

Predeciduous teeth: To extract or not ?

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Abstract

The presence of teeth at birth (natal teeth) or within 30 days after birth (neonatal teeth) is a rare condition. Both general dentist and pediatric dentist are involved in the supervision or treatment of patients with natal and neonatal teeth. It causes difficulty in feeding to the infant, sublingual ulceration, laceration of the mother’s breasts and also possesses the danger of accidental aspiration. This article presents a case report where the natal teeth were extracted due to the risk of aspiration.

Keywords: Natal teeth, Neonatal teeth, Predeciduous teeth, Riga Fede’s disease

Introduction

Normal eruption of deciduous teeth starts with the eruption of mandibular incisors at around 6 months of age. Prematurely erupted deciduous teeth are referred to as congenital teeth, fetal teeth, predeciduous teeth, and dentitia praecox. [1] Massler and Savaral [2] defined

tooth/teeth present at birth as “natal teeth” and those erupting after 30 days of life as “neonatal teeth.” Natal and neonatal teeth were first documented by Titus Livius in 59 BC. He believed natal teeth to be prediction of disastrous events. Caius Plinius Secundus in 23 BC said that the male infant born with natal or neonatal teeth had a splendid future waiting ahead. In the Indian community, it was considered to be a bad omen. The baby was considered as devils incarnation.[3] The incidence of natal teeth and neonatal teeth ranges from 1:1000 to 1:30,000 [1,3]

The etiology of natal teeth is unknown but several conditions such as infection or malnutrition, hypovitaminosis, febrile states, trauma, hormonal stimulation and maternal exposure to environmental toxins have been considered as causative factors [4] Morphologically, it usually resembles normal primary dentition in size and shape; though the teeth are more

smaller, conical and have hypoplastic enamel and dentin with poor or absent root formation. The presence of natal teeth can be associated with few complications, the most common being the discomfort during suckling, laceration of the mother's breasts, sublingual laceration (Riga-Fede disease) with resultant feeding refusal, mobility and aspiration of the natal teeth. [3,4] Due to these complications majority of the natal teeth are being prematurely lost or extracted. The aim of this article is to report a case of natal teeth as well as to present a comprehensive knowledge about its management

Case Report

A 2 months old male infant was referred to the Department of Pedodontics and Preventive Dentistry with the chief complaint of loose teeth in the lower front region of the jaw since birth and difficulty in suckling. Interviewing the parents revealed that it was their first-born child and they were worried due to the social stigma that the child born with teeth is unlucky. A detailed medical history was taken, which revealed that child was prematurely born at 7 months ; and it was cesarean delivery. The patient was nonsyndromic. On intraoral examination, there was presence of two natal teeth loosely attached to gingiva in the mandibular anterior region. Teeth were having severe (grade III) mobility [Figure 1].



Figure 1: Natal teeth present in the lower anterior region of the jaw



Figure 2: Radiograph showing presence of natal teeth in the lower anterior region of the jaw.



Figure 3: Extracted natal teeth

Intra oral radiograph revealed presence of two natal teeth; below which primary incisor buds were present. [Figure 2] There was a danger of aspiration of these teeth, due to which decision to extract them immediately was made. As the patient was 2 months old and had already taken Vitamin K supplement, no Vitamin K was administered that day. Extraction was carried out using 2% lignocaine with adrenaline local infiltration technique after application of topical anesthesia [Figure 3] . A careful curettage of the sockets was done to remove any odontogenic remnants. Postoperative hemostasis was achieved and postoperative instructions were given. [Figure 4] The patient was recalled after 1 week. Clinical

[Figure 5] and radiographic follow-up was taken. [Figure 6] Clinically, complete healing was found. Also, demonstration of oral hygiene maintenance for the infant was given to the mother. [Figure 7]



Figure 4: Intraoral Post- operative



Figure 5: Clinical follow-up done after 1 week showing complete healing



Figure 6: Radiographic follow-up done after 1week.



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

Discussion

The etiology of natal and neonatal teeth remains undetermined; however it is usually related to various factors, including superficial position of the tooth germ, increased eruption rate due to pyretic incidents, developmental abnormalities, febrile status; eruption accelerated by febrile incidents or hormonal stimulation, heredity, osteoblastic activity within the germ zone related to the remodeling phenomenon. [1,2,5] Some investigators has suggested association of natal and neonatal teeth with some syndromes such as Hallerman-streiff syndrome (Occlusomandibulo-dyscephaly with hypotrichosis), Ellis-Van creveld syndrome (Chondro-ectodermal dysplasia), Craniofacial dysostosis syndrome, Multiple steacystoma, Congenital pachyonychia (Jadassohn Lewandowsky Syndrome), Sotos syndrome, Pierre Robin syndrome, Adrenogenital syndrome or with Cleft palate. [5]

Spoug and Feasby (1966) have suggested that clinically, natal and neonatal teeth can be classified according to their degree of maturity.[1,3,5]

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, implies a tooth with incomplete or substandard structure; it also implies a poor prognosis.

Hebling (1997) classified natal and neonatal into 4 clinical categories [4,5]

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

Natal and neonatal teeth usually loosely attached to soft-tissue pad on the alveolar ridge. They may be differentiated from the primary tooth using periapical radiographs. Different factors are considered for management of natal or neonatal teeth which include degree of mobility, inconvenience to the infant during suckling, possibility of traumatic injury to the ventral surface of tongue of the infant or to mother's breast and implantation. [6] If the tooth is very well implanted, it is better to leave the tooth as it is, unless it causes any trauma to the infant or mother. If the tooth is mobile and not very well implanted, it is advisable to perform extraction to avoid the risk of aspiration. [4-6]

According to some authors, presence of Riga-Fede disease is an indication for removal of natal or neonatal tooth; however, many authors do not recommend removal since an acute incisal margin can be relieved by smoothing [6,7]. Tomizawa et al. reported that the treatment of Riga-Fede disease by layering the incisal edge with any photopolymerizable resin, which is facilitated rapid healing of the ulcers. [8] Other treatment modalities include use of feeding plate all of which

prevents wounding to the tongue of the infant as well as of the maternal breast.[2,5,9]

If the extraction is planned, it is better to avoid extraction up to 10th day of life to prevent hemorrhage due to hypoprothrombinemia. The commensal flora of the intestine is not established properly to produce Vitamin K which in turn is required for production of prothrombin in the liver. If it is not possible to wait upto 10 days, then they should be removed shortly after birth while the newborn infant is still in the hospital. Assess the general health of the patient and assess the need to administer Vitamin K before extraction. Vitamin K (0.5–1.0 mg) should be administered intramuscularly before extraction procedure to prevent post-operative hemorrhage. Vitamin K administration is done after consulting Pediatrician and teeth should be extracted under topical or local anaesthesia. Extraction of the natal tooth should be followed by the curettage of the socket to prevent continued development of the cells of the dental papilla. [5,8,10]

Conclusion

Infants with natal or neonatal erupted teeth must be carefully examined for further treatment planning. Periodic follow-up by a pediatric dentist to provide preventive oral health care is very essential. Hence to avoid any complication, early diagnosis and appropriate treatment should be of prime concern in the management of natal teeth and neonatal teeth. Also, parent counseling to bring about awareness is equally important.

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