

Dentitia Praecox - A Report and Review

Dr. M. S. Saravanakumar^{1*}, Dr. Mohammed Akheel²

¹Reader, Dept of Pediatric Dentistry, Indira Gandhi Institute of Dental Sciences,
MGMC & RI, Puducherry, India

²Thai Moogambigai Dental College, Chennai, India

Abstract

Child development from conception through the first years of life is marked by many changes. Eruption of every tooth, either primary or permanent, follows a chronology corresponding to the date when it erupts into the oral cavity. Though these dates are established in literature, they are subject to small variations depending on the hereditary, endocrine, and environmental factors of an individual. The expectations about the eruption of the first teeth are great and even greater when the teeth appear early in the oral cavity.

Keywords: Natal, neonatal teeth

***Author for Correspondence** E-mail: drsaravanapedo@gmail.com

INTRODUCTION

Tooth eruption at about 6 months of age is a milestone in terms of functional and psychological changes in the child's life and in emotional terms for the parents. When the teeth are observed at birth or during the first 30 days of life, respectively known as natal and neo-natal teeth, the interest, curiosity, and concern of clinicians are similar to that of parents. Today, Dentitia praecox or predecidual teeth or fetal teeth or congenital teeth, stimulate the interest of parents and health professionals because of their clinical characteristics, among them their great mobility, which raises a concern about the possibility of being swallowed or aspirated by the infant during nursing.

ETIOLOGY

The presence of natal and neonatal teeth is definitely a disturbance of biological

chronology whose etiology is still unknown [1]. It has been related to several factors such as superficial position of the germ layer [2], infection or malnutrition, febrile states [3], eruption accelerated by febrile incidents or hormonal stimulation [1], hereditary transmission of a dominant autosomal gene [2], osteoblastic activity inside the germ area related to the remodeling phenomenon [4], and hypovitaminosis. A few syndromes associated are Hallerman-Streiff syndrome [5], Ellis-Van creveld syndrome, craniofacial dysostosis, multiple steacystoma, congenital pachyonychia, and Sotos syndrome.

Several theories have been put forward but the most appropriate one was given by Fauconnier and Gerardy in 1953 [6]. They considered 'early eruption' to be that occurring because of changes in the endocrine system whereas 'premature eruption' would be clearly a pathological phenomenon with the formation of an incomplete rootless tooth that would

exfoliate within a short period of time. This structure designated “Expulsive Capdepon Follicle”, may result from trauma to the alveolar margin during delivery, with the resulting ulcer acting as a route infection up to the dental follicle through the gubernacular canal, causing premature loss of tooth.

CLINICAL CHARACTERISTICS

Morphologically, natal and neonatal teeth may be conical or may be of normal size and shape and opaque yellow-brownish in color [7]. The terms natal and neonatal tooth proposed by Massler and Savara (1950) [8] were limited only to the time of eruption and not to the anatomical, morphological, and structural characteristics. On the basis of clinical characteristics, these teeth were then classified into Mature, when they are fully developed in shape and comparable in morphology to the primary teeth, and Immature, when their structure and development are incomplete.

On the basis of literature data, Hebling [9] recently classified natal teeth into four categories:

- (i). Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of a root.
- (ii). Solid crown poorly fixed to the alveolus by gingival tissue and little or no root.
- (iii). Eruption of the incisal margin of the crown through gingival tissue.
- (iv). Edema of gingival tissue with an un-

erupted but palpable tooth.

HISTOLOGICAL CHARACTERISTICS

Histological investigations have demonstrated that most of the crowns of natal and neonatal teeth are covered with hypoplastic enamel with varying degrees of severity [2, 4, 10], absence of root formation, ample and vascularized pulp, irregular dentin formation, and lack of cementum formation. Microscopically irregular interglobular areas with structures resembling osteodentin have been observed along with atypical arrangement of dentinal tubules and a gradual decrease in the number of dentinal tubules from the crown to the cervical region.

RADIOGRAPHIC DIAGNOSIS

A radiographic verification of the relationship between natal and neonatal teeth 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. It should be pointed out that most natal and neonatal teeth are primary teeth of the normal dentition and not supernumerary teeth. These teeth are usually located in the regions of lower incisors.

