

## “Early baby teeth” - Folklore and Facts

Umamaheswari N.\*, Karunakaran\*\*

---

### Abstract

Variations in the newborns oral cavity have been an enduring interest to the pediatric dentist. The occurrence of natal and neonatal teeth is a rare anomaly which for centuries has been associated with diverse superstitions among many different ethnic groups. Natal teeth are more frequent than neonatal teeth. The ratio being approximately 3:1. The purpose of this case report is to review the literature related to the natal teeth folklore and misconceptions and discuss their possible etiology and treatment.

**Keywords:** Natal teeth; Neonatal teeth; Deciduous incisor.

---

### Introduction

“Early doing’s and sayings” of a child is always flooded with immense pleasure in day to day life. Not all the early happenings in the child’s life are easily appreciated. One such thing that leads to plethora of reaction is the new born with the new teeth at birth or too early. The folklore and misconceptions surrounding natal and neonatal teeth vary to complicate matters further there are various difficulties like pain on suckling, refusal to feed, traumatic ulceration faced by the mother and the child due to their early teeth. These teeth are of enduring interest to both the parents and pediatric dentist because of their clinical characteristics.

### Case report

A 2 day old male infant was referred with the complaint of two teeth in the lower jaw

**Figure 1: Pre-operative view showing mandibular anterior natal teeth**



since birth, continuous crying and refusal to suck milk. Oral examination revealed two crowns of the teeth in the mandibular anterior region (Fig 1), whitish opaque in color and exhibiting grade III mobility. The crown size was normal; the gingival was of normal appearance. A diagnosis of natal tooth was made.

Since immediate extraction was the treatment of choice, a pediatrician was consulted and vitamin K was administered intramuscularly as a part of immediate medical care to prevent hemorrhage; and the teeth were extracted under topical local anesthesia (Fig 2), which the patient tolerated well. The extracted teeth had a crown but were devoid of roots (Fig 3). The patient was reevaluated after 7 days, and the recovery was found to be uneventful (Fig 4).

---

**Author’s Affiliation:** \*Reader, Department of Pedodontic and Preventive Dentistry, \*\*Professor & HOD, Department of Oral Pathology, J.K.K.Nataraja Dental College and Hospital, Komarapalyam, Namakkal Dist - 638183.

**Reprints Requests:** Dr. Uma Maheswari N., M.D.S, Department of Pedodontic and Preventive Dentistry, J.K.K.Nataraja Dental College and Hospital, P.B.No:151, Natarajapuram, NH-47(Salem to Coimbatore), Komarapalyam, Namakkal Dist - 638183, Tamilnadu.

E-mail: umsipedo@rediffmail.com

(Received on 15.02.2013, Accepted on 16.03.2013)

**Figure 2: Extracted natal teeth***Review of literature**Folklore and Fact*

The occurrence of natal and neonatal teeth which for centuries has been associated with diverse superstitions among many different ethnic groups. 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 believed the affected children are considered to be monsters and beaver of misfortune. Shakespeare contributed his thoughts on natal teeth in "King Henry the Sixth" when he refers to Richard the Third in his quotation "teeth hadst thou in thy head when thou wast born to riguity thou camest to bite the word ". [1] In England, the belief was that this condition would guarantee the conquest of the world.[2]

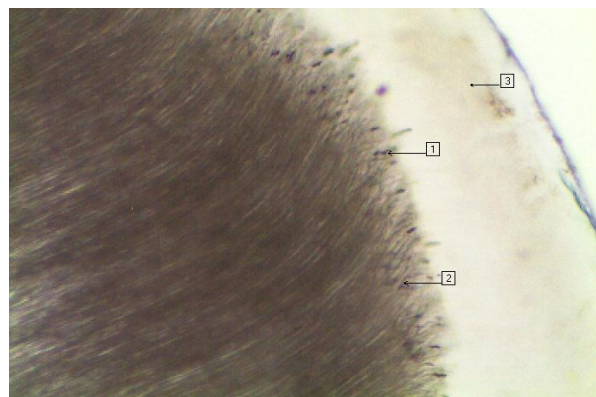
Massler and Savara (1950)[3] defined these

**Figure 4: After 1 week****Figure 3: Post-operative view after extraction**

teeth as natal and neo natal teeth taking only the time of eruption as a reference. This definition has been widely accepted and followed. Natal teeth are those teeth that are present at the time of birth and neonatal teeth are those teeth that erupt within first thirty days of life. Terms such as congenital teeth, fetal teeth, predeciduous teeth and precocious dentition as well as dentitice praecox and dens cannatalis, have been used to describe these teeth.

