

Natal Tooth-An Overview and A Case Report

Anil Patil^{*}, Anand Lingaraj Shigli, Shubhani Deepak Mehta and Nikhil Narendra Zaparde

Bharati Vidyapeeth Deemed University Dental College and Hospital, Maharashtra, India

^{*}Corresponding author: Anil Patil, Bharati Vidyapeeth Deemed University Dental College and Hospital, Maharashtra, India, Tel: +91 9850983500; E-mail: dranilp0888@gmail.com

Received date: December 01, 2016; Accepted date: December 27, 2016; Published date: January 04, 2017

Copyright: © 2017 Patil A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Natal and neonatal teeth represent an uncommon anomaly amongst different racial and ethnic groups. A paediatrician and a paediatric dentist should work as a team since the presence of natal tooth may lead to numerous complications. Also, diagnosis and proper treatment planning of these teeth are recommended because they may result in injury to the tongue, inadequate nutrition intake leading to malnutrition and growth retardation. This paper presents a case report and a concise overview of the literature on natal teeth.

Keywords: Incidence; Natal tooth; Prevalence; Treatment modalities

Introduction

The paediatric dentists play a vital role in a child's life right from infancy till the child becomes a mature adult. Eruption of primary incisor in the mouth is marked as a big event in a child's life. On some instances an infant may be born with a tooth like structure in the mouth right at birth which is known as "natal teeth", within first month of life known as "neonatal teeth" [1] or beyond the natal period of thirty days known as "early infancy teeth" (one to three and a half months) [2]. These teeth are also known by various terminologies like "Dentitia praecox", "dens connatalis", "congenital teeth", "foetal teeth", "infancy teeth", "predeciduous teeth", and "precocious dentition" [3].

Myth and Historical Background

Natal and neonatal teeth were first seen and documented by Titus Livius. In some countries like India, Poland and Africa, Children having such teeth were considered as taboo and were killed immediately after birth [1]. There was another scenario in England, where they believed that the infants born with natal teeth would become famous soldiers, while those born in France and Italy were considered to be the future conqueror of the world [4].

Classification

Spouge and Feasby [5] classified these teeth on the basis of maturity as follows: 1. A mature natal or neonatal tooth-Nearly or almost developed and has relatively good prognosis for maintenance; 2. An immature natal or neonatal tooth-A tooth with incomplete structure and poor prognosis.

The frequency of teeth affected by natal and neonatal in literature showed that, the lower deciduous central incisors (85%) are the most frequently affected, followed by the maxillary incisors (11%), mandibular canines and molars (3%), and maxillary canines and molars (1%) [6].

The morphology and the mineralization of these teeth may differ from the normal teeth. These teeth are usually smaller in size and conical in shape [7]. Some teeth may show enamel

hypomineralization/hypoplasia and a small root formation indicating its immature nature. This article hereby presents a case report and management of an infant with natal teeth in the mandibular anterior region of the jaw.

Case Report

A twelve days old infant was referred by the paediatrician to the Department of Periodontics and Preventive Dentistry, Bharati Vidyapeeth Dental College and Hospital, Sangli, India; with a chief complaint of presence of teeth in the lower anterior region of the jaw since birth and difficulty in breast feeding (Figure 1).



Figure 1: Extra-oral photograph of a twelve days old child with natal teeth.

History of full term, normal vaginal delivery with normal perinatal history weighing two and a half kilograms at birth. On intraoral examination, two teeth were present in the mandibular anterior region and positions of the natal teeth represent the corresponding position of 71 and 81 (Figure 2) with grade II mobility according to Miller's classification of mobility. The teeth were surrounded by yellowish deposits. The size of crown, shape and the appearance were similar to normal teeth. The gingiva appeared to be slightly swollen. The maxillary and rest of mandibular gum pads, tongue and intraoral mucosa was normal (Figure 2). There was discomfort to the mother during breast feeding because of the association of natal teeth. Also, there was increased risk of aspiration due to the presence of grade II mobility. Thus, both the natal teeth were advised for extraction after prophylactic administration of vitamin K supplementation. Radiographic investigations revealed calcified cap of enamel and dentin (Figure 3).

