

MANAGING NATAL TOOTH IN A 20-DAYS-OLD INFANT: A CASE REPORT

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ABSTRACT

The presence of teeth at birth or earlier than expected is a rare phenomenon and can evoke a variety of reactions. Natal teeth are those which present at birth, while neonatal teeth appear within the first 30 days after birth, constituting an unusual and rare occurrence. This case report describes the management of a 20-days-old male infant with presence of an excessively mobile tooth in the lower jaw since birth, causing difficulty in breast feeding. The tooth appeared whitish opaque in colour, with grade II mobility. Crown size, shape, and appearance were similar to normal teeth. Due to the association of natal teeth with breastfeeding discomfort, extraction was recommended. No vitamin K prophylaxis was administered as the baby had achieved normal safe levels. Topical anesthesia was applied, and the tooth was extracted using primary anterior forceps. Hemostasis was achieved with sterile cotton gauze and the patient was discharged post-extraction.

Key Words: Natal tooth, Mandibular incisor, Extraction, Vitamin K, Paediatric dentistry

INTRODUCTION

It is essential for pediatricians and pediatric dentists to be well-informed about the normal features and abnormalities in a newborn's oral cavity for early detection of issues. One such dental anomaly is the presence of natal and/or neonatal teeth.¹ Ideally, the first tooth to erupt in the oral cavity is the mandibular central incisor, usually around six months of age.² However, variations in dental development can result in teeth being present at birth or shortly thereafter.³ In 1905, Massler and Savara introduced terminology to classify teeth present at birth as "natal teeth" and those appearing within the first month as "neonatal teeth." Some other terms used to describe these teeth include congenital teeth, fetal teeth, predeciduous dentition and dentitia praecox.⁴

The prevalence of natal teeth ranges from 1 in 2000 to 3500 live births. Although the exact cause is unknown, several factors are believed to contribute to their development. Maternal risk factors during pregnancy include infections, trauma, malnutrition, febrile illnesses, hormonal influences, and exposure to environmental toxins. In the infant, a superficial position of the tooth germ, osteoblastic remodeling within the tooth germ, hereditary factors (often an autosomal dominant trait) and exposure to environmental pollutants such as polychlorinated

biphenyls (PCBs) may increase the likelihood of natal teeth.

The clinical appearance of natal teeth varies widely, ranging from normal size and shape to smaller, conical forms. The colour can differ from whitish opaque to yellowish brown. These teeth may appear in an immature form, with minimal root development, and are often attached to the gum pads by a thin layer of soft tissue over the alveolar ridge.⁵ If a tooth is present at birth or erupts very early, it can cause difficulties for both the mother and the infant, such as pain during suckling, refusal to feed, or struggling to feed. Most natal teeth are prematurely erupted primary teeth and should be carefully managed unless they interfere with nursing or cause tongue ulceration, leading to serious complications. If extraction is necessary, it should be done with caution due to the underdeveloped coagulation mechanism in infants.^{6,7} In 1997, Hebling categorized natal teeth into four clinical types based on their appearance.⁸

CASE REPORT

A 20 days old baby boy was referred by the Paediatrician to the Department of Paediatric and Preventive Dentistry, Desh Bhagat dental college and hospital, Mandi Gobindgarh. The infant's mother complained about the presence of one excessively mobile tooth in the lower jaw since birth, which was causing difficulty

during breast feeding. The child was delivered by normal vaginal delivery, and the prenatal history of the mother was normal. Past medical and Family history was non-contributory. On intraoral examination, single tooth was present in the mandibular anterior region and position of the natal teeth represent the corresponding position of 71. The tooth was whitish opaque in colour, with grade II mobility according to Millers classification of mobility. The size of crown, shape and the appearance were similar to normal teeth (Figure 1). The lips, gingivae, palate, tongue, floor of the mouth, and buccal mucosa were clinically normal in appearance and there was no ulceration on the ventral surface of the tongue. There was no gross congenital malformation. The maxillary and rest of mandibular gum pads and intraoral mucosa was normal. Because of the association of natal teeth with discomfort to the mother during breast feeding, the natal teeth were advised for extraction.