*Classification*

Spoug and Feasby (1966) have suggested that clinically, natal and neonatal teeth he further classified according to their degree of maturity.[2]

**Figure 5: Photo micrograph showing irregular dentin[1], irregular branching of dentinal tubules[2] & thin enamel[3]**

**Figure 6: Photo micrograph showing irregular branching of dentinal tubules[1], straight dentino- enamel junction[2] & thin enamel[3]**



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 teeth on the other hand implies a tooth with incomplete or substandard structure; it also implies a poor prognosis.

The appearance of each natal tooth into the oral cavity can be classified into four categories as the teeth emerge into the oral cavity.[2,4]

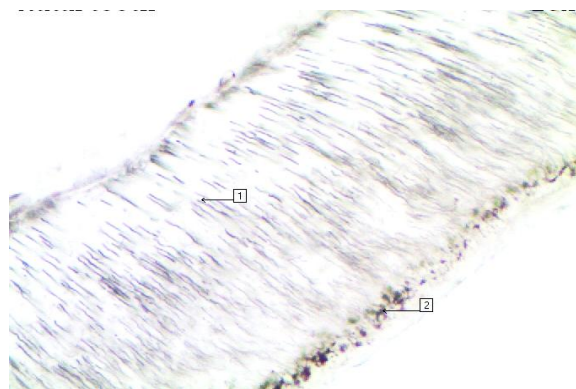
1. shell-shaped crown poorly fixed to the alveolus by the gingival tissue and absence of a root
2. solid crown poorly fixed to the alveolus by the gingival tissue and little or no root
3. eruption of the incisal margin of the crown through the gingival tissues
4. edema of the gingival tissue with an unerupted but palpable tooth

If the degree of mobility is more than 2 mm, the natal teeth of category (1) or (2) usually need extraction.[4]

#### *Incidence and Prevalance*

The incidence of natal and neonatal teeth has been estimated to be 1:1000 and 1:30,000.[5,6] Reports about significant difference in males and females are conflicting, with females, in general being more affected.

**Figure 7: Photo micrograph showing irregular dentinal tubules[1] & Tome's granular layer[2]**



Natal teeth are more frequent, approximately three times more than common than neonatal teeth[1] with the most common localization being the mandibular region of the central incisors (85%), followed by maxillary incisors (11%), mandibular cuspids or molars (3%) and the maxillary cuspids and molars (1%).[3] Natal or neonatal cuspids are extremely rare.[7]

As has been noted, the natal and neonatal teeth are more frequently seen in the mandibular incisor regions and are more frequently bilateral. Most commonly these teeth are precociously erupted from the normal complement of primary teeth (90-99%). Only 1% to 10% of natal and neonatal teeth are supernumerary.[8,9]

#### *Etiology*

The variety of natal and neonatal descriptions suggests the lingering controversy regarding this condition and its etiological aspect. In fine the law in this regard is yet to be resolved.

1. The rate at which baby's teeth come through will depend on his 'genetic blueprint',[4] i.e., hereditary transmission of a dominant autosomal gene appears to be an important factor.[2,10]
2. Endocrine disturbances: it is thought to be because of excessive secretion of pituitary, thyroid or gonads.



3. Eruption of natal and neonatal teeth could be dependant on osteoblastic activity within the area of the tooth germ.[2,10]
4. Infection: for eg. Congenital syphilis appears to have varying effect; in some cases, it has erupted early , while in others it has been retarded.[10]
5. Nutritional deficiency, eg., hypovitaminosis (which in turn is caused by poor maternal health, endocrine disturbances, febrile episodes, pyelitis during pregnancy, and congenital syphilis).[1,10]
6. Febrile status: fever, exanthemata during pregnancy tend to accelerate eruption as they do in various other processes.
7. Superficial position of the tooth germ.
8. Environmental factors: polychlorinated biphenyls (PCB) and dibenofuran[11] seem to increase incidence of natal teeth. These children usually show other associated symptoms, such as dystrophic finger nails, hyper pigmentation etc.,

The most acceptable theory is based upon the result of a superficial localization of the dental follicles, probably related to the hereditary factor.[5,8,12]

Natal teeth and neonatal teeth are frequently found associated with developmental abnormalities and recognized syndromes. These syndromes include Ellis-van Creveld, pachyonychia congenita , Hallerman- Streiff, Rubinstein-Taybi , steatocystoma multiplex, Pierre-Robin, cyclopia, Pallister-Hall, short rib-polydactyly type II Wideman-Rautenstrauch, cleft lip and palate, Pfeiffer, ectodermal dysplasia, craniofacial dysostosis, multiple steacytoma, Sotos, adrenogenital, epidermolysis bullosa simplex including van der Woude and Walker-Warburg Syndromes.[1,13]

#### *Complication*

- a. Potential risk of the infant inhaling the tooth into his/her airway and lungs if the tooth becomes dislodged during

nursing, due to its great mobility.

