

# A Rare Posterior Maxillary Natal Tooth in a Nigerian Child: A Case Report and Review of Literature

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## ABSTRACT

**Background:** Natal and neonatal teeth are terms used to describe teeth that erupt before the normal time. Their low prevalence and incidence give credence to its rarity. The presence of natal/neonatal teeth in the mouth is surrounded by certain cultural beliefs/myths, in Nigeria.

**Objective:** The objective of this article was to report a rare case of a supernumerary maxillary natal tooth in the molar region in a 6 weeks old Nigerian infant.

**Case report:** A six-weeks old male infant presented to the paediatric dental outpatients' clinic. History revealed that a small tooth-like structure was first seen in the maxillary right molar region at birth by the mid-wife who then informed the child's mother. The tooth was grossly mobile with no history of traumatic injury to mother's breast, nor ulceration on the child's tongue, or inconvenience during suckling. Patient had received the relevant immunizations; mother cleans baby's mouth and tooth with a clean handkerchief daily.

Examination showed a healthy-looking infant with a mobile whitish opaque coloured, tooth-like structure with irregular shape in the right maxillary molar region. Radiographic investigation revealed an immature supernumerary toothlike structure with thin radiopaque shell with a radiolucent core. There were no distinct morphological delineation of enamel, dentine and pulp. Based on clinical and radiographic examination a final diagnosis of natal tooth was made. Tooth was extracted on the basis of being a supernumerary, gross mobility of the tooth, child's good health, parents' insistence and cultural beliefs. Extraction and healing were satisfactory.

**Conclusion:** Supernumerary natal teeth in the maxillary molar region is a very rare occurrence. The associated problems include risk of aspiration of the tooth, traumatic ulcers to child's tongue and mother's breast. Cultural and societal beliefs play a huge role in its management.

**Keywords:** natal, neonatal, maxillary molar, posterior, Nigerian child.

## INTRODUCTION

Various terminologies have been used in the past to describe teeth that erupt before the normal time and these include: congenital teeth, foetal teeth, predeciduous teeth, Dentitia praecox (Precocious dentition), Dens connatalis, and infancy teeth. (Sothinathan & Shakib, 2011) However, lack of accuracy and specificity of these terminologies have made them become obsolete. The most acceptable terms for these teeth are "natal" and "neonatal" teeth as described by Massler & Savara. (1950) Based solely on the time of eruption, Massler & Savara defined natal teeth as teeth seen in the oral cavity at birth, while

neonatal teeth are teeth which erupt within the first 30 days of life.

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The incidence of natal and neonatal teeth varies from 1:2000 to 1:3500 births, respectively (Dyment et al., 2005). The prevalence of natal/neonatal teeth has been reported to be one in 2000–3667 live births (Kates, et al., 1984), while others have reported one in 6000–8000 (Gonçalves et al., 1998). These incidence and prevalence suggest that natal and neonatal teeth are very rare occurrences. In Nigeria, the prevalence of

natal teeth is unknown although a few cases have been reported in the literature mostly in South-western Nigeria (Ajagbe & Daramola, 1978; Aderinokun & Onadeko, 1990; Sote & Egri-Okwaji, 1998; Denloye & Aderinokun, 2007; Olatosi et al., 2012) This may due to the traditional belief that children with these teeth possess evil supernatural abilities and are despised for it (Bankole et al., 2017). Amongst the few individual cases reported none was from the south-south region of Nigeria.

Although the exact cause of natal and neonatal teeth is unknown, it has been linked to a number of factors, including the superficial position of the tooth germ (Boyd & Miles, 1951), infection or malnutrition (Leung, 1986), febrile states (Leung, 1987), eruption accelerated by febrile incidents or hormonal stimulation (Bigéard et al., 1996), hereditary transmission of a dominant autosomal gene (Hals, 1957), osteoblastic activity within the germ area related to the remodelling phenomenon (Jasmin & Clergeau-Guerithault, 1991) and hypovitaminosis (Anderson, 1982). Additionally, natal and neonatal teeth have been associated with syndromes such as Ellis-van Creveld, pachyonychia congenita, Hallerman-Streiff, Rubinstein-Taybi, steatocystoma multiplex, Pierre-Robin, cyclopia, Pallister-Hall, short rib-polydactyly type II, Wiedemann-Rautenstrauch, cleft lip and palate, Pfeiffer, ectodermal dysplasia, