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### Supersititons Behind the Natal Tooth: A Case Report

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**Abstract:** Developmental milestones are anxiously awaited by every parent, particularly in the first year of their child's life. One such milestone is the eruption of their child's first tooth. Natal and neonatal teeth are most commonly a part of deciduous dentition and erupt in the same position as that of deciduous teeth in the arch. Natal teeth are those teeth that are present at the time of birth and neonatal teeth are those that erupt within 30 days of life. Clinically, natal teeth are small or normal size, conical or of normal shape. They may reveal an immature appearance with enamel hypoplasia and small root formation. The management of natal and neonatal teeth is largely aimed at their preservation for aesthetics and maintenance of space for eruption of successor tooth. Paediatric dentists should make every effort to educate the parents and the paediatrician on the preferred treatment for the natal teeth. Extraction should be done only by the paediatric dentist to avoid any undue trauma to the underlying tissue. Periodic follow-up by a paediatric dentist to ensure preventive oral health is very essential. Hence, to avoid any further complication, early diagnosis and adequate treatment should be a prime concern in the management of natal and neonatal teeth.

**Keywords:** Milestones, Natal, Neonatal, Pediatrician.

#### INTRODUCTION

Developmental milestones are anxiously awaited by every parent, particularly in the first year of their child's life. One such milestone is the eruption of their child's first tooth. Any untoward incident in this regard may be a cause of worry for the parents, more so, if it is a natal tooth which compromises in child's feeding [1]. Natal and neonatal teeth are most commonly a part of deciduous dentition and erupt in the same position as that of deciduous teeth in the arch [2].

According to Massler and Savara [3], natal teeth are those teeth that are present at the time of birth and neonatal teeth are those that erupt within 30 days of life. Teeth erupting beyond the natal period of thirty days (i.e. erupting within 1-3.5 months) are usually referred to as early infancy teeth [4]. On this basis, when teeth are observed at birth or during the first 30 days of life, the interest, curiosity, and concern of clinicians are similar to that of the parents.

#### HISTORY

Tooth eruption follows a chronology and is subject to small variations depending on endocrine, hereditary and environmental features. At times, however, the chronology of tooth eruption suffers a more significant alteration in terms of onset. This

condition has been the subject of curiosity and study since the beginning of time, being surrounded by beliefs and assumptions. The occurrence of natal and neonatal teeth has been associated with diverse superstitions among many different ethnic groups and cultures.

Natal teeth were reported during Roman times by Titus Livius (59 BC) [5]. Caius Plinius Secundus (the Elder), in 23 B.C., believed that a splendid future awaited male infants with natal teeth, whereas the same phenomenon was a bad omen for girls [6].

Superstitions and folklore about natal teeth have varied from claims that affected children were exceptionally favored by fate to the belief that they were doomed [6-8]. Shakespeare describes in Richard the Third, "Marry they say that my uncle grew so fast that he could gnaw a crust of bread at two hours old." In Henry the Sixth, Richard says about himself, "The midwife wondered; and the women cried, 'O Jesus bless us, he is born with teeth!' And so I was; which plainly signified that I should snarl and bite and play the dog." The reaction of parents to children born with teeth has been varied, some cultures thought the children would be heroes and were selected by fate. An example of this is Caius Plinius Secundus "The Elder" thought a splendid future awaited male children born with teeth

and cited Manius Curius, who owned his nickname of “Dentatus” to this occurrence. “Born with two teeth in his mouth an omen that he will be strong, fierce and harsh, but without fear.”

In some cultures like Malaysian communities, a natal tooth is believed to herald good fortune. Chinese community considers presence of these teeth as a bad omen and the affected children are considered to be monsters and beavers of misfortune. Allwright reported a Chinese patient in whom extraction was requested so that the tooth, together with the "attending evil spirits", could be disposed of in the middle of Hong Kong Harbor [9].

In Poland, India, and Africa, superstition prevailed for a long time, and in many African tribes children born with teeth were murdered soon after birth because they were believed to bring misfortune to all they would contact.

In England, the belief was that babies born with teeth would grow to be famous soldiers, whereas

in France and Italy it was assumed they will “get on in the world.” Swedish people once held the belief that they could cure an injured finger if placed in the mouth of a child born with teeth [6].

From Denmark comes the quote, “Old age dentition is a rare thing, just as are children born with teeth.” Hallager from the Italian and German proverb, “The one whose teeth grow early, will sink early into the grave.”