- b. Ulceration to ventral surface of the tongue, Coldrallin first described this condition in 1857. Riga and Fede histologically described the lesion , which was then started to be called Riga-Fede disease.[2,14]
- c. Difficulty in feeding or refusal to feed due to pain.
- d. Ulceration to the nipple of the mother and interference with breast feeding.

#### *Clinical aspects*

Clinically, the natal teeth are small, or of 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 brown-yellowish/whitish opaque color. They are attached to a pad of soft tissue above the alveolar ridge, occasionally covered by mucosa and as a result have an exaggerated mobility, with the reason of being swallowed or aspirated, in most of the cases.[5,15] Bigeard *et al* revealed that the dimensions of the crown of these teeth are smaller than those for the primary teeth under normal conditions.

#### *Histological features*

In this study, ground section of natal & neonatal teeth demonstrated varying thickness of enamel and almost straight dentino-enamel junction. Dentin demonstrated irregular branching of dentinal tubules and Tomes granular layer. (Fig 5, 6, 7)

First report on microscopic observation of natal and neonatal teeth was done by Howkins (1932). Histological investigations of natal teeth have been well detailed by Boyd and Miles [16]. The histological aspect shows a thin enamel layer, with varying degrees mineralization and/or hypoplastic to total absence of enamel in some regions. Friend *et al.* demonstrated that the alteration in amelogenesis was detected due to premature exposure of the tooth to oral cavity, which resulted in metaplastic alteration of the epithelium of the normally columnar

enamel to a stratified squamous configuration.[4]

Atubular osteodentin such as that observed in the occlusal central fossa is equivalent to the irregular tertiary dentin deposited in response to untoward stimuli such as caries or attrition.[14] This suggests that odontoblast in the central fossa were exposed to the oral environment before developing a covering enamel and normal tubular dentin and responded by depositing the atubular substance. The dentin may show alterations with atypical deposition of dentinal tubules chiefly in the cervical third; and occasionally of osteodentin, which is attributed to stimulation by movement of the teeth. It has been further postulated that the mobility may cause degeneration of Hertwig's sheath, thus preventing root development and stabilization.[2,15,17] The usually increased mobility causes histological changes in the cervical dentin and cementum.[8]

The pulp cavity and radicular canals are wider, although the pulp shows normal development.[1] Weil's zone and cell-rich zone are missing.[16] Absence of root formation, lack of cementum formation, lack of pulp chamber, an irregular dentin formation was also observed.

In the polarized light and micro-radiographic studies, these teeth showed enamel hypoplasia and dentinal disturbances including the formation of osteodentin and irregular dentin in the cervical portions and interglobular dentin in the coronal region.[18] Natal teeth with no enamel formation are extremely rare; there has been only one case reported, in which cartilage-like teeth erupted prematurely at birth.[17]

### *Diagnosis*

The diagnosis of the teeth is done based on a complete history, physical examination of the infant and by the clinical and radiographic findings to rule out being the part of normal dentition or supernumerary—so that indiscriminate extractions would be performed. A proper examination can reveal

a relationship between a natal/neonatal tooth and adjacent structures, nearby teeth, and presence or absence of a tooth germ in the primary dentition would determine whether or not later belongs to normal dentition. Investigators have observed that most of these teeth are primary teeth of normal dentition and not supernumerary teeth. According to the citations, diagnosis is important to plan treatment, keeping in view the maintaining of the normal dental occlusion.[2]

### *Treatment and Management*

In confronting, a typical variation in the new born's oral cavity, the pediatric dentist must decide between "early treatments" to other extreme "should never be treated".

If erupted natal and neonatal teeth is diagnosed as a tooth of normal dentition, the maintenance of these teeth in the mouth is the first treatment option, unless this would cause injury to the baby or mother.[19,20] Spouge and Feasby[21] have pointed out that prematurely erupted teeth are often well formed and normal in all respects except that they may be somewhat mobile.

Grinding or smoothening the incisal edges of the teeth was advocated by Allwright (1958)[22] and Martins *et al* (1998)[23] to prevent the injury to the maternal breast, feeding splint was the option reported by Bjuggren G (1973).[24] Goho (1996)[25] reported his treatment of natal teeth by covering the incisal margin with composite resin. Tomizawa *et al* (1989)[23] reported two cases of treatment of Riga-Fede disease by covering the incisal margin with photopolymerizable resin, which aided rapid healing of the ulcers.

This petty tooth can some times become pretty serious. Removal of natal teeth is indicated when they are poorly developed, interfere with feeding, highly mobile, and associated with soft tissue growth.