The teeth were extracted using 2% Lignocaine with adrenaline local infiltration technique after application of topical anaesthesia. Care was taken such that the tooth should not be aspirated by the child (Figure 4).

After extraction, curettage of the socket was done to prevent continued development of the cells of the dental papilla. The teeth resembled an immature normal teeth (Figure 5). The teeth were sent to the histopathological laboratory for further investigations. The decalcified section stained with haematoxylin and eosin showed enamel almost lost due to decalcification, dentine with dentinal tubules, odontoblastic cell layers and young pulp tissue which was suggestive of normal tooth like structure (Figure 6).

Postoperative instructions were given and demonstration of oral hygiene maintenance for the infant was given to the mother (Figure 7). A recall visit after seven days (Figure 8) and one month (Figure 9) was scheduled and the child was kept under clinical and radiographic follow-up (Figure 10).



Figure 2: Natal teeth present in the lower anterior region of the jaw.



Figure 4: Extraction of natal teeth under 2% lignocaine with adrenaline.



Figure 3: Radiograph (RVG) showing presence of natal teeth in the lower anterior region of the jaw.



Figure 5: Extracted natal teeth resembling immature teeth.

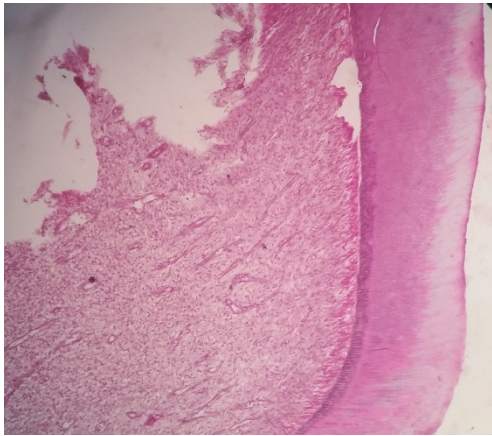


Figure 6: Histopathological image of natal tooth.



Figure 7: Demonstration of oral hygiene maintenance for the infant given to the mother.

Discussion

Etiological factors

The exact etiology of natal teeth is yet to be found. Several sources suggest that a hereditary factor may be responsible for the presence of such teeth [8].

Other aetiologies associated with natal or neonatal teeth include various endocrine disturbances, nutritional deficiency and environmental factors like polychlorinated biphenyls (PCBs), dibenzofurans (PCDFs) [9].

Associated syndromes

The syndromes associated with natal teeth include Chondroectodermal Dysplasia [10], Oculomandibulofacial syndrome

[11], Broad thumb hallux syndrome, Epidermal polycystic disease, Pierre-Robin anomaly, Cleft Lip and Palate, Pfeiffer syndrome, Ectodermal Dysplasia, Craniofacial Dysostosis, Epidermolysis-Bullosa Simplex including Van der Woude, Down's Syndrome [12] and Walker-Warburg Syndromes [13]. Our case had no association with any syndromes.



Figure 8: Clinical follow-up done after seven days.



Figure 9: Clinical follow-up done after one month.

Incidence and prevalence

Natal teeth are more common as compared to neonatal teeth. The incidence of natal and neonatal teeth ranges from 1: 2,000 to 1: 3,500 respectively [14].

The prevalence of natal teeth has been investigated by several studies and different ranges have been reported from 1: 716 to 1: 3500 live births [15].

Females are more commonly affected as compared to males, according to Almeida et al. there was 66% prediction for female compared to 31% proportion for males [16].