Historical figures such as Zoroaster, Hannibal, Luis XIV, Mazarin, Richelieu, Mirabeau, Richard III, and Napoleon may also have been favored by the presence of natal teeth [6, 7, 9].

### INCIDENCE AND PREVALENCE

Natal teeth are three times more common than neonatal teeth. The incidence of natal and neonatal teeth ranges from 1: 2,000 to 1: 3,500 [10, 11](Table 1).

**Table 1: Prevalence of neonatal and natal teeth in different populations and studies**

Authors	Prevalence	Number of children in the sample
Magitot[12]	1 : 6000	17,578
Puech, 1876	1 : 30000	60,000
Ballantyne [13]	1 : 6000	17,578
Massler and Savara [14]	1 : 2000	6,000
Allwright [15]	1 : 3408	6,817
Bodenhoff [16]	1 : 3000	—
Wong [17]	1 : 3000	—
Bodenhoff and Gorlin [6]	1 : 3000	—
Mayhall [18]	1: 1125	90
Chow [19]	1 : 2000 to 3500	—
Anderson [20]	1: 800	—
Kates <i>et al.</i> [21]	1: 3667	7,155
Leung [22]	1 : 3392	50,892
Bedi and Yan [23]	1: 1442	—
Rusmah [24]	1 : 2325	9,600
To [25]	1 : 1118	53,678
De Almeida and Gomide[26]	1 : 21	.61,019
Alaluusua <i>et al.</i> [27]	1 : 1000	34,457 (1997–2000)
El Khatib <i>et al.</i> [10]	1: 3400	17000 (1984 and 2001)

Only 1% to 10% of natal and neonatal teeth are supernumerary. More than 90% of natal and neonatal teeth are prematurely erupted deciduous series of teeth, whereas less than 10% are supernumerary[28-30]. The most commonly occurs in the mandibular region of central incisors, followed by maxillary incisors, mandibular cuspids or molars, and maxillary cuspids or molars in descending order [31, 32]. Natal or neonatal cuspids are extremely rare. There was no difference in prevalence between males and females. However, a predilection for female was cited by some

authors. Anegundi *et al* [33] reported a 66% proportion for females against a 31% proportion for males. There is a racial variation in the incidence; the problem is more common in infants of some American Indian tribes.

### CASE REPORT

A 25 year old mother reported to the paediatric ward at Bharati hospital with a 32 days old baby boy .The mother complained of discomfort while feeding the child. On clinical examination, it was revealed that

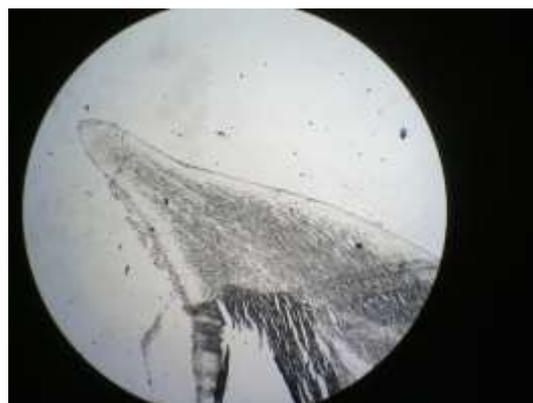
the child had a neonatal tooth in the corner anterior region of the jaw. The child was reported to the paediatric dental unit for the same. The mother was advised to get the tooth extracted on further consultations, the mother reviled the place where they came from, and several motions were attached to the occurrence of the neonatal teeth. People in the Solapur district region of Maharashtra behind these teeth were a gift of god and hence should never be removed such superstitious beliefs made the mother extremely hesitant towards the prescribed treatment; however after proper counselling, the mother agreed to the procedure and the neonatal tooth was extracted.



**Fig-1: Neonatal tooth in the corner anterior region of the jaw**



**Fig-2: Gross section of natal tooth**



**Fig-3: Ground section of natal tooth**



**Fig-4: Hematoxylin and eosin stained section of natal tooth**

#### **HISTOLOGICAL SECTION AND FINDINGS**

In the literature it is noted that histopathology of natal and neonatal tooth show hypoplastic enamel, absence of cementum tissue and root is usually absent. Pulp shows rich vascularity. Here in our case, Hematoxylin and eosin stained section shows thin layer of hypomineralised enamel separated from mineralized dentin. Section clearly shows enamel rods and dentinal tubules are atypical and bizarre in pattern. Absence of scalloping at dentinoenamel junction. Dentinal tubules are more in number at the crown than in cervical area. Pulp showing proliferating blood vessels, collagen fibers, fibroblast. At one place it shows presence of neural tissue. Chronic inflammatory infiltrate present chiefly lymphocyte and plasma cells.

