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Case Report

MANAGEMENT OF NATAL TOOTH- A CASE REPORT

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ABSTRACT - Eruption of teeth at or immediately after birth is a relatively rare phenomenon. These teeth are known as 'natal' teeth if present at birth and 'neonatal' teeth if they erupt during the first thirty days of life. Such teeth are of great concern to the parent because of several superstitions and beliefs. Natal teeth resemble normal primary dentition in size and shape; however, the teeth are often smaller, conical and have hypoplastic enamel and dentin with poor or absent root formation. The prevalence has been observed between 1 in 2000 to 1 in 3500 live births. This paper reports a case of natal tooth which was present in the mandibular anterior region with grade III mobility. Due to the possibility of aspiration, because of the presence of mobility and also as the tooth was causing discomfort to the mother during breast feeding, the tooth was extracted under topical anesthesia and the healing was satisfactory.

Introduction

Tooth eruption as one of the development signs of a child is an important turning point both in terms of psychological and functional changes for the child's life and in terms of emotional moods for the parents.[1] Eruption of first tooth takes place in the oral cavity at about six months of age, which is considered as one of the milestones of child life. Occasionally infants are born with a tooth like structure in their oral cavity before the age of first deciduous tooth.[2] Several terms have been used in the literature to designate teeth that erupt before the normal time, such as congenital teeth, fetal teeth, predecidual teeth, and dentitia praecox.[3] According to Massler & Savara (1950), taking only the time of eruption as reference, natal teeth are those observables in the oral cavity at birth and neonatal teeth are those that erupt during the first 30 days of life.[4] This definition has been accepted and utilized by most authors. The condition has been the subject of curiosity, and studied since the beginning of time, being surrounded by beliefs and assumptions. Titus and Livius, in 59 BC, considered natal teeth to be a prediction of disastrous events, and Caius Plinius Secundus (the Elder), in 23 BC, believed that a splendid future awaited male infants with natal teeth, whereas the same phenomenon was a bad omen for girls.[5]

The incidence of natal and neonatal teeth has

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Been investigated in many studies and the occurrence varies 1:2000 to 1:3500 among live births.[1] Natal teeth are encountered more often than neonatal teeth in an approximate ratio of 3:1.[6] With respect to gender, although there was no difference in prevalence between males and females, in some studies a predilection for females was reported.[1] Natal and neonatal teeth present almost exclusively in the mandibular incisor region, probably because these teeth are normally the first to erupt. According to Boden hoff's study of natal and neonatal teeth, 85% are mandibular incisors, 11% maxillary incisors, 3% are mandibular canines and molars, and only 1% are maxillary canine or molars.[7]The exact etiology is unknown, some factors that are assumed to be considered as etiological factors are infection, and febrile states, trauma, malnutrition, hormonal stimulation and exposure to environmental toxins are reflected as maternal risk factors for these teeth during the intrauterine period of child, superficial location of the tooth germ in the infant and also sometimes hereditary(autosomal dominant trait).[8] A case report is presented in this article where an infant was born with natal tooth.

Case Study

A 24 hours old infant was referred by the pediatrician to the department of dental surgery for examination with a chief complaint of presence of teeth in the front portion of the lower jaw since birth. Medical history revealed that the infant was delivered by lower segment caesarian section with a birth weight of 2.75 kilograms. There was no familial history of any similar oral manifestation. On intraoral examination, it was seen that there was a single natal tooth present in the mandibular anterior region.

This tooth was whitish opaque in color, surrounding marginal gingiva was mildly inflamed, held with soft tissue, exhibiting grade III mobility, caused discomfort for the nursing mother and at the same time there were chances of aspiration. The baby seemed to be uncomfortable and mouth was kept open during feeding. Due to lack of co-operation from the baby, intraoral radiographs could not be taken. It was decided to extract the mobile natal tooth to prevent aspiration and to ensure proper feed for the baby. The parents were explained the process in detail about the need for removal of mobile tooth. After taking all necessary precautions, mandibular natal tooth was removed. The method of extraction followed was stabilization of the baby's head with the help of father. Topical local anesthetic gel was applied over the tooth and surrounding gingival tissue. Long gauze was taken, half of which was inserted into the oral cavity to prevent any accidental slipping of the tooth from the forceps and other half remained outside the oral cavity for better control. The teeth were extracted with deciduous anterior forceps (Figure I, II). Careful curettage of the socket was performed in an attempt to remove any odontogenic cellular remnants. Extraction socket was plugged with a sufficient long gauze piece and the father was asked to hold it for next 20-25 minutes. The extracted tooth exhibited normal crown but were devoid of root. Post extraction hemostasis was achieved. Patient was recalled for checkup and on examination a complete and uneventful healing of the extraction socket was observed.

