Prematurely erupted tooth in the molar region

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Abstract

Prematurely erupted teeth may be found in the mouth of a baby at birth or in the first few days after birth. The aetiology of the premature eruption is not known, but many factors have been associated. Such teeth are usually extracted to prevent their aspiration especially when they are mobile. This paper reports the case of a thirty-three-day old male child who was seen at the outpatient clinic of the University College Hospital, Ibadan with a tooth- like structure in the maxillary right molar region. This firm structure which resembled a primary molar had only two definite buccal cusps, no lingual cusp and no occlusal table. Based on the immature form and the mobility, the tooth was extracted.
The poor prognosis associated with such prematurely erupted teeth needs to be recognized and treatment instituted accordingly. The need to adopt a transcultural approach in managing cases in which parents' cultural beliefs create anxiety over the presence of such teeth was also stressed. It was concluded that dental professionals have a role to play in the management of neonates with premature tooth eruption so as to prevent complications.

Key words: Prematurely erupted tooth, molar region

Introduction

Teeth found in the mouth of a baby at birth or in the first few days were in older literature variously referred to as fetal teeth, congenital teeth or dentitis praecox[1]. Massler and Savara[1] attempted to introduce uniformity by assigning the term 'natal' to those teeth which are present at birth, and 'neonatal' to those which erupt within the neonatal period or the first thirty days of the child's independent existence. Natal teeth are more frequent than neonatal teeth with females in general being more affected[2].
Clinical significance was given to these teeth by classifying them into mature and immature natal and neonatal teeth[3]. Mature natal/neonatal teeth imply that the teeth are fully developed and compare closely to the remainder of the primary series, hence of a good prognosis. Immature natal/neonatal teeth on the other hand, have incomplete and substandard structures and therefore have a poor prognosis. This distinction is necessary because varying treatment modalities are applied to the two categories of structural development[3].
The incidence of neonatal teeth is poorly documented. The occurrence of natal teeth varies between 1 in 2,000 and 1 in 3,667 lives births[4]. Leung[5] in a study of 50,892 infants over 17 years found the incidence of natal teeth to be 1:3392 live births. Kates, Needleman and Holmes[4] carried out a study of the incidence of natal teeth in 18,155 infants which showed an incidence of 1:716 live births. Record of the incidence rate in Nigerian babies to date, is lacking, even though reports of isolated cases exist in the literature[6,7,8].
The most common location of natal or neonatal teeth is the mandibular region of central incisors (85%). According to To[9] all of the natal and neonatal teeth found in a study of 53,678 patients were mandibular incisors. Other sources showed that maxillary incisors (11%), mandibular cuspids and molars (3%) and maxillary cuspids and molars (1%) may be affected[10]. The majority of these teeth are early erupting teeth of the normal deciduous dentition, the incidence of supernumerary teeth has been reported as ranging from 1 to 10 percent[4].
Natal teeth have been associated with some syndromes such as pachyonychia congenital, Ellis-van creveld syndrome, while some cases have been associated with cleft lip or palate[2,5,11]. Bodentoff and Gorlin[12] reported a familial association in 14.5 per cent of cases while in a study by Kates, Needleman and Holmes[4] a positive family history was found in 7 out of 38 cases of natal and neonatal teeth. Many theories have been proposed to explain the possible etiology of the premature eruption of these teeth. Cases reported have been associated to endocrinological disturbances, nutritional deficiency, congenital syphilis and even fever of the mother during pregnancy. The most acceptable theory has been based upon the result of a superficial localization of dental follicles, probably related to hereditary factors[13]. Early eruption of teeth has been found to interrupt the mineralization process of enamel. Hence the enamel has often been described as dysplastic or hypomineralized and is prone to wear and discoloration[14].
The management of these teeth is dependent on several factors. Massler and Savara[1] recommend leaving them alone unless they are causing difficulty to the infant and mother. Indications for extraction include hypermobility,

difficulties during breast feeding, traumatic ulcerations on the tongue, frenum or lips[4,9]. Chow[2] on the other hand suggested extraction as the preferred treatment of choice as the teeth seldom develop properly and subsequent loss of space is not a long term sequelae. Hooley[15] suggests that 67 per cent of natal or neonatal teeth will exfoliate prematurely, due to inadequate root formation.

None of the isolated cases reported in Nigeria documented the occurrence of the tooth in the molar region. The purpose of the present report is to document the eruption of an immature tooth in the maxillary right molar region which is an unusual site in the mouth of a Nigerian baby and discuss the rationale for treatment.

Case Report

A thirty-three-day old male child was brought to the pedodontic clinic by the maternal Aunt who discovered a tooth-like structure in the maxillary molar region of the child's mouth, a few days before. History revealed that the child's mother died in early puerperium, thus pregnancy, labour and delivery history could not be obtained. The boy was the second child of his 31 year-old mother, the first child being alive and well. The aunt had no knowledge of any familial history of the condition or any congenital abnormalities.

Examination showed a healthy looking baby. There was a firm tooth like structure in the maxillary right molar region (Figure 1). The structure, which was mobile, had only two definite buccal cusps but no occlusal table.

Based on the gross mobility of the tooth, the insistent plea of the child's custodian to extract the tooth and a favorable assessment of the child's health, the tooth was extracted. The extraction and healing were uneventful. The child was reviewed five days later and scheduled for further regular recall visits.

