

NATAL TEETH - A REVIEW

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ABSTRACT

One or two teeth might be seen soon after the birth of a baby. This is a major event in the life of the baby. Parents will be filled with joy and pleasure and form an emotional environment. The most common complications include discomfort during breastfeeding, difficulty in sucking milk, rejection in feeding of milk and emotional disturbance in relation to mother and child.

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INTRODUCTION

One of the main aims of modern dentistry is the provision of early, comprehensive care for infants, making the knowledge of dental issues arising at this age more important. A child's development involves several changes. Around six months of age, a baby's first tooth usually erupts (1). The existence of a tooth in a new-born might worry parents and nursing staff during an already trying time, in addition to any other difficulties that may arise. The historical, aetiological, and therapeutic treatment features of natal teeth are examined in this article (2).

These teeth can have a variety of issues, and the dental team will determine the best course of action after evaluating each patient individually. In addition to reassuring parents, neonatal nurses should be knowledgeable about and competent in identifying natal and neonatal teeth and know whom to refer to when a patient becomes ill (3).

Teeth that develop early in life are a rare but well-researched clinical anomaly (4,5,6,7). More recently, it was discovered that these terms did not adequately characterize teeth that were present at birth or soon after. Even these terms are limited to defining the eruption time; they do not address the tooth's anatomy, histology, primary dentition status, or supernumerary status (8,9).

HISTORICAL PERSPECTIVE

In certain parts of the world, the condition is regarded as a bad omen, and there are numerous other beliefs surrounding it (2). Since the Roman and Ancient Greek eras, babies have been recorded to be born with teeth, and the phenomenon is deeply rooted in mythology, hearsay, and superstition. The existence of natal teeth in ancient times is confirmed by Cuneiform inscriptions found at Nineveh (10). False beliefs about natal and neonatal teeth range from the extreme of thinking they are good and symbolize extraordinary favour, to the other extreme of thinking they are evil and represent terrible misfortune (7, 11, 12). In "King Henry the Sixth," Shakespeare shares his observations on baby teeth when he quotes Richard the Third, saying, "teeth hadst thou in thy head when thou wast born to signify thou camest to bite the world" (8).

PREVALENCE

The literature reports various proportions of these (1,5,13). Anterior mandible accounts for 85% of the total number of natal teeth, with the anterior maxilla coming in second (14). It is not unexpected that there is a considerable preference for the lower central incisors because they usually erupt earliest. The percentage of supernumeraries reported is less than 10% (15). The prognosis of an immature tooth is worse than that of a mature natal tooth (8).

DEVELOPMENT AND ETIOLOGY

Although the precise cause of these teeth is unknown (5), several theories have been put forth, including infection, fever at birth, malnourishment, hypovitaminosis, and exposure of the mother to toxins in the environment. (1,4,16). Various theories have been proposed which include the following (4):

- Genetic predisposition: According to research by Bodenhoff and Gorlin, 15% of new-borns with natal teeth report having experienced something similar from close family members (7,17). The research by Massler and Savara reveals that 10/24 cases also show evidence of hereditary influences (6).
- A baby's genetic makeup will determine how quickly his teeth erupt; in other words, the presence or absence of a dominant autosomal gene in the family seems to play a significant role (11).
- Endocrine disturbances: It is believed to be caused by a surplus of pituitary, thyroid, or gonad secretion.
- Osteoblastic activity near the tooth germ may influence the eruption process of infant and neonatal teeth.
- Infection: The effects of congenital syphilis appear to vary; in certain cases, the disease has manifested early, while in others, it has taken longer to manifest.
- Nutritional deficiencies, such as hypovitaminosis (resulting from pyelitis during pregnancy, endocrine disorders, febrile episodes, and congenital syphilis), among other factors.
- Hyperthermia
- Anatomical proximity
- Atmosphere - Increased by dibenzofurans and polychlorinated biphenyls (PCBs). Typically, these kids exhibit additional related symptoms like hyperpigmentation, dystrophic fingernails, etc. (18).

Neonatal and natal teeth are commonly linked to recognized syndromes and developmental abnormalities (8,19–21). Typically, one of the following factors leads to the dental clinic receiving infant patients (22):

- A possibility exists that the new-born will breathe in the fragment into his or her lungs due to the tooth's excessive movement during nursing.
- A ventral surface tongue ulcer. Coldarllin originally reported this syndrome in 1857. The term "Riga-Fede disease" was coined following the publication of a histological description of the lesion by Riga and Fede.
- Difficulties eating or refusing to eat due to pain.