Kates *et al*[26] suggested extraction as a treatment as they thought despite initial space loss; the space was regained and crowding of permanent mandibular incisors was not

apparent. If extraction is carried out, it is 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. The prophylactic administration of vitamin K (0.5-1.0 mg i.m) is advocated 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.

### Conclusion

Pediatric dentists should make every effort to educate the parents and the medical community on the preferred treatment for the natal teeth. If the extraction of the natal tooth is indicated then it should be performed by the pediatric dentist to avoid unnecessary trauma to the area. Periodic follow up by a pediatric dentist to ensure preventive oral health is very essential. Hence to avoid any complication, early diagnosis and adequate treatment should be a prime concern in the management of natal teeth.

### References

- Alvarez MP, Crespi PV, Shanske AL. Natal molars in Pfeiffer syndrome type 3: A case report. *J Clin Pediatr Dent.* 1993; 18: 21-4.
- 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.
- Massler M, Savara BS. Natal and Neonatal teeth: A review of 24 Cases reported in the literature. *J Pediatr.* 1950; 36: 349-359.
- Singh S, Subbba Reddy VV, Dhananjaya G, Patuk R. Reactive fibrous hyperplasia associated with a natal tooth: A case report. *J Indian Soc Pedo Prev Dent.* 2004; 22: 183-6.
- Bodenhoff J. Natal and Neonatal teeth. *J Odontol Tidsskr.* 1959; 67: 645-695.
- Bodenhoff J, Gorlin RJ. Natal and Neonatal teeth: Folklore and fact. *Pediatr.* 1963; 32: 1087-1093.
- Goncalves FA, Birmani EG, Sugayai NN, Melo AM, Natal teeth. Review of literature and report of an unusual case. *Braz Dent J.* 1998; 9: 53-6.
- Available from: <http://www.newdao.com/natal-teeth-baby-born.html>. [last updated on 2007 Nov. 9]
- El Khatib K, Abouchadi A, Nassih m, Rzin A, Jidal B, Danino A, et al. Natal teeth: Study of five cases. *Rev Stomatol Chir Maxillofac.* 2005; 106: 325-7.
- McDonkd RD, Abouchadi A, Nassih M, Rzin A, Jidal B, Danino A, et al. Natal teeth: Study of five cases. *Rev Stomatol Chir Maxillofac.* 2005; 106: 325-7.
- Alaluusua S, Kiviranta H, Leppaniemi A, Holtta P, Lukinmaa PL, Lope L, et al. Natal and neonatal teeth in relation to environmental toxicants. *Pediatr Res.* 2002; 52: 652-5.
- Portela MB, Damasceno L, Primo LG. Unusual case of multiple natal teeth. *J Clin Pediatr Dent.* 2004; 29: 37-9.
- Darwisha S, Sastry Rh, Ruprecht A. Natal teeth, bifid tongue and deaf mutism. *J Oral Med.* 1987; 42: 49-53.
- Sigal MJ, Mock D, Weinberg S. Bilateral mandibular hamartomas and familial natal teeth. *Oral Surg Oral Med Oral Pathol.* 1988; 65: 731-5.
- Delbem AC, Fraraco Junior IM, Percinot C, Delbem AC. Natal teeth: Case report. *J Clin Pediatr Dent.* 1996; 20: 325-7.
- Anderson RA. Natal and neonatal teeth: Histologic investigation of two black females. *ASDC J Dent Child.* 1982; 49: 300-3.
- Masatomi Y, Abe K, Ooshima T. Unusual multiple natal teeth: Case report. *Pediatr Dent.* 1991; 13: 170-2.
- 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.
- Robson C Farli A, parecida CB, Dione DT, Wanda TG. Natal and Neonatal teeth: Review of the literature. *J Pedo Dent.* 2001; 23 (2): 158 - 162.
- Chow MH. Natal and Neonatal teeth. *JADA.* 1980; 100: 215-216.

21. Spouge JD, Feasby WH. Erupted teeth in the newborn. *Oral Surg Oral Med Oral Path.* 1966; 22: 198-208.
22. Allwright WC. Natal and Neonatal teeth. A review of 50 cases. *J India Soc Pedo Prev Dent.* 1996; 21-23.
23. Kates GA, Needleman HL, Holmes LB. Natal and Neo natal teeth – a clinical study. *JADA.* 1984; 109: 441-443.
24. Bodenhoff J. Natal and Neonatal teeth. *Dental Abstr.* 1960; 5: 485-488.
25. Berendsen WJH, Wakkerman HL. Continued growth of the papillae after extraction of neonatal teeth: report of case. *J Dent Chil.* 1988; 55: 139-141.
26. Southam JC. The structure of natal and neonatal teeth. *Dent Practit.* 1968; 18: 423-427.