

Dentistry

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MANAGEMENT OF NATAL TEETH: A TWIN CASE REPORT



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ABSTRACT:

Background: Child's growth and development from conception through the first few years of life is dotted with many transitions. Tooth eruption is one such phenomena which follows a chronology corresponding to the age of the child at which the tooth erupts into the oral cavity. These dates have been documented in the literature and are subjected to minute variations depending on several factors such as hereditary, endocrine and environmental features. However, sometimes the chronology of tooth eruption undergoes a more significant alteration in terms of onset, and the first teeth may either be present at birth or erupt during the first month of life. This paper was aimed to discuss the clinical features, etiologic factors, complications, and management of such natal or neonatal tooth, as well as its role in sublingual ulcer formation and discomfort during breastfeeding.

Case Presentations: Two newborns, a 10-day old male, and a 7-day old female with a mandibular incisor natal tooth had reported to the department of Pedodontics and Preventive Dentistry. The teeth were extracted as they were mobile and there was fear of aspiration and refusal to feed.

Conclusion: Extraction of the natal tooth accelerated healing of ulcers and relief from discomfort during breastfeeding.

INTRODUCTION:

The clinical age at which deciduous mandibular incisor tooth erupts is 6–7 months.¹ In rare conditions, teeth might be present at birth or erupt within 30 days of birth. Massler and Savara,² termed the teeth present at birth as "natal teeth" and those erupting within the first 30 days of life as "neonatal teeth", also called "early infancy teeth." Most commonly occurring natal teeth are mandibular incisors. It has a prevalence rate of 66% occurring more commonly in girls.³ Natal tooth prevalence rate varies from 1:716 to 1:3500 live births.⁴ A survey was conducted with 18,155 infants; the prevalence rate of natal teeth was one in 716 for the 7,155 infants examined personally and one in 3,667 for those surveyed. A group of another 38 infants and children were examined prospectively who had a total of 61 natal and neonatal teeth. All of these were mandibular central incisors. It was determined that ninety-five percent of the natal and neonatal mandibular primary central incisors teeth were normal teeth, and 5% were supernumerary teeth. Natal teeth are often smaller, yellowish, and conical and tend to have hypoplastic enamel and dentin with poor or absent root formation even though it might sometimes resemble normal primary dentition in size and shape.⁵ To differentiate the premature eruption of a normal primary incisor from a supernumerary tooth, a dental roentgenogram is indicated.¹ Enamel dysplasia was seen in 31% of the teeth, probably due to the duration of the gingival covering. Thus, it is recommended that the natal and neonatal teeth should be left intact, if possible, and extracted only if they are extremely mobile, and there are chances of aspiration or in such cases when the reattachment is unlikely. It was

found that sixty-one percent of these infants had either a pair of natal or neonatal teeth or both.⁵ An exact etiology is not known for its occurrence. It is assumed that several factors like hereditary components, endocrinal abnormalities, and environmental elements may be contributory to its occurrence.⁶ Sometimes, developing teeth germs of both natal and neonatal teeth are present in an unusual location under the alveolar bone.⁷ Complications of a natal or a neonatal teeth usually includes discomfort during suckling, laceration of the mother's breasts, sublingual ulceration associated with Riga–Fede syndrome¹ prevalence rate of Riga–Fede disease being 6%–10%,⁸ and aspiration of the teeth.¹ Careful evaluation of these infants is advised to prevent trauma to the tongue and to the mother's breast as well as to avoid aspiration of the tooth. In 10 percent cases, Trauma was noted, mobility and danger of inhalation in 94 percent. If the tooth is supernumerary or excessively mobile, tooth extraction is indicated. The appropriate time for extraction of natal/neonatal was calculated to be 7-25 days of birth from the immunological and hematological point of view. Out of 50 children with natal/neonatal/early infancy teeth, extraction was carried out in 97 percent of the cases. It was seen that the neighbouring primary teeth to move into the extraction space. If the tooth does not cause ulceration or pain, or interfere with breastfeeding, no treatment is necessary.¹

CASE PRESENTATION 1

A 10-day-old male baby was referred to the Department of Paedodontics and Preventive Dentistry with loose teeth in the lower front region of the jaw with a complaint of inability to suckle mother's milk (figure 1). The infant was underweight (1.5 kg). Normal vaginal delivery was done and the perinatal history was normal. On intraoral examination, there was presence of natal tooth in the anterior mandibular region. A danger of aspiration of this tooth existed as there was severe mobility (Grade II) associated with it so it was decided that the tooth will be extracted as part of the treatment plan. Hence, prophylactic administration of vitamin K was done before extracting them. Extraction of a shell shaped crown (figure 2) was done under topical anaesthesia with epinephrine and careful curettage of the sockets was done to remove any remnants of odontogenic cells that might otherwise be left at the extraction site. Postextraction haemostasis was achieved (figure 3). Postoperative instructions were given to the mother and a recall visit after a week was scheduled.