#### **ETIOLOGY**

Etiology of natal and neonatal teeth is still unknown due to disturbance of biological chronology. A number of factors favoring the occurrence of these teeth have been described in the literature.

These factors are:

- Hereditary transmission of a dominant autosomal gene [33, 34].
- Endocrine disturbances: May be because of excessive secretion of pituitary, thyroid, or gonads [35].
- Natal and neonatal teeth could be erupting due to osteoblastic activity within the area of the tooth germ [36].

- Most commonly superficial positioning of tooth germ [11].
- Poor maternal health, endocrine disturbances, febrile episodes during pregnancy and congenital syphilis [35].
- Infection or Malnutrition [37].
- Nutritional deficiency, e.g., Hypovitaminosis [38].
- Environmental factors such as Polychlorinated biphenyls (PCBs), polychlorinated dibenzodioxins(PCDDs), and dibenzofurans (PCDFs) seem to cause the eruption of natal teeth [39].

Fauconnier and Gerardy[40] presented an excellent discussion of the difference between “early eruption” and “premature eruption” in which they also proposed an etiology of natal and neonatal teeth. They considered “early eruption” to be that occurring because of changes in the endocrine system, whereas “premature eruption” would be a clearly pathological phenomenon with the formation of an incomplete root less tooth that would exfoliate within a short period of time. This structure, designated “expulsive Capdeponet follicle,” may result from trauma to the alveolar margin during delivery, with the resulting ulcer acting as a route of infection up to the dental follicle through the golubernacular canal, causing premature loss of the tooth.

#### SYNDROMES ASSOCIATED

Few syndromes are reported to be associated with natal teeth and neonatal teeth [6]. These syndromes include Rubinstein-Taybi, Steatocystoma Multiplex, Pierre-Robin, Cycloopia, Pallister-Hall, Short Rib-Polydactyly (type II), Wiedemann-Rautenstrauch (Neonatal Progeria), Cleft Lip and Palate, Pfeiffer, Ectodermal Dysplasia, Craniofacial Dysostosis, Multiple Steatocystoma, Adrenogenital, Epidermolysis-Bullosa. Simplex including Van der Woude, Down 's syndrome[41], Walker-Warburg Syndromes [42], Adrenogenic syndromes, Craniosynostosis syndromes.

Most of the time, natal teeth are not related to a medical condition. However, sometimes they may be associated with:

- ✓ Ellis-van Creveld Syndrome; Bimanual ulnar polydactyly, chondrodysplasia of long bones, leading to dwarfism, hidrotic ectodermal dysplasia affecting nails, congenital heart malformations [43].
- ✓ Hallermann-Streiff syndrome; parrot nose, mandibular hypoplasia, proportionate nanism, hypotrichosis, blue sclera, congenital cataract [44].
- ✓ Jadassohn-Lewandowski Syndrome; congenital thickening of the nails, palmo-plantar keratosis, oral leukokeratosis (keratinized leukoplakia).
- ✓ Soto syndrome; excessive physical growth during the first few years of life taller, heavier,

disproportionately large and long head with a slightly protrusive forehead.

#### CLASSIFICATION

Spouge and Feas by in 1966 [45] have suggested that clinically, natal and neonatal teeth are classified according to their degree of maturity

1. A mature natal or neonatal tooth is one which is nearly or fully developed and has relatively good prognosis for maintenance.

2. The term immature natal or neonatal tooth, on the other hand, refers to a tooth with incomplete or substandard structure; it has a poor prognosis.

Heblingetal in 1978

The appearance of each natal tooth into the oral cavity can be classified into four categories as the teeth emerge into the oral cavity [46].

- Shell-shaped crown, poorly fixed to the alveolus by gingival tissue and absence of a root.
- Solid crown, poorly fixed to the alveolus by gingival tissue and little or no root.
- Eruption of the incisal margin of the crown through the gingival tissues.
- Edema of gingival tissue with an unerupted but palpable tooth.