Photomicrograph of an undecalcified section through the tooth like structure showed absence of enamel. Dentinal tubules were visible and presence of neonatal line was evident (Figure 2).

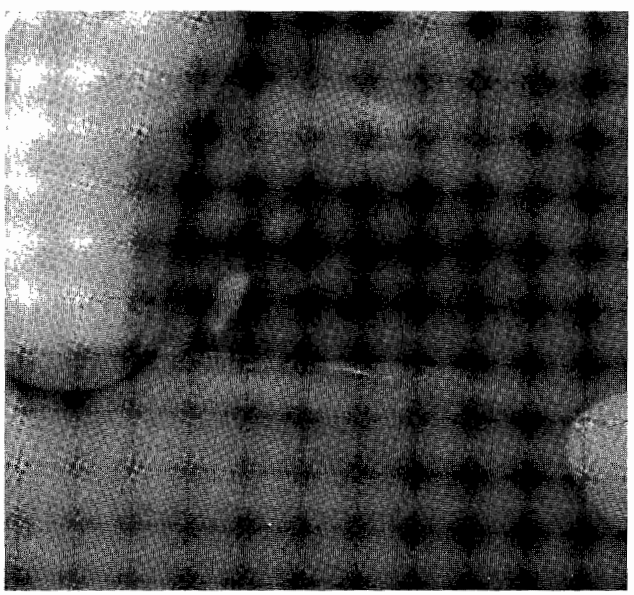

Figure 1 Immature Neonatal tooth in the maxillary right molar region

Discussion

Eruption of natal canine and molar although not common in infants has been documented[16]. Aetiology of the premature eruption of teeth is not known but among the many factors implicated, heredity has been considered by many researchers to be most important with frequencies

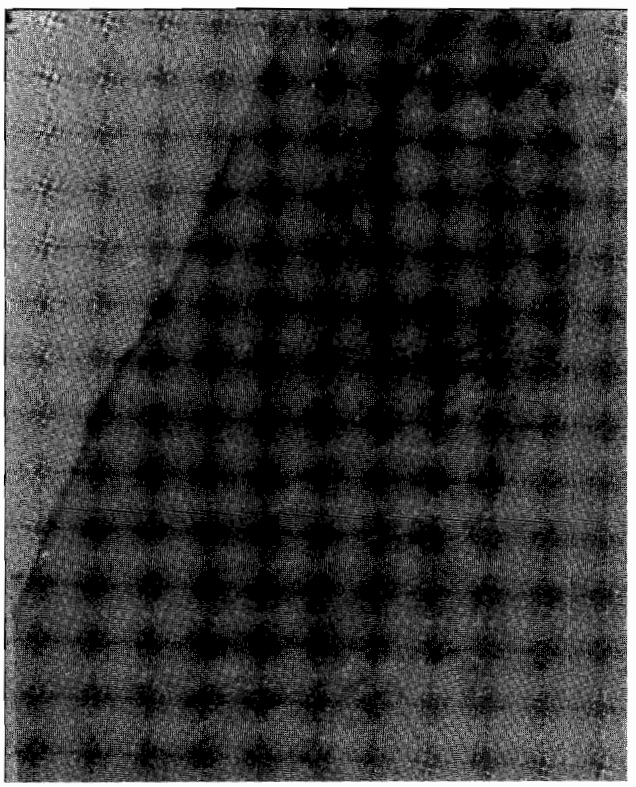

Figure 2. Histological section of non decalcified specimen showing absence of enamel but presence of dentinal tubules and neonatal line (x40)

ranging between 8% and 46% [1,4,17]. Even though the cause of maternal death could not be ascertained, presence of systemic disorder in the mother may be safely assumed. It is therefore not unlikely that the tooth was prematurely erupted as a consequence as it may however be difficult to establish a valid familial link in the present case.

The deficient structure of the tooth observed in this case is in a way similar to reports of earlier cases[1,17], even though the precise nature of the immaturity is different.

Treatment of natal and neonatal teeth should be directed at preserving the teeth especially if they are the mature type, since they often belong to the normal deciduous series and their removal may lead to malocclusion at a later date[18]. However, immature types are usually mobile due to inadequate root formation, as is the case in the present report. These could exfoliate and be aspirated; hence they need to be extracted as subsequent loss of space is not long term sequelae[2]. Other reasons for extracting them are traumatisation of the mother's nipples and discoloration of the crown. In Nigeria, a strong indication for their

extraction, whether mature or immature, is the negative societal reaction to the presence of teeth in the mouth of a neonate[7]. A study on beliefs about prematurely erupted teeth in rural Yoruba communities in Nigeria, revealed that 53.79% of respondents felt that the condition was an indication that the child was evil and as many as 4.1% of them said they would get rid of the child[18].

In the present case, this belief may be further strengthened considering the circumstances of the child's birth. Such teeth should therefore be extracted to prevent the exposure to danger posed by the parents seeking to extract the tooth by unqualified personnel who might transmit infection such as HIV, since cultural beliefs may create anxiety in the parents. With increasing availability of health care facilities in many parts of Nigeria, there are increased opportunities for health professionals to educate the masses about this condition so as to disabuse their minds of myths and beliefs which might be associated with it and where necessary to refer appropriately in order to prevent mismanagement.

Conclusion

Premature eruption of a tooth in the molar region in infants is rare. Dental professionals have a role in the management of neonates who may have it so as to prevent complications.

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