CASE REPORT

A 24-year-old female reported to our clinic

with the chief complaint of teeth present in her child's mouth, born 28 days earlier. On oral examination, two neonatal teeth were found on the lower anterior region (Figure 1). Mother anticipated a threat of swallowing of the mobile teeth by the baby (Figure 2). After thorough hematological examination, the



Fig. 1



Fig.2



Fig. 3.

neonatal teeth were extracted under local anesthesia using safe insulin 1 ml syringe, in an aseptic condition. Extracted teeth were rootless (Figure 3). The baby was reviewed after 10 days and the lesion was resolved completely. Mother informed that the infant feeding normally.

DISCUSSION

The presence of natal and neonatal teeth may



be a source of doubt for the treatment plan. In the decision on maintenance or non-maintenance of these teeth in the oral cavity, some factors should be considered, such as implantation and degree of mobility, inconveniences during suckling, interference with breast feeding, possibility of traumatic injury, and whether the tooth is part of the normal dentition or is supernumerary [11]. If the erupted tooth is diagnosed as a tooth of the normal dentition, each of the other situations mentioned above should be considered [11]. The maintenance of these teeth in the mouth is the first treatment option, unless this would cause injury to the baby. These teeth should be left in the arch and their removal should be

indicated only when they interfere with feeding or when they are highly mobile, with the risk of aspiration.

The risk of dislocation and consequent aspiration, in addition to traumatic injury to the baby's tongue and/or to the maternal breast, have been described as reasons for removal. Smoothing of the incisal margin was the option reported by Martins et al [12] to prevent wounding of the maternal breast during breast feeding. Among the clinical reports that consider natal and neonatal teeth to be the cause of sublingual ulceration caused by suckling, Kinirons [13] described a highly peculiar situation (i.e., the birth of a baby with natal teeth and presence of sublingual ulceration observed immediately after birth which according to the author, had probably been caused by suction during intrauterine

life).The treatment option in this case was extraction. If the treatment option is extraction, this procedure should not pose any difficulty since these teeth can be removed with a forceps or even with the fingers. However, the cited author emphasized the precautions that should be taken when extracting natal and neonatal teeth; avoiding extraction up to the 10th day of life to prevent hemorrhage, assessing the need to administer vitamin K before extraction, considering the general health condition of the baby, avoiding unnecessary injury to the gingival, and being alert to the risk of aspiration during the removal.

According to Rusmah [7], tooth extraction is a contraindication in newborns because of the risk of hemorrhage. However, administration of vitamin K before the procedure permits safe extraction. The decision to keep these teeth or not is based on the basic necessity of survival of living beings (the possibility of feeding). Other concerns expressed include the need for prevention of dental caries, by controlling bacterial plaque and via periodical fluoride application since in these teeth which erupt prematurely, mineralization is incomplete.

REFERENCES

1. Bigeard L., Hemmerle J. and Sommermater J. I. *Journal of Dentistry for Children* 1996. 63. 23–31p.
2. Boyd J. D. and Miles A. E. *British Dental Journal* 1951. 91. 173p.
3. Leung A. K. C. *JADA* 1987. 114. 762p.
4. Jasmin J. R. and Clergeau-Guerirtalt. *Journal de Biologie Buccale* 1991. 19. 309–314p.
5. Fonseca M. A. and Muller W. A. *Journal of Dentistry for Children* 1995. 61. 334–337p.
6. Fauconnier H. and Gerardy L. *Archivio Stomatologico* 1953. 8. 84p.
7. Rusmah M. *Journal of Clinical Pediatric Dentistry* 1991. 15. 251–253p.
8. Massler M. and Savara B. S. *Journal of Pediatrics* 1950. 36. 349–359p.
9. Hebling J., Zuanon A. C. C. and Vianna D. R. *Odontologia Clinica* 1997. 7. 37–40p.
10. Howkins C. *British Dental Association* 1932. 53. 402–405p.
11. Magitor E. *British Journal of Dental Science* 1883. 26. 640–641p.
12. Martins A.L.C.F., Fazzi L., Corrêa M. S. N. P. et al. São Paulo. Santos. 1998. 117–129p. 13. Kinirons M. J. *Journal of Oral Medicine* 1985. 40(3). 108–109p.