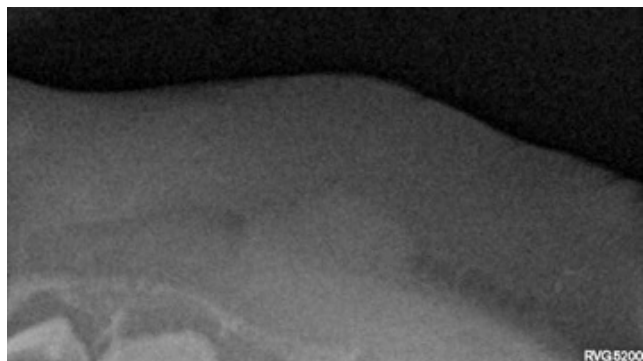


Figure 10: Radiographic (RVG) follow-up done after one month.

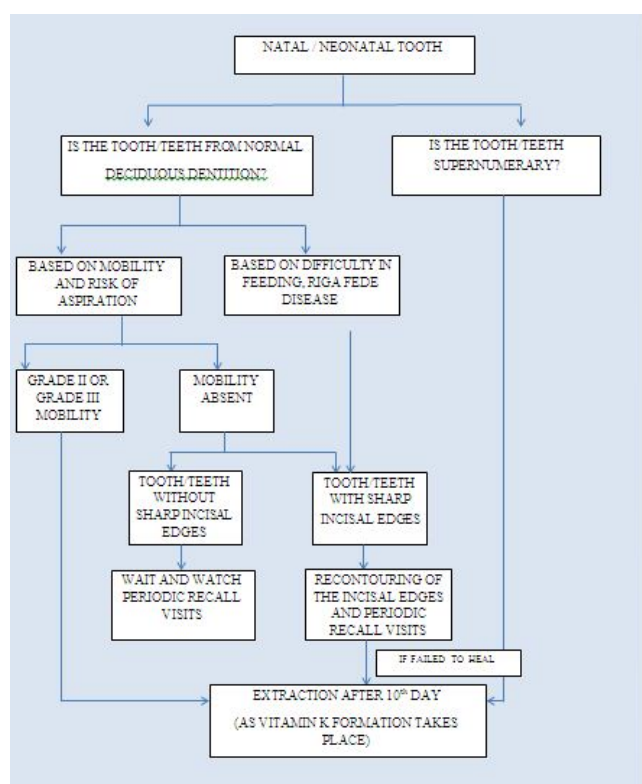


Figure 11: Treatment decision flow chart.

Treatment modalities

The management of natal teeth depends upon the risks and complications associated. Treatment decision flowchart is as described in the figure (Figure 11).

The treatment planning of these natal or neonatal teeth depends on various factors which include degree of mobility, inconvenience during

suckling, problems associated with breastfeeding, and if the tooth is supernumerary or is part of the normal dentition [17].

No treatment is required if the tooth is asymptomatic and breastfeeding is not impaired. Extraction of the tooth should be done only if the tooth is supernumerary or if the tooth is extremely mobile with a possible risk of aspiration after the consultation of a paediatric dentist. If extraction is the treatment of choice, it can be postponed till the child becomes ten days old or more only after appropriate blood levels of vitamin K is attained. Since parenteral vitamin K prevents a life threatening haemorrhagic disease of the new-born, the American Academy of Paediatrics recommends that all new-born infants should be given a single intramuscular dose of 0.5 to 1 mg of vitamin K [18].

Curettage of the socket should be done post extraction to avoid continued development of the cells of the dental papilla. Failure to curette the socket might result in the eruption of odontogenic remnants may result if the socket is not curetted [19].

If the tooth is not recommended for extraction, smoothing of the incisal edges of the teeth should be done to prevent any injury to the maternal breasts and to continue proper feeding of the child [20]. Feeding splint usage was first implemented by Bjuggren [21]. Full coverage of the incisal portion of the tooth with composite resin material was also recommended [22].

Also, in the non-extraction cases, parental counselling is necessary for explaining the importance of oral hygiene, usage of a fluoridated toothpaste and regular dental visits to prevent the occurrence of early childhood caries [23].

