, they will exfoliate spontaneously or require extraction because of excessive mobility, concerns regarding aspiration or the loss of attachment with subsequent development of abscess. They may also be extracted to alleviate feeding difficulties including Riga–Fede disease, where the presence of natal or neonatal teeth in association with nursing or sucking leads to ulceration of the ventral surface of the tongue. Both general practice dentists and pediatric dental specialists may be involved in the supervision or treatment of patients with natal and neonatal teeth. On rare occasions, following spontaneous loss or extraction of these teeth, there may be continued root development necessitating further treatment (5).

Clinically, these teeth show a great mobility due to the initial stage of root formation. Spouge and Feasby suggested that natal and neonatal teeth might be classified according to the level of maturity. A mature natal or neonatal tooth is completely or almost developed and has a relatively good prognosis for maintenance. The term immature natal or neonatal tooth is associated to a structurally incomplete tooth resulting in poor prognosis (6).

The presence of natal and neonatal teeth is a disturbance of biological chronology whose etiology is still unknown. Currently, they are attributed to superficial position of the developing tooth germ, which predisposes the tooth to erupt early. It may be related to hereditary factors and many cases show a familial trait, with hereditary transmission of a dominant autosomal gene (1). Many theories have been proposed to explain the etiology of premature eruptions of teeth by increased eruption rate during or

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after fever, endocrine disorders, dietetic deficiencies, effects of congenital syphilis, superficial position of tooth germ, family history and association with some syndromes, such as chondroectodermal dysplasia (7).

Case report

A 5-week-old infant was referred to the Department of Stomatology and Maxillofacial Surgery in Bratislava by her attending pediatrician for evaluation of two neonatal teeth that were erupting in the mandibular anterior area (Fig. 1). A review of her medical chart revealed that the infant was delivered by vaginal route and was born prematurely at 36 weeks and 1 day gestation. She was a healthy infant and she was the first and the only child of the family. Her birth weight was 2260 g, length was 45 cm, and head circumference was 31 cm.

In the intraoral examination, the teeth were diagnosed as “neonatal teeth“ since they were present in the infant’s mouth 3 weeks after the delivery. The teeth were excessively mobile and caused discomfort for the nursing mother and at the same time presented a potential risk for the infant, therefore, the removal of the tooth was planned. Examination revealed that the positions of the neonatal teeth present corresponded to those of teeth 71 and 81. Clinical examination confirmed that the neonatal teeth had only minimal attachment to the surrounding gingiva and were close to spontaneously exfoliation. After applying topical anesthetic to the adjacent gingiva and placing a piece of gauze lingual to the neonatal teeth to serve as a pharyngeal guard, the coronal aspects of both teeth with an undeveloped roots were simply extracted with rongeur forceps. The two removed neonatal teeth had dimensions of 6.5 mm to 3.5 mm and had a hypoplastic appearance (Fig. 2). No curettage of the extraction site was performed. The postoperative course was uneventful.



Fig. 1. Clinical aspect of lower neonatal incisors.



Fig. 2. Extracted neonatal teeth. Very little root formation is evident.



Fig. 3. The intraoral appearance of the infant at a follow up appointment, six months from birth.



Fig. 4. The presence of upper deciduous tooth germs, six months from birth.

Recalls were made twice, after one week and six months, and there were no complications. At a follow up appointment, six months from birth, the presence of only upper deciduous tooth germs was observed (Figs 3 and 4).

Discussion

Normally, primary teeth begin to erupt at approximately 6 months of age. In rare cases, the chronology of tooth eruption is significantly altered, and the first teeth are present at birth or will emerge shortly after birth. By definition the teeth that are present at birth are called natal teeth and those which erupt within a month after delivery are neonatal teeth (8). In our case, the teeth were present in the newborn infant's mouth 3 weeks after the delivery, therefore, they were diagnosed as "neonatal tooth". The teeth were present in the mandibular incisor region and were excessively mobile and caused discomfort for the nursing mother. They were extracted because of the fear of aspiration.

The presence of teeth in newborns is uncommon, occurring in general of two or three teeth. The incidence of natal and neonatal teeth has been estimated to be 1:1000 and 1:30000. It was observed that 85 % of natal or neonatal teeth are mandibular incisors, 11 % are maxillary incisors, 3 % mandibular cuspids or molars and only 1 % are maxillary cuspids or molars and 1 % are supernumerary teeth (9).