Figure 1:
Neonatal teeth in region of
Lower left central incisors

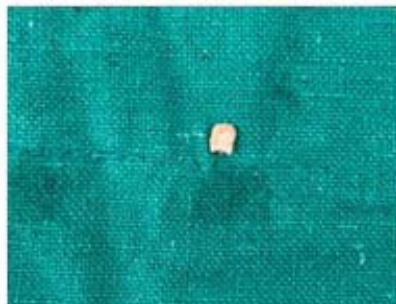


Figure 2:
Extracted Neonatal tooth



Figure 3:
Postoperative Hemostasis
achieved

The procedure was performed with the dentist and mother in the knee-to-knee position, and the baby reclined in the dentist's lap. No vitamin K prescription prophylaxis was performed because the baby had already achieved the normal safe levels. Initially, the mucosa was dried and a topical anesthetic was applied with cotton three times. The tooth was extracted using primary anterior forceps and the wound was curettaged. Sterile cotton gauze was then applied with pressure for hemostasis. The extracted tooth had the crown structure only and was lacking in root (Figure 2). After achieving complete haemostasis patient was discharged (Figure 3). Post-operative instructions were given to the parents and the patient was recalled after 1 week for follow up.

DISCUSSION

There are various folklore and myths around densconnatalis. 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.

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.⁹ Natal teeth, occurring at birth, are three times more common than neonatal teeth, with an incidence ranging from 1:2,000 to 1:3,000 live births, and females are more predisposed to this anomaly.¹⁰

Clinical cases often report the occurrence of neonatal teeth, predominantly affecting the lower central incisors (around 85% of cases) and the upper central incisors (around 11%).¹¹⁻¹³

The teeth most commonly affected by hypoplastic enamel in natal and neonatal teeth are the lower primary central incisors, accounting for approximately 85% of cases. Following these, the maxillary incisors are affected in about 11% of cases, while the mandibular canines and molars are affected in 3% of cases, and the maxillary canines and molars in 1% of cases. The gingival covering may contribute to discoloration of natal teeth, while incomplete root formation is the primary reason for the excessive mobility observed in natal and neonatal teeth.¹⁴ The exact cause of natal and neonatal teeth remains uncertain, although several

factors have been suggested to contribute, including the superficial positioning of tooth germs, increased eruption rates due to fever episodes, developmental abnormalities, hormonal influences, and hereditary syndromes.^{15,16}

Environmental factors such as polychlorinated biphenyls (PCB) and dibenzofurans have been implicated in increasing the incidence of natal teeth.¹⁷ Some sources propose that an autosomal dominant gene may be the hereditary factor, as evidenced by a report detailing five siblings born with natal teeth.¹⁸ A study revealed a prevalence of 9% among Indian newborns, with 62% of their relatives also exhibiting natal or neonatal teeth.¹⁹

Several syndromes have been associated with the presence of natal or neonatal teeth. Some of these syndromes include cleft lip and palate, Pfeiffer syndrome, Ellis-van Creveld syndrome, Pachyonychia congenita (Jadassohn-Lewandowsky), Pallister-Hall syndrome, Hallermann-Streiff syndrome, Rubinstein-Taybi syndrome, Pierre-Robin sequence, Sotos syndrome and epidermolysis bullosa simplex. These associations highlight the importance of thorough evaluation and assessment when natal teeth are present, as they may serve as a clinical indicator of an underlying genetic condition or syndrome. Early diagnosis and management of associated syndromes are essential for providing appropriate medical care and support to affected individuals.⁹

Infants are particularly vulnerable to vitamin K deficiency bleeding (VKDB), which can result from vitamin K malabsorption, leading to severe bleeding in breastfed infants due to its crucial role in liver prothrombin production. 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.²⁰ It is recommended that a pediatrician should evaluate the need for administration of intra muscular 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. In our case, since the infant was 20 days old, no prophylactic vitamin K administration was given before extraction. Extraction of the natal tooth should be followed by curettage of the socket to prevent the continued development of the cells of the dental papilla, as documented by Ooshima et al and Tsubone et al.^{21,22} Failure to do so may result in the eruption of tooth-like structures several months later, a condition referred to as residual natal tooth by Tsubone et al.²²

CONCLUSION

Despite their rarity, natal teeth can pose significant challenges, particularly when they interfere with feeding or pose a risk of aspiration. In this case, the natal tooth was identified early, and appropriate measures were taken to ensure the infant's safety during extraction.