#### CLINICAL CHARACTERISTICS

The appearance of these teeth is dependent on the degree of maturity, but most of the time they are loose, small, discolored, and Hypoplastic. They are attached to the oral mucosa in many instances as the root development is incomplete or defective. This leads to the mobility in teeth, with the risk of being swallowed or aspirated by the child. The mobility also may lead to degeneration of Hertwig's sheath which is responsible for the formation of root, thus resulting in further incomplete root development and stabilization. Increase in mobility could also cause changes in the radicular part of teeth such as cervical dentin, pulp cavity, and cementum as well. Clinically, natal teeth are small or normal size, conical or of normal shape. They may reveal an immature appearance with enamel hypoplasia and small root formation. Natal teeth may exhibit a brownish yellow or yellowish brown or whitish opaque colour[47-49]. The dimensions of the crown of these teeth are smaller than those of the primary teeth under normal conditions.

According to Bigeard *et al*[50] the dimensions of the crown of these teeth are smaller than those obtained by Lautrou[51] for primary teeth under normal conditions. The terms natal and neonatal tooth proposed by Massler and Savara[8] were limited only to the time of eruption and not to the anatomical, morphological and structural characteristics [39].

## INVESTIGATION

A dental roentgenogram is always indicated to differentiate the premature eruption of a primary deciduous tooth from a supernumerary tooth [52, 53]. The study also provides information about tooth root development; the relationship of the natal tooth to adjacent teeth; and the status of the enamel, dentin and radicular structures [54].

## DIAGNOSIS

Natal teeth are usually diagnosed based on a complete history and physical examination of infant. A radiographic verification of the relationship between a natal and/or neonatal tooth and adjacent structures, nearby teeth, and the presence or absence of a germ in the primary tooth area would determine whether it belongs to the normal dentition nor supernumerary, so that indiscriminate extractions would be performed. Bohn nodules and cysts of the dental lamina differentiated from natal and neonatal teeth by radiographic examination. The importance of a correct diagnosis of natal and neonatal teeth has been pointed out by several investigators [52, 55-59] who used clinical and radiographic findings in order to determine whether these teeth belonged to the normal dentition or were supernumerary, so that no indiscriminate extractions would be performed. A radiographic verification of the relationship between a natal and/or neonatal tooth and adjacent structures, nearby teeth, and the presence or absence of a germ in the primary tooth area would determine whether or not the latter belongs to the normal dentition [59]. It should be pointed out that most natal and neonatal teeth are primary teeth of the normal dentition and not supernumerary teeth [60]. These teeth are usually located in the region of the lower incisors [60, 61] are double in 61% of cases and correspond to teeth of the normal primary dentition in 95% of cases, while 5% are supernumerary [62].

Ooshima *et al* emphasized that multiple natal teeth are extremely rare. However, some rare reports are available in the literature about the involvement of natal molars and canines [63, 64]. Tay [63] reported a case of natal teeth in which a second upper molar and a lower canine were involved. According to the above citations, diagnosis is important for the maintenance of natal and neonatal teeth of the normal dentition, since the premature loss of a primary tooth may cause a loss of space and collapse of the developing mandibular arch [55] with consequent malocclusion in permanent dentition [64].

## DIFFERENTIAL DIAGNOSIS

Bohn's nodules and Epulis might be confused with natal teeth. Bohn's nodules are usually multiple and found along the buccal and lingual aspects of the mandibular and maxillary ridges [65]. These remnants of mucus-gland tissue are firm, whitish and have a rice-like appearance, are asymptomatic, do not interfere with feeding and are spontaneously shed within several

weeks. Epulis are tumor-like growths of the gum that might be either sessile or pedunculated, and are reactive rather than neoplastic lesions. Other differential diagnoses include lymphangioma and hamartoma of the alveolar ridge.

## TREATMENT AND MANAGEMENT

Natal and neonatal teeth are a rare condition associated with complications like Riga-fade disease and nursing problems. Now a day's these teeth are of great concern to parents as well as health professionals because of refusal of child to take feed due to pain associated with suckling and the risk of aspiration and being swallowed during nursing because of their great mobility.

The management of natal and neonatal teeth is largely aimed at their preservation for aesthetics and maintenance of space for eruption of successor tooth. In light of this knowledge, extraction of natal and neonatal teeth is reserved until they cause difficulty to the infant and mother. Occasionally, they may exfoliate spontaneously or require extraction because of excessive mobility, concerns regarding aspiration or the loss of attachment with subsequent development of abscess.