Treatment for natal and neonatal teeth should be planned carefully, due to its several complications and premature loss of primary teeth may cause loss of space and collapse of the developing arches with consequent malocclusion in permanent dentition. If erupted natal and neonatal tooth is diagnosed as a tooth of the normal dentition, the maintenance of these teeth in the mouth is the first treatment option, unless this would cause injury to the baby or mother (9). If the teeth do not interfere with breastfeeding and are otherwise asymptomatic, no intervention is necessary. Teeth extraction is indicated if the teeth are supernumerary or if the teeth are poorly implanted and excessively mobile, which is associated with a risk of aspiration. Consultation with a pediatric dentist is strongly recommended, especially if tooth extraction is a consideration (10). Radiographic examination is the only way of revealing if the teeth are supernumerary or belong to normal deciduous dentition.

For extraction of natal or neonatal teeth in cases where there is minimal gingival attachment, as in this case report, it will likely be possible to achieve adequate soft tissue anesthesia with the application of topical anesthetic. In this scenario, the authors recommend that no curettage of the extraction site is performed. In most cases, this treatment will be adequate and the child will not develop residual natal or neonatal teeth. Where it is possible, this conservative initial treatment will allow most children to avoid exposure to injectable local anesthetic and a lengthier, more stressful surgical procedure associated with curettage of the area. However, recognizing that the risk of residual tooth formation is approximately 9.1 %, the parents should be informed of the need for regular follow-up with a dentist. They should also be informed that in the event of residual tooth formation, a second surgical procedure will be required. For extraction of natal or neonatal teeth in cases where there is more significant gingival attachment, topical anesthetic may be followed with a small amount of an injectable local anesthetic. Only in these cases, where injection of local anesthetic is already indicated, do the authors rec-

ommend routinely providing simultaneous curettage of the area. In both of the above scenarios, if extractions are planned within the first 10 days of life, then it must be confirmed that the child has been given the routine postnatal injection of vitamin K to ensure that there will be no bleeding problems (5). Otherwise, it is safer to wait until a child is 10 days old before extracting the tooth. The waiting period before performing tooth extraction is to allow for the commensal flora of the intestine to become established and to produce vitamin K, which is essential for the production of prothrombin in the liver. If it is not possible to wait, then it is advisable to evaluate the need for administration of vitamin K with help of pediatrician. If the newborn was not medicated with vitamin K immediately after birth, vitamin K (0.5–1 mg) is administered intra-muscularly to the baby as a part of immediate medical care to prevent hemorrhage (9).

Paediatricians are, usually, the first who find natal and neonatal teeth and early consultation with paediatric dentist can prevent complications. Although these teeth do not appear frequently, proper evaluation and diagnosis are necessary for the best treatment option. Longitudinal and more divergent studies are necessary to confirm the etiology and nature of natal and neonatal teeth and to determine whether they are deciduous or supernumerary teeth.

It is necessary to investigate the possible local or systemic factors that could be related to eruption of neonatal teeth, their association with other pathologies and the basis of differential diagnosis, in order to promote a better oral condition for cases similar to the present one.

References

1. Singh S, Subbareddy VV, Dhananjaya G, Patil R. Reactive fibrous hyperplasia associated with a natal tooth. A Case Report. *J Indian Soc Pedo Prev Dent* 2004; 22: 183–186.
2. Gonçalves FA, Birman EG, Sugaya NN, Melo AM. Natal teeth: review of the literature and report of an unusual case. *Braz Dent J* 1998; 9: 53–56.
3. Kates GA, Needleman HL, Holmes LB. Natal and neonatal teeth: A clinical study. *J Am Dent Assoc* 1984; 109: 441–443.
4. Rao RS, Mathad SV. Natal teeth: Case report and review of literature. *J Oral Maxillofac Pathol* 2009; 13: 41–46.
5. Dymment H, Anderson R, Humphrey J, Chase I. Residual Neonatal Teeth: A Case Report. *J Can Dent Assoc* 2005; 71: 394–397.
6. Spouge JD, Feasby WH. Erupted teeth in the newborn. *Oral Surg Oral Med Oral Pathol* 1966; 22: 198–208.
7. Lemos LVFM, Shintome LK, Ramos CJ, Myaki SI. Natal and neonatal teeth. *Einstein* 2009; 7: 112–113.
8. Massler M, Savara BS. Natal and neonatal teeth: a review of twenty-four cases reported in the literature. *J Pediatr* 1950; 36: 349–359.
9. Anegundi, RT, Sudha, R, Kaveri, H, Sadanand, K. Natal and neonatal teeth: a report of four cases. *J Indian Soc Pedo Prev Dent* 2002; 20: 86–92.
10. Leung, AK, Robson, WL. Natal teeth: a review. *J Natl Med Assoc* 2006; 98: 226–228.

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