REFERENCES

1. Lobelli CC, Manoelito FSJ, da Conceição M, Pereira PS, Isabelita Duarte A. Management of Neonatal Teeth: Two Case Reports. *Inter Ped Dent Open Acc J.* 2020;4(1):178.
2. Cunha RF, Boer FAC, Torriani DD, Frossard WTG. Natal and Neonatal teeth: review of the literature. *Ped Dent.* 2001;23(2):158-62.
3. Dahake PT, Shelke AU, Kale YJ, Iyer VV. Natal teeth in premature dizygotic twin girls. *BMJ Case Rep.* 2015;1:1-3.
4. Kaur G, Sultan A, Antony TJ, Kumar SS. Residual neonatal tooth in a pre-term infant: A case report and brief review. *Int J Oral Health Dent.* 2019;5(2):118-23.
5. Nirmala SVSG, Prabhu RV, Veluru S, Tharay N, Kolli NK. Natal Teeth - A Case Report with Decision Support System. *J Pediatr Neonatal Care.* 2015;2(3):73.
6. Kim SH, Cho YA, Nam OH, Kim MS, Choi SC, Lee HS. Complication After Extraction of Natal Teeth with Continued Growth of a Dental Papilla. *Pediatr Dent.* 2016;38(7):137-42.
7. Pinkham JR, Casamassino PS, McTigue DJ, Fields HW, Nowak AJ. Pediatric Dentistry-Infancy through adolescence; in *Infant oral pathology and*

- unusual clinical findings. 4th Edition, Saunders Publication; 2014.
8. Hebling J, Zuanon ACC, Vianna DR. Dente natal: a case of natal teeth. *Odontol Clin.* 1997;7:37-40.
 9. Dutta S. Management of natal teeth: A twin case report. *Arch Dent Res.* 2023;13(2):118-21.
 10. Varuna S, Sapna B. A rare case of natal teeth. *International Journal of Science & Healthcare Research.* 2022;7(3):397-9.
 11. Zhu J, King D. Natal and neonatal teeth. *ASDC J Dent Chil.* 2014;62(2):123-8.
 12. Leung AK, Robson WL. Natal teeth. *Am J Dis Child.* 1986;140:249-51.
 13. Kates GA, Needleman HL, Holmes LB. Natal and neonatal teeth: a clinical study. *J Am Dent Assoc.* 1984;109(3):441-3.
 14. Chachra RR, Bansal S, Kaur S, Sharma T, Chachra M, Student A, Head P, Swami D. Management of Natal Teeth-A Series of Two Case Reports; 2019.
 15. Leung AKC, Robson WLM. Natal teeth: a review. *J Nat Med Assoc.* 2006;98(2):226-8.
 16. Chow MH. Natal and neonatal teeth. *J Am Dental Assoc.* 1980;100(2):215-6.
 17. Alaluusua S, Kiviranta H, Leppäniemi A, Hölttä P, Lukinmaa PL, Lope L, et al. Natal and neonatal teeth in relation to environmental toxicants. *Pediatr Res.* 2002;52:652-5.
 18. Malki GA, Al-Badawi EA, Dahlan MA. Natal teeth: a case report and reappraisal. *Case Rep Dent.* 2015;15(2):1-4.
 19. Rao RS, Mathad SV. Natal teeth: case report and review of literature. *J Oral Maxillofac Pathol.* 2009;13(1):41-6.
 20. Ceratto S, Savino F. Vitamin K deficiency bleeding in an apparently healthy newborn infant: the compelling need for evidence-based recommendation. *Ital J Pediatr.* 2019;45.
 21. Ooshima T, Mihara J, Saito T, Sobue S. Eruption of toothlike structure following the exfoliation of natal tooth: Report of a case. *ASDC J Dent Child.* 1986;53:275-8.
 22. Tsubone H, Onishi T, Hayashibara T, Sobue S, Ooshima T. Clinico-pathological aspects of a residual natal tooth: A case report. *J Oral Pathol Med.* 2002;31:239-41.