Natal and Neonatal teeth are associated with some superstitions so proper management of these teeth are essential both from social and clinical point of view. Most of the time these are ignored by the paediatricians due to lack of awareness, as they are associated with negative culture attitudes good parental counselling and vigilant management is required in relation to child protection. So both the paediatrician and paediatric dental specialists should be involved in the supervision or treatment of patients with natal and neonatal teeth. In confronting a typical variation in the newborn's oral cavity, pediatric dentist must decide between "early treatment" and the other extreme "should never be treated." Before you are taking decision of maintaining or extraction of these teeth some factors should be considered, such as implantation and degree of mobility, interference with breast feeding, inconveniences during suckling, possibility of traumatic injury, and whether the tooth is part of the normal dentition or is supernumerary. If the erupted tooth is diagnosed as normal dentition tooth, the maintenance of these teeth in the mouth is the first treatment option, unless this would cause injury to the infant or breastfeeding mother [66, 67]. If these teeth are not well implanted and highly mobile with increases risk of aspiration they should be extracted. Although many investigators have mentioned the possibility of aspiration of these teeth, this risk. In reality, is an unlikely possibility since there are no reports in the literature of the actual occurrence of aspiration. Bigeard *et al* in 1996 [68] suspected that this tooth was swallowed, indicating the possibility of aspiration. On the basis of the report by the parents of a 28-day old

baby of the sudden disappearance of a natal tooth. Smoothing or grinding of the incisal edges of the teeth was advocated by Allwright in 1996 and Martins *et al.* in 1998[69, 70] to prevent wounding of the maternal breast during breast feeding. To prevent the injury to the maternal breast, feeding splint was the option reported by Bodenhoff in 1960[71]. Goho in 1996 treated natal teeth by covering the incisal margin with composite resin [72]. Tomizawae *t al*[73] in 1989 reported two cases of treatment of Riga-Fede disease by covering the incisal margin with photopolymerizable resin, which aided rapid healing of the ulcers. Extraction of these teeth can be done with a forceps or even with the fingers without any difficulties.

The risks of dislocation and consequent aspiration of the mobile teeth, in addition to traumatic injury to the baby's tongue and/or to the mother's breast, have been described as reasons for the extraction [74]. In the case the extraction was carried out as the children were more than 10 days old and the vitamin K/prothrombin level and IgG level are that of adult level by this time, which ruled out chances of excessive hemorrhage. If the child is below 10 days of age, prophylactic administration of vitamin K (0.5-1.0mg, IM) is advocated before and after extraction because of the risk of hemorrhage as the commensal flora of the intestine might not have been established until the child is 10 days old and since vitamin K is essential for the production of prothrombin in the liver for clot formation at extraction site [1]. If extraction is carried out, it is important and necessary to ensure that the underlying dental papilla and Hertwig's epithelial root sheath are removed by gentle curettage as root development can continue if these structures are left in situ. To prevent continued development of the cells of the dental papilla, extraction of the tooth should be followed by curettage of the socket. Failure to curette the socket may cause eruption of odontogenic remnants and necessitate future treatment. No intervention is necessary if the tooth does not interfere with breastfeeding, if it is not very mobile or if it is a part of deciduous dentition. Other management options are smoothing of the incisal margin for non-mobile teeth, by covering the incisal margins with composite resin or Glass Ionomer Cement, feeding splint [1]. According to Kates *et al* [75] if natal teeth survive beyond 4 months, they have a good prognosis.

## CONCLUSIONS

This literature review leads to the following conclusions:

- Natal and neonatal teeth are rare events in the oral cavity;
- The decision to keep or to extract a natal and/or neonatal tooth should be evaluated in each case, keeping in mind scientific knowledge, clinical common sense, and parental opinion after the parents are properly

informed about all aspects involved in this situation;

- Radiographic examination is an essential auxiliary tool for the differential diagnosis between supernumerary primary teeth and teeth of the normal dentition. When the teeth are supernumerary, they should be extracted. In this procedure, the clinician should first consider the wellbeing of the patient and assess the risk of hemorrhage due to the hypoprothrombinemia commonly present in newborns. Teeth of the normal dentition, when considered mature, should be preserved and maintained in healthy conditions in the baby's mouth using all possible clinical resources.
- Periodic follow-up by pediatric dentists is of fundamental importance, as also are recommendations to the parents with respect to home dental hygiene and the use of fluoride.

Paediatric dentists should make every effort to educate the parents and the paediatrician on the preferred treatment for the natal teeth. Extraction should be done only by the paediatric dentist to avoid any undue trauma to the underlying tissue. Periodic follow-up by a paediatric dentist to ensure preventive oral health is very essential. Hence, to avoid any further complication, early diagnosis and adequate treatment should be a prime concern in the management of natal and neonatal teeth.