Conclusion

An accurate oral examination is recommended for new-borns, in order to establish the appropriate diagnosis as the natal teeth are quite rare in occurrence. If diagnosed, proper treatment of such teeth is necessary for the betterment of the infant. Also parental counselling and recall visits should be undertaken for supervising the development of the future dentition.

References

1. Massler M, Savara BS (1950) Natal and neonatal teeth: a review of twenty-four cases reported in the literature. *J Pediatr* 36: 349-359.
2. Mhaske S, Yuwanati MB, Mhaske A, Ragavendra R, Kamath K, et al. (2013) Natal and neonatal teeth: an overview of the literature. *ISRN Pediatr*.
3. Zhu J, King D (1995) Natal e neonatal teeth. *J Dent Child* 62:123-128.
4. Leung AK, Robson WL (2006) Natal teeth: a review. *J Natl Med Assoc* 98: 226-228.
5. Spouge JD, Feasby WH (1966) Erupted teeth in the newborn. *Oral Surg Oral Med Oral Pathol* 22: 198-208.
6. Allwright WC (1958) Natal and neonatal teeth. *British Dent J* 105: 163-172.
7. Hebling J, Zuanon ACC, Vianna DR (1975) Dente Natal- Acase of natal teeth. *OdontolClin*. 1975: 7:37-40.
8. Rao RS, Mathad SV (2009) Natal teeth: Case report and review of literature. *J Oral Maxillofac Pathol* 13: 41.
9. Stamfelj I, Jan J, Cvetko E, Gaspercic D (2010) Size, ultrastructure, and microhardness of natal teeth with agenesis of permanent successors. *Ann Anat* 192: 220-226.
10. Weiss H (1955) Chondroectodermal dysplasia: report of a case and review of the literatura. *J Pediatr* 46: 268-275.

11. Robotta P, Schafer E (2011) Hallermann-Streiff syndrome: case report and literature review. *Quintessence Int* 42: 331-338.
12. Ndiokwelu E, Adimora GN, Ibeziako N (2004) Neonatal teeth association with Down's syndrome. A case report. *Odontostomatol Trop* 27: 4-6.
13. Venkatesh C, Adhisivam B (2011) Natal teeth in an infant with congenital hypothyroidism. *Indian J Dent Res* 22: 498.
14. Dymont H, Anderson R, Humphrey J, Chase I (2005) Residual neonatal teeth: a case report. *J Can Dent Assoc* 71: 394-397.
15. Kates GA, Needleman HL, Holmes LB (1984) Natal and neonatal teeth: a clinical study. *J Am Dent Assoc* 109: 441-443.
16. de Almeida CM, Gomide MR (1996) Prevalence of natal/neonatal teeth in cleft lip and palate infants. *Cleft Palate Craniofac J* 33: 297-299.
17. Malki GA, Al-Badawi EA, Dahlan MA (2015) Natal Teeth: A Case Report and Reappraisal. *Case Rep Dent*.
18. Bhutta ZA, Darmstadt GL, Hasan BS, Haws RA (2005) Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. *Pediatrics* 115: 519-617.
19. Farsi DJ, Ahmed MM (2014) Natal and neonatal teeth. *Saudi Med J* 35: 499-503.
20. Martins ALCF (1998) Erupção dentária: dentes decíduos e sintomatologia desse processo. In: Corrêa MSNP (ed.) *Odontopediatria na Primeira Infância*, São Paulo: Santos, pp: 117-29.
21. Bjuggren G (1973) Premature eruption in the primary dentition-a clinical and radiological study. *Sven Tandlak Tidskr* 66: 343-355.
22. Goho C (1996) Neonatal sublingual traumatic ulceration (Riga-Fede disease): reports of cases. *ASDC J Dent Child* 63: 362-364.
23. Moura LF, Moura MS, Lima MD, Lima CC, Dantas-Neta NB, et al. (2014) Natal and neonatal teeth: a review of 23 cases. *J Dent Child (Chic)* 81: 107-111.