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Case Report

Management of natal teeth: A twin case report

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ABSTRACT

Background: Child's evolution and growth right from conception up to the first couple of years of life is dotted with several transitions. Tooth eruption is one such phenomena which follows a chronology corresponding to the age of the child at which the tooth appears in the mouth. The exfoliation timeline has been documented in the literature but may vary based on several factors including hormonal, hereditary, and environmental. However, sometimes the eruption sequence undergoes a more drastic alteration where the first teeth may be present in the mouth at the time of birth or erupt within the first thirty days after birth. This paper was written with the aim to discuss the etiologic factors, clinical features, complications, and management of such natal or neonatal teeth, as well as their role in sublingual ulcer formation and discomfort during breastfeeding.

Case Presentations: Two cases are discussed where 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 at Kalinga Institute of Dental Sciences. 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.

1. Introduction

The clinical age at which deciduous mandibular incisor tooth erupts is 6–7 months.[1] In rare conditions, teeth might be present in the mouth at birth or might appear in the oral cavity within the first month of life. The teeth present at birth were termed as "natal teeth" by Massler and Savara[2] and those erupting within the first 30 days after birth as "neonatal teeth" and are also called "early infancy teeth." Most commonly occurring predeciduous 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; one in 716 for the 7,155 infants was the prevalence rate for those examined personally for the fetal teeth while one in 3,667 was the prevalence rate for those who were surveyed. A prospective examination for a group of another 38 infants and children was done who had a total of 61 mandibular central incisors as natal and neonatal teeth. It was determined that 95% of the natal and neonatal primary lower central incisors teeth were normal teeth, and 5% were supernumerary teeth. It has been observed that even though fetal teeth might rarely resemble the normal primary dentition in structure, they are often smaller, have a yellowish hue, and are conical in shape. They tend to have either poor, or no root formation and the crown is often formed with hypoplastic enamel and dentin.[5] A dental roentgenogram is usually advised to help differentiate if the natal teeth is the premature eruption of a normal primary incisor or it

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is a supernumerary tooth.[1] Enamel dysplasia was seen in 31% of the teeth, the probability of which is attributed to the duration of the gingival covering. Thus, it is indicated, as far as possible the natal and neonatal teeth should be left intact, and extraction is only advisable if they are extremely mobile, and chances of aspiration is likely. It was found that 61% of these infants had either natal or neonatal teeth or both[5] without any exact known etiology. 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 congenital teeth are present in an unusual location under the alveolar bone.[7] Complications of a predeciduous teeth usually includes lacerated skin of mother's breasts, aspiration of the teeth, discomfort during breast-feeding, sublingual ulceration associated with Riga–Fede syndrome;[1] prevalence rate of Riga–Fede disease being six to ten percent.[8] Careful evaluation of these infants is advised to prevent trauma to the tongue, to avoid aspiration of the tooth and injury to the mother's breast as well. In 10 percent cases, trauma was noted while mobility and danger of inhalation in 94 percent cases cause complications. If the tooth is supernumerary or excessively mobile, tooth extraction is indicated. From the immunological and hematological perspective, it is indicated that the appropriate time for extraction of fetal teeth is 7-25 days after birth. Out of 50 children with dentitia praecox, extraction was carried out in 97 percent of the cases. It was seen that the neighbouring primary teeth usually move into the extraction space. In case if the tooth does not cause ulceration or pain, or interfere with breastfeeding, no treatment is necessary.[1]

2. Case Presentation 1

A 10-day-old male baby was referred to the Department of Pedodontics and Preventive Dentistry with loose teeth in the lower front region of the jaw with a complaint of discomfort during suckling mother's milk (Figure 1). The infant was underweight (1.5 kg). The child was delivered by normal vaginal delivery, and the perinatal history of the mother was normal. On intraoral examination, there was presence of natal tooth in the lower front gums region. Moderate mobility (Grade II) associated with the teeth was observed which posed a threat of aspiration, so it was decided that the tooth will be extracted. Hence, prophylactic administration of vitamin K was done before extracting them. Extraction of a shell shaped crown (Figure 2) was done under topical anesthesia with epinephrine. Careful curettage of the sockets was conducted to remove any odontogenic cells remnants that might be left at the extraction site otherwise. Post extraction hemostasis was obtained (Figure 3). Postoperative instructions were given to the mother and a follow-up visit was scheduled a week later.

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

Figure 2: Natal tooth after extraction

Figure 3: Post operative intraoral view

3. Case Presentation 2

A 7-day-old female newborn was referred to the Department of Pedodontics and Preventive Dentistry with the complain of loose tooth in the lower front tooth region and discomfort during breastfeeding. The medical history was not relevant. An extraoral examination confirmed a healthy, symmetrical face without any enlarged lymph nodes. An intraoral examination revealed a small shell shaped crown in the anterior lower gums region 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. Post extraction hemostasis was obtained (Figure 6). Postoperative instructions were given to the mother and a follow-up visit was scheduled a week later.