This structure, known as an "expulsive Capdepon follicle," may develop from alveolar margin trauma during childbirth. The ulcer that results from this trauma can then act as a conduit for infection up the gubernacular canal. The gubernaculum dentis persistente is impacted by follicle infection, resulting in phlegmasia and turgidity of the follicular tissues, claims this author. True early eruption and expulsive folliculitis can be differentiated based on the following features (24):

- Increased mobility, turgidity and gingivitis in the eruption area.
- True early eruption: firmness, the tooth's regular eruptive route, and the gingival mucosa's integrity (4,5,11,14,15,24,25,26,27,28).

Even though the pulp exhibits normal development, the radicular canals and the pulp cavity are wider. The cell rich zone and Weil's zone are absent. A sizable pulpal chamber, uneven dentin production, no cementum formation, and the absence of roots were among the other discoveries. In the polarized light and micro-radiographic investigations, these teeth showed enamel hypoplasia along with dentinal abnormalities such as the production of osteodentin and irregular dentin in the cervical sections and interglobular dentin in the coronal region (21). There has only been one case documented, in which teeth that resembled cartilage prematurely erupted at birth. Natal teeth without enamel formation are exceedingly rare (9,19,29,30).

Other oral manifestations such as Bohn nodules and dental lamina cysts can be mistaken for these dental conditions, but radiographic examination can distinguish between them (4,22,31).

DIAGNOSIS

After a comprehensive clinical examination of the patient in well-lit conditions, the diagnosis of natal teeth must be made (2). This will help to avoid extracting teeth without a reason. Researchers found that most of these teeth are not supernumerary teeth but rather main teeth of a normal dentition (29).

MANAGEMENT

Steady root growth increases stability. According to Kates et al., natal teeth with a good prognosis for retention were those that survived for four months (15). If feeding is not interfered with, removal is not recommended. Riga:Fede disease is not always a sign that something needs to be extracted.

Maintenance in the mouth is thought to be the main course of treatment if these erupted teeth are determined to be a normal part of the dentition, unless they endanger the unborn child. These teeth should remain in the arch if they are implanted properly and should only be extracted if they become in the way of food (4,7,11).

- Inability to latch and feed.
- Interference with suckling.
- Breast irritation detrimental to feeding.
- Persistent lingual ulceration (Riga-Fede disease) resistant to conservative management.
- Supernumerary natal teeth as confirmed by radiography (15).

Teeth that hold steady after four months have a good prognosis. They don't look nice due to the discolouration. The medical community and parents should benefit greatly from the knowledge that paediatric dentists can provide regarding the proper maintenance of infant teeth. In case extraction of the natal tooth is deemed necessary, a dentist should handle the procedure to prevent needless damage to the surrounding tissue. It is crucial to have a paediatric dentist check up on you on a regular basis to guarantee preventive oral health care. In order to prevent complications, it is imperative that natal teeth be managed with an emphasis on early diagnosis and appropriate treatment (22).

CONCLUSIONS

Parent counselling to raise awareness is equally important as closely examining infants with prematurely erupted teeth for the purpose of planning future treatment. To determine if natal teeth are primary or supernumerary teeth, as well as to validate their genesis, more research is necessary.

REFERENCES

1. Cunha RF, Boer FA, Torriani DD, Frossard WT. Natal and neonatal teeth: review of the literature. *Pediatr Dent*. 2001 Mar-Apr;23(2):158–162.
2. Sothinathan R and Shakib K. *British Dental Journal* 2011; 210: 265-266.
3. Holden E, DeSeta M, Siddik D, Bhujel N. Natal and neonatal teeth: A review and management recommendations. *J Neonatal Nurs*. 2022 Aug 1;28(4):240–3.
4. Leung A K. Natal teeth. *Am J Dis Child* 1986; 140: 249–251.
5. Leung AKC and Robson WLM. Natal teeth: a review. *Journal of the National Medical Association*, 2006; 98(2):226–228.
6. Massler M, Savara B S. Natal and neonatal teeth. *J Pediatr* 1950; 36: 349–359.
7. Bodenhoff J, Gorlin R J. Natal and neonatal teeth: folklore and fact. *Pediatrics* 1963; 32: 1087–1093.
8. Alvarez MP, Crespi PV, Shanske AL. Natal molars in Pfeiffer syndrome type 3: A case report. *J Clin Pediatr Dent* 1993; 18:21-4.
9. Anderson RA. Natal and neonatal teeth: Histologic investigation of two black females. *ASDC J Dent Child* 1982; 49:300-3.
10. To E W. A study of natal teeth in Hong Kong Chinese. *Int J Paediatr Dent* 1992; 1: 73–76.
11. Allwright W C. Natal and neonatal teeth: a study among Chinese in Hong Kong. *Br Dent J* 1958; 105: 163–172.