## REFERNECES

1. Sogi, S., Hugar, S. M., Patil, S., &Kumar, S. (2011). Multiple natal teeth: A rare case report. *Indian J Dent Res* 22, 169-71.
2. Samadi, F., Babaji, P., Saha, S., Katiyar, A., &Chowdhry, S. (2011). Natal Teeth: Report of Two Cases and Review of Literature. *International Journal of Oral & Maxillofacial Pathology*, 2(1), 33-6.
3. Massler, M., &Savara, B. S. (1950). Natal and neonatal teeth: A review of 24 cases reported in the literature. *J Pediatr*, 36, 349-59.
4. Anegundi, R. T., Sudha, P., Kaveri, H., &Sadanand, K. (2002). Natal and neonatal teeth: a report of 4 cases. *J Indian SocPedoPrev Dent*, 20(3), 86-92.
5. Allwright, W. C. (1958). Natal and neonatal teeth. *British Dent J*, 105, 163-172.
6. Bodenhoff, J., &Gorlin, R. J. (1963). Natal and neonatal teeth: folklore and fact. *Pediatr*,32, 1087-1093.
7. Zhu, J., &King, D. (1995). Natal e neonatal teeth. *J Dent Child* 62, 123-128.
8. Massler, M., &Savara, B. S. (1950). Natal and neonatal teeth: a review of 24 cases reported in the literature. *J Pediatr*,36, 349-359.
9. Allwright, W. C. (1958). Natal and neonatal teeth: a study among Chinese in Hong Kong. *Br Dent J*. 105, 163-172.