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

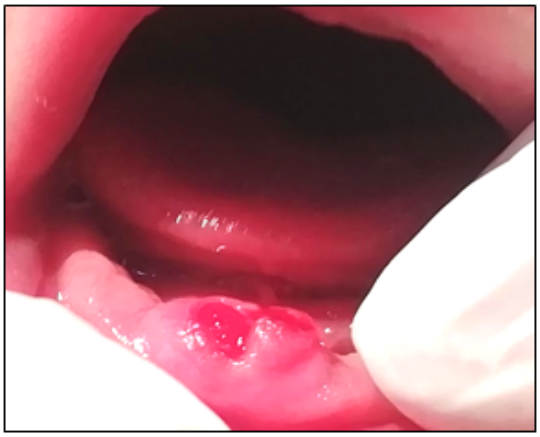

Figure 6: Post operative intraoral view

4. Discussion

There are various folklore and myths around dens connatalis. In some cultures, like in Malaysia, England a fetal tooth is believed to bring forth good luck; while in some others, like in China, Africa, Poland, and India, the children born with this are said to be bearers of misfortune.[9] In King Henry the Sixth, Shakespeare also mentions to Richard the Third about fetal teeth that he had teeth in his head when he came into this world to bite everyone thus associating this condition with the reason for someone to be able to conquer the world.[10]

Dentitia praecox is a relatively rare occurrence, and their exact etiology is not known. Natal teeth have been associated with cleft lip and palate, Pfeiffer syndrome, chondroectodermal dysplasia also called Ellis-van Creveld. Several syndromes, including pachyonychia congenita (Jadassohn-Lewandowsky), Rubinstein-Taybi, Wiedeman Rautenstrauch (neonatal progeria), steatocystoma multiplex have been associated with the occurrence of natal teeth. Some other conditions like cyclopia, Pierre-Robin, Pallister-Hall, ectodermal dysplasia Hallermann-Streiff (Mandibulo-oculo-facial dyscephaly with hypotrichosis), multiple adrenogenital, Sotos, craniofacial dysostosis, Walker-Warburg syndrome, steatocystoma, and epidermolysis bullosa simplex have also been associated with it.[1,4,11–19] Histologically, the pulpal chamber and the radicular canals of natal or neonatal teeth are larger due to the lack of cementum formation, and irregular dentin formation. Absence of root formation is also observed. Although the pulp shows normal development, sub-odontoblastic zone of Weil and cell-rich zone are missing in such teeth.[20]

Several sources suggest an autosomal dominant gene to be the hereditary cause as put forward in a report on 5 siblings born with natal teeth.[21] In a study, it was reported that the natal or neonatal teeth prevalence among

Alaskan Tlingit Indian newborns was 9%; while it was found that 62% of their relatives were also affected.[20] Additionally, a positive family history is indicated in case of natal and neonatal teeth by Kates et al. in 7 out of 38 cases. Certain environmental factors and chemicals, like polychlorinated biphenyls, dibenzofurans etc. enhances the incidence of natal teeth apart from other symptoms, such as dystrophic fingernails and hyperpigmentation.[21] Endocrinal disturbances, infections like congenital syphilis, Febrile status, pyelitis, nutritional deficiencies like hypovitaminosis, and exanthemata during pregnancy are some other etiologic factors.[20]

Predeciduous teeth have been classified by Spoug and Feasby (1966) depending on their clinical maturity:

1. A partially or wholly developed natal or neonatal tooth with moderately good prognosis.
2. An underdeveloped, immature, natal or neonatal tooth with poor prognosis.[22]

Hebling et al. classified precocious dentition according to the tooth morphology during eruption into the oral cavity:

1. Conch-shaped tooth crown with no root poorly attached to the alveolus by gingival tissue.
2. Solid crown with little or no root poorly attached to the alveolus by gingival tissue.
3. Incisal edge of the natal tooth erupting through the gingival tissues, and
4. Unerupted natal tooth causing palpable gingival edema.[22]

It is safer to wait before extracting the tooth till the child is 10 days old. This waiting period is recommended for the establishment of commensal flora in the intestine which is essential to produce vitamin K which in turn helps in the production of prothrombin in the liver before performing tooth extraction.[23] It is recommended that a pediatrician should evaluate the need for administration of intramuscular vitamin K (0.5–1.0 mg) in case it is not possible to wait for 10 days for the extraction. In some cases, the newborn is medicated immediately after birth with vitamin K to prevent hemorrhagic disease of the newborn, so all these factors need to be kept in mind.

5. Conclusion

Thus, dens connatalis are mostly extracted as a part of the routine treatment in such cases if the tooth is mobile or there are chances of aspiration of the same. Thus, in the two reported cases this procedure was followed post application of Vitamin K. The children did not report any complications post extraction.

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None.

7. Conflict of Interest

None.

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