12. Gardiner J H. Erupted teeth in the newborn. *Proc R Soc Med* 1961; 54: 504–506.
13. de Almeida CM, Gomide MR. Prevalence of natal/neonatal teeth in cleft lip and palate infants. *Cleft Palate Craniofac J*. 1996 Jul;33(4):297–299.
14. Zhu J, King D. Natal and neonatal teeth. *ASDC J Dent Child* 1995; 62: 123–128.
15. Kates GA, Needleman HL, Holmes LB. Natal and neonatal teeth: a clinical study. *J Am Dent Assoc*. 1984 Sep 1;109(3):441–3.
16. Alaluusua S, Kiviranta H, Leppäniemi A, Hölttä P, Lukinmaa P-L, Lope L et al. Natal and neonatal teeth in relation to environmental toxicants. *Pediatr Res*. 2002 Nov;52(5):652–655.
17. Limrick O E B. Born with teeth. *Lancet* 1893; 2: 965.
18. McDonald RD, Avery DR, Dean JA. *Dentistry for the Child and Adolescent*. 8th ed. Missouri: Mosby; 2004.
19. Masatomi Y, Abe K, Ooshima T. Unusual multiple natal teeth: case report. *Pediatr Dent* 1991; 13: 170–172.
20. Rao BB, Mamatha GR, Jameera KM, Hegde RB. Natal and neonatal teeth: A case report. *J Indian Soc Pedo Prev Dent* 2001; 19:110-2.
21. Uzamis M, Olmez S, Ozturk H, Celik H. Clinical and ultrastructural study of natal and neonatal teeth. *J Clin Pediatr Dent* 1999; 23:173-7.
22. Rao RS and Mathad SV. Natal teeth: case report and review of literature. *Journal of Oral and Maxillofacial Pathology*,2009;13(1): 41–46.
23. Facounnier H, Gerardy L. *Arch Stomatol* 8:84, 1953.
24. Costa CAA. Odontopediatria na prevenção de possíveis distúrbios dento-maxilo-faciais. In: *Odontopediatria*, 3th Ed. Rio de Janeiro: Coelho Branco Fo; 1952:104.
25. Viscardi RM, Romberg E, Abrams RG. Delayed primary tooth eruption in premature infants: relationship to neonatal factors. *Pediatr Dent*. 1994;16(1):23-8.
26. Ramos SRP, Gugisch RC, Fraiz FC. The influence of gestational age and birth weight of the newborn on tooth eruption. *J Appl Oral Sci*. 2006;14(4):228-32.
27. Paulsson L, Bondemark L, Söderfeldt B. A systematic review of the consequences of premature birth on palatal morphology, dental occlusion, tooth-crown dimensions, and tooth maturity and eruption. *Angle Orthod*. 2004;74(2):269-79.
28. Gonçalves F A, Birmani E G, Sugayai N N, Melo A M. Natal teeth: Review of literature and report of an unusual case. *Braz Dent J* 1998; 9: 53–56.
29. Anegundi RT, Sudha P, Kaveri H, Sadanand K. Natal and neonatal teeth: A report of four cases. *J Indian Soc Pedo Prev Dent* 2002; 20:86-92.
30. Sigal MJ, Mock D, Weinberg S. Bilateral mandibular hamartomas and familial natal teeth. *Oral Surg Oral Med Oral Pathol* 1988; 65:731-5.

31. Singh S, Subbba Reddy VV, Dhananjaya G, Patil R. Reactive fibrous hyperplasia associated with a natal tooth: A case report. *J Indian Soc Pedo Prev Dent* 2004; 22:183-6.
32. Goho C. Neonatal sublingual traumatic ulceration (Riga-Fede disease): reports of cases. *ASDC J Dent Child* 1996; 63: 362–364.
33. Tomizawa M, Yamada Y, Tonouchi K, Watanabe H, and Noda T. Treatment of Riga-Fede's disease by resin-coverage of the incisal edges and seven cases of natal and neonatal teeth. *Shoni Shikagaku Zasshi*, 1989;27(1): 182–190.
34. Bhutta ZA, Darmstadt GL, Hasan BS, and Haws RA. Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. *Pediatrics*, 2005;115(2) suppl:519–617.
35. Ziai MN, Bock DJ, Da Silveira A, Daw JL. Natal teeth: a potential impediment to naso-alveolar molding in infants with cleft lip and palate. *J Craniofac Surg* 2005; 16:262-266.