Figure I- Natal tooth

Figure II- Extracted immature natal tooth

Discussion

The occurrence of natal and/or neonatal teeth was reported since prehistoric period, which for centuries has been associated with diverse superstitions among many different ethnic groups.[9] Natal teeth were reported during Roman times by Titus (59 BC) and Caius Plinus Secundus (23 BC) and were described in the cuneiform inscriptions found at Nineveh. 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. Historical figures, such as Richard III, Louis XIV, Napoleon, Mirabeau, Mazarin, Cardinal Richelieu, Zoroaster and Hannibal, were described as examples of the former. In England, infants born with natal teeth were considered destined to be famous soldiers, while those born in France and Italy were considered future conquerors of world. In China, Poland, India and Africa, affected children were considered monsters and bearers of misfortune.[10] Case of infants born with a tooth or teeth or have teeth within first month of their birth are rare in occurrence. In the literature, the prevalence of natal teeth in reported to be three times more frequent compared to neonatal teeth and whether natal or neonatal, mandibular incisors contribute the greatest incidence among tooth types.[1] Morphologically, natal and neonatal teeth may be conical or may be if normal size and shape and opaque yellow-brownish in color. The terms natal and neonatal teeth were limited only to the time of eruption and not to the anatomical, morphological and structural characteristics. Spouge and Feasby classifies these teeth on the basis of clinical characteristics as 'mature' teeth which are well develop in shape as compare to morphology of primary teeth with relatively good prognosis, and 'immature' teeth that assume the presence of an incomplete structure and development with a poorer prognosis. On the basis of literature data, Hebling classified natal teeth into four clinical categories: Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of root; Solid crown poorly fixed to the alveolus by gingival tissue and little or no root; Eruption of incisal margin of the crown through gingival tissue; Edema of gingival tissue with an unerupted but palpable tooth.[5]

The exact etiology of natal and neonatal teeth is not known. Infection, febrile states, trauma, malnutrition, superficial positions of the tooth

germ, hormonal stimulation and maternal exposure to environmental toxins have been implicated as causative agents. The condition might occur as a familial trait since a positive family history has been reported in 8-62% of cases. Hereditary transmission of an autosomal dominant gene has also been suggested. Natal teeth have also been reported in association with syndromes such as Ellis-van Creveld (chondroectodermal dysplasia), Jadassohn-Lewandowsky (pachyonychia congenital), Hallerman-Streiff, craniofacial dysostosis, steacystomamultiplex, Sotos, Wiedemann-Rautenstrauch, Meckel-Gruber and Pierre Robin.[5] The presence of natal and neonatal teeth may be a source of doubt about the treatment plan. In deciding whether to maintain these teeth in the oral cavity, some factors should be considered, such as implantation and degree of mobility, inconveniences during suckling, interference with breastfeeding, possibility of traumatic injury and whether the tooth is a part of normal dentition or is supernumerary.[6] Most of the prematurely erupted teeth (immature type) are hypermobile because of limited root development. Neonatal teeth are usually less mobile as compared to natal teeth. In some cases the tooth may become mobile to the extent, which may require extraction so as to avoid displacement or aspiration.[7] although many investigators have mentioned the possibility of aspiration of these teeth, in reality; this is unlikely possibility since there are no reports in the literature of the actual occurrence of aspiration. However, cases of spontaneous tooth exfoliation have been reported.[6] If the treatment option is extraction; This procedure should not pose any difficulties since these teeth can be removed with forceps or even with the fingers. However, few precautions have been recommended that should be taken when extracting these teeth which include: avoiding extraction up to tenth day of life to prevent hemorrhage, assessing the need to administer vitamin K before extraction, considering the general health and condition of the baby, avoiding unnecessary injury to the gingivae and being alert to the risk of aspiration during removal. Further, to prevent continued development of the cells of the dental papilla, extraction of the tooth should be followed by careful curettage of the socket without disturbing primary tooth bud. But, it should be kept in mind that failure to curette the socket may cause eruption of odontogenic remnants and necessitate future treatment.[5]

If the tooth is not causing any difficulty to the infant or mother they are left alone and the importance of the tooth in the growth of infant should be explained to the parent. Teeth causing trauma need conservative treatment which consists of smoothing rough incise edges, or placing round, smooth composites over the incisal edges.[9,] Generally the gingival tissues surrounding natal teeth are normal; occasionally they are, however edematous and hemorrhagic. It has been recommended that the inflamed gingival tissue around the teeth can be controlled by applying chlorhexidine gluconate gel three times a day.[10] In the present case, the natal tooth was hyper mobile and having difficulty in suckling and fear of aspiration. So, it was decided to extract the natal tooth followed by curettage to allow rapid healing.

Conclusion

Natal and neonatal teeth are rare occurrence in the oral cavity. Pediatricians are usually the first to detect these teeth and early consultation with the dentist can prevent complications. The decision to keep or to extract these teeth should be evaluated in each case, keeping in mind the scientific knowledge, clinical common sense and parental opinion.

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