10. El Khatib, K., Abouchadi, A., Nassih, M., Rzin, A., Jidal, B., Danino, A., ... & Bouazzaoui, N. (2005). [Natal teeth: apropos of five cases]. *Revue de stomatologie et de chirurgie maxillo-faciale*, 106(6), 325-327.
11. Ooshima, T., Mihara, J., Saito, T., & Sobue, S. (1986). Eruption of Tooth-Like Structure Following The Exfoliation Of Natal Tooth: Report Of Case. *ASDC J Dent Child*, 53(4), 275-278.
12. Magitot, E. (1883). Anomalies in the eruption of the teeth in man. *The British Journal of Dental Science*, 26, 640-641.
13. Ballantyne, J.W. (1896). Congenital teeth. *Edinburgh Medical Journal*, 41, 1025-1038.
14. Massler, M., & Savara, B. S. (1950). Natal and neonatal teeth. A review of twenty-four cases reported in the literature. *The Journal of Pediatrics*, 36(3), 349-359.
15. Allwright, W. C. (1958). Natal and neonatal teeth: a study among Chinese in Hong Kong. *The British Dental Journal*, 105, 163-173.
16. Bodenhoff, J. (1959). Natal and Neonatal teeth. *European Journal of Oral Sciences*, 67, 645-695.
17. Wong, H. B. (1962). Natal and neonatal teeth in Singapore. *Journal of the Singapore Paediatric Society*, 4, 74-82.
18. Mayhall, J. T. (1967). Natal and neonatal teeth among the Tlinget Indians. *Journal of Dental Research*, 46(4), 748-749.
19. Chow, M. H. (1980). Natal and neonatal teeth. *Journal of the American Dental Association*, 100, 215-216.
20. Anderson, R. A. (1982). Natal and neonatal teeth: histological investigation of two black females. *Journal of Dentistry for Children*, 49, 300-303.
21. Kates, G. A., Needleman, H. L., & Holmes, L. B. (1984). Natal and neonatal teeth: a clinical study. *The Journal of the American Dental Association*, 109(3), 441-443.
22. Leung, A. K. (1986). Natal teeth. *The American Journal of Diseases of Children*, 140, 249-251.
23. Bedi, R., & Yan, W. (1990). The prevalence and clinical management of natal teeth—a study in Hong Kong. *Journal of Pediatrics*, 6, 85-90.
24. Rasmah, M. (1991). Natal and neonatal teeth: a clinical and histological study. *The Journal of Clinical Pediatric Dentistry*, 15(4), 251-253.
25. To, E. W. (1991). A study of natal teeth in Hong Kong Chinese. *International Journal of Paediatric Dentistry*, 1(2), 73-76.
26. De Almeida, C. M., & Gomide, M. R. (1996). Prevalence of natal/neonatal teeth in cleft lip and palate infants. *Cleft Palate- Craniofacial Journal*, 33(4), 297-299.
27. Alaluusua, S., Kiviranta, H., Leppäniemi, A., Hölttä, P., Lukinmaa, P. L., Lope, L., ... & Kaleva, M. (2002). Natal and neonatal teeth in relation to environmental toxicants. *Pediatric research*, 52(5), 652-655.
28. De Almeida, C. M., & Gomide, M. R. (1996). Prevalence of natal/neonatal teeth in cleft lip and palate infants. *Cleft Palate- Craniofacial Journal*, 33(4), 297-299.
29. Cunha, R. F., Boer, F. A. C., Torriani, D. D., & Frossard, W. T. G. (2001). Natal and neonatal teeth: review of the literature. *Pediatric Dentistry*, 23(2), 158-162.
30. Primo, L. G., Alves, A. C., Pomarico, I., & Gleiser, R. (1995). Interruption of breast feeding caused by the presence of neonatal teeth. *Brazilian Dental Journal*, 6(2), 137-142.
31. Dymont, H., Anderson, R., Humphrey, J., & Chase, I. (2005). Residual neonatal teeth: a case report. *Journal of the Canadian Dental Association*, 71(6), 394-397.
32. King, N. M., & Lee, A. M. P. (1989). Prematurely erupted teeth in newborn infants. *Journal of Pediatrics*, 114(5), 807-809.
33. Anegundi, R. T., Sudha, R., Kaveri, H., & Sadanand, K. (2002). Natal and neonatal teeth: a report of four cases. *Journal of the Indian Society of Pedodontics and Preventive Dentistry*, 20(3), 86-92.
34. Natal, H. H. (1957). Neonatal teeth: Histological investigation in two brothers. *Oral Surg Oral Med Oral Pathol*, 10, 509-521.
35. Bigeard, L., Hemmerle, J., & Sommermayer, J. I. (1996). Clinical and ultra-structural study of the natal tooth: enamel and dentine assessments. *J Dent Child*, 63(1), 23-31.
36. Kates, G.A., Needleman, H.L., & Holmes, L.B. (1984). Natal and neonatal teeth: acclinical study. *J Amer Dent Assoc*, 109(3), 441-443.
37. Leung, A. K. C. (1986). Natal teeth. *Am J Dent Child*, 140(3), 249-251.
38. Anderson, R. A. (1982). Natal and neonatal teeth: histological investigation of two black females. *J Dent Child*, 49(4), 300-303.
39. McDonald, R. D., Avery, D. R., & Dean, J. A. (2004). *Dentistry for the Child and Adolescent*, Mosby, St. Louis, Mo, USA, 8th edition.
40. Facounnier, H., & Gerardy, L. (1953). *Arch Stomatol*, 8, 84.
41. Ndiokwelu, E., Adimora, G. N., & Ibeziako, N. (2004). Neonatal teeth association with Down's syndrome. A case report. *Odonto-StomatologieTropicale*, 27(107), 4-6.
42. Venkatesh C., & Adhisivam, B. (2011). Natal teeth in an infant with congenital hypothyroidism. *Indian Journal of Dental Research*, 22(3), 498.
43. Weiss, H. (1955). Chondroectodermal dysplasia: report of a case and review of the literature. *The Journal of Pediatrics*, 46(3), 268-275.
44. Robotta, & Schafer, E. (2011). Hallermann-Streif syndrome: case report and literature review. *Quintessence International*, 42(4), 331-338.