CASE PRESENTATION 2

A 7-day-old female newborn was referred to the Department of Pedodontics and Preventive Dentistry with the chief complaint of loose tooth in the lower front tooth region and difficulty with breastfeeding. The medical history was not relevant. An extraoral examination confirmed a healthy face without any lymphadenopathy. An intraoral examination revealed a small shell shaped crown in the anterior mandibular gum pad exhibiting a grade III mobility (Figure 4). It was decided that the tooth needs to be extracted as there was risk of aspiration. Prophylactic administration of Vitamin K was not required as the mother was previously administered Vitamin K. The tooth with a faint opaque whitish color, smaller than a primary tooth was extracted (Figure 5).

The extraction site was carefully curetted for any remnants. Postextraction haemostasis was achieved (Figure 6). Postoperative instructions were given to the mother and a recall visit after a week was scheduled.

DISCUSSION

There are various folklores and superstitions surrounding natal and neonatal teeth. In some cultures, a natal tooth is believed to herald good fortune like in Malaysian communities; in some others, it is considered a bad omen. In King Henry the Sixth, Shakespeare contributed his thoughts on natal teeth, where he refers to Richard the Third with "teeth hadst thou in thy head when thou wast born to signify thou camest to bite the world".⁹ In China, India, Poland, and Africa, the affected children are bearers of misfortune. In England, this condition was believed to be the reason for someone to conquer the world.¹⁰

The exact etiology for the occurrence of a natal or neonatal tooth is not known. Natal teeth have been associated with a number of developmental abnormalities and various syndromes, including cleft lip and palate, Pfeiffer, Ellis-van Creveld (chondroectodermal dysplasia), Wiedeman Rautenstrauch (neonatal progeria), Rubinstein-Taybi, steatocystoma multiplex, pachyonychia congenita (Jadassohn-Lewandowsky), cyclopia, Hallermann-Streiff (Mandibulo-oculo-facial dyscephaly with hypotrichosis), Pierre-Robin, Pallister-Hall, ectodermal dysplasia, craniofacial dysostosis, multiple adrenogenital, Sotos, steatocystoma, Walker-Warburg syndrome, and epidermolysis bullosa simplex.^{1,4,11-19} Histologically, the pulp cavity and the radicular canals of natal or neonatal teeth are wider, although the pulp shows normal development. Weil's zone and cell-rich zone are missing in such teeth. Lack of cementum formation, an irregular dentin formation, absence of root formation, large pulp chamber, were also observed.²⁰

Several sources suggest an autosomal dominant gene to be the hereditary cause as put forward in a report on 5 siblings in the same family who were born with natal teeth.²¹ In a study, it was reported that the prevalence of natal or neonatal teeth among Alaskan Tlingit Indian newborns was 9%; while it was reported that 62% of the newborn's relatives were also affected.²⁰ Furthermore, Kates et al. found a positive family history of natal and neonatal teeth in 7 out of 38 cases. Certain environmental factors, like polychlorinated biphenyls, dibenzofurans etc. increases the incidence of natal teeth. Children exposed to these chemicals usually display other symptoms, such as dystrophic fingernails and hyperpigmentation along with natal or neonatal teeth.²¹ Endocrinal disturbances, nutritional deficiencies like hypovitaminosis, infections like congenital syphilis, Febrile status, pyelitis and exanthemata during pregnancy are among the other etiologic factors.²⁰

Natal and neonatal teeth have been classified by Spoug and Feasby (1966) according to their degree of clinical maturity:

- (1) a nearly or fully developed, mature natal or neonatal tooth having moderately good prognosis.
- (2) an incomplete, immature, natal or neonatal tooth with a substandard structure is with a poor prognosis.²²

Hebling et al. suggested a clinical classification according to the tooth morphology during eruption into the oral cavity:

- (1) shell-shaped crown without root poorly fixed by gingival tissue to the alveolus.
- (2) solid crown with little or no root poorly fixed by gingival tissue to the alveolus.
- (3) eruption of the incisal edge of the natal tooth crown through the gingival tissues, and
- (4) palpable gingival edema due to unerupted tooth.²²

CONCLUSION

Before extracting the tooth, it is safer to wait till the child is 10 days old. This waiting period is for the commensal flora of the intestine to become established and start to produce vitamin K which is essential to produce prothrombin in the liver before performing tooth extraction.²³ It is recommended to evaluate the need for administration of vitamin K (0.5–1.0 mg) intramuscularly by a pediatrician, if it is not possible to wait for 10 days also, if the newborn was not medicated immediately after birth with vitamin K which is done usually after birth to prevent hemorrhagic disease of the newborn.²⁴

CASE REPORT 1

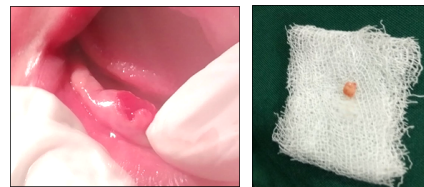


Figure 1: Pre-operative intraoral view of natal tooth in lower anterior region of an infant of 10 days

CASE REPORT 2



Figure 4: Pre-operative intraoral view of natal tooth in lower anterior region of an infant of 7 days

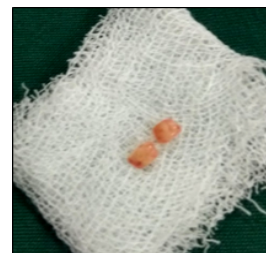


Figure 5: Natal tooth after extraction



Figure 6: Post operative intraoral view

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