45. Spouge, J. D., & Feasby, W. H. (1966). Erupted teeth in new born. *Oral Surg Oral Med Oral Pathol.*, 22,198–208.
46. Nevas, R. M. A., MENOZA, M. G. M., Leonardo, M. R., Silva, R. A. B., Herrera, H., & Herrera, H. P. (2010). Congenital eruption of cyst: A case report. *Braz dent J*, 21(3), 259-61.
47. Masatomi, Y., Abe, K., & Ooshima, T. (1991). Unusual multiple natal teeth: casereport. *Pediatr Dent*, 13, 170-72.
48. Tay, W. M. (1970). Natal canine and molar in an infant. *Oral Surg Oral Med Oral Pathol*, 29, 598-602.
49. Goncalves, F. A., Birmani, E. G., Sugayai, N. N., & Melo, A. M. (1998). Natal teeth: Review of literature and report of an unusual case. *Braz Dent J*, 9, 53-6.
50. Bigeard, L., Hemmerle, J., & Sommermater, J. I. (1996). Clinical and ultrastructural study of the natal tooth: enamel and dentin assessments. *J Dent Child*, 63, 23-31.
51. Rusmah, M. (1991). Natal and neonatal teeth: a clinical and histological study. *J ClinPed Dent*, 15, 251-253.
52. Leung, A. K. C. (1986). Natal teeth. *Am J Dis Child*, 140, 249-251.
53. Cunha, R. F., Boer, F. A. C., Torriani, D. D., & Frossard, W. T. G. (2001). Natal and neonatal teeth: review of the literature. *Pediatric dentistry*, 23(2), 158-162.
54. Goncalves, F. A., Birman, E. G., Sugaya, N. N., & Melo, A. M. (1998). Natal teeth: review of the literature and report of an unusual case. *Braz Dent J*, 9(1), 53-56.
55. Hebling, J., Zuanon, A. C. C., & Vianna, D. R. (1997). Dente Natal—A case of natal teeth. *OdontolClín*, 7,37-40.
56. Rusmah, M. (1991). Natal and neonatal teeth: a clinical and histological study. *J ClinPed Dent*, 15, 251-253.
57. Bhaskar, S. N. (1976). Distúrbios de desenvolvimento dos maxilares, da dentição e dos dentes. In *Patologia Bucal*. São Paulo: ArtesMédicas, 151.
58. Walter, L. R. F., Ferelle, A., & Issao, M. (1996). Necessidadesodontológicascongênitas e de desenvolvimento. In: *Odontologia Para o Bebê*. São Paulo: ArtesMédicas,45-151.
59. Almeida, C. M., Gomide, M. R., & Nishiyama, C. K. (1997). Dente natal /neonatal. *Odontologia Clínica*, 7, 43-45.
60. Brandt, S. K., Shapiro, S. D., & Kittle, P. E. (1983). Immature primary molar in the newborn. *Pediatr Dent*, 5, 210-213.
61. Berman, D. S., & Silverstone, L. M. (1975). Natal and neonatal teeth: a clinical and histological study. *Br Dent J* 139, 61-364.
62. Howkins, C. (1932). Congenital teeth. *Br Dent Assoc*, 53, 402-405.
63. Tay, W. M. (1970). Natal canine and molar in an infant. *Oral Surg Oral Med Oral Pathol*, 29, 598-602.
64. Matias, S. R., & Corrêa, M. S. N. P. (1998). Radiologiaemodontologia: Peimeirainfância. In: Corrêa, MSNP. *Odontopediatriana PrimeiraInfância*. São Paulo: Santos, 209-219.
65. Leung, A. K., & Robson, W. L. (1992). Bohn's nodules. *Resident & Staff Physician*, 38(3), 28.
66. Chow, M. H. (1980). Natal and neonatal teeth. *JADA*, 100(2), 215-216.
67. Robson, C., Farli, A., Parecida, C. B., Dione, D. T., & Wanda, T. G. (2001). Natal and Neonatalteeth: Review of the literature. *J Pedo Dent*, 23, 158-62.
68. Bigeard, L., Hemmerle, J., & Sommermater, J. I. (1996). Clinical and ultra-structural study of the natal tooth: enamel and dentine assessments. *J Dent Child*. 63(1), 23-31.
69. Allwright, W. C. (1996). Natal and neonatal teeth. A review of 50 cases. *J India SocPedoPrev Dent*, 21-3.
70. Martins, A. L. C. F. (1998). Erupçãodontária: dentesdecíduos e sintomatologia desseprocesso. In: Corrêa MSNP. *Odontopediatriana PrimeiraInfância*. São Paulo: Santos, 117-129.
71. Bodenhoff, J. (1960). Natal and neonatal teeth. *Dental Abstr*, 5, 485-8.
72. Goho, C. (1996). Neonatal sublingual traumatic ulceration (Rega - Fede disease): Reports of cases. *J Dent child*. 63,362-364.
73. Tomizawa, M., Yamada, Y., Tonouchi, K., Watanabe, H., & Noda, T. (1980). Treatment of Riga-Fede's disease by resin-coverage of the incisal edges and seven cases of natal and neonatal teeth. *Shoni-Shikagaku-Zasshi*, 27, 182-190.
74. Chawla, H. S. (1993). Management of natal/neonatal/early infancy teeth. *J Indian SocPedodPrev Dent*, 11, 33-6.
75. Kates, G. A., Needleman, H. L., & Holmes, L. B. (1984). Natal and neonatal teeth: a clinical study. *J Am Dent Assoc*, 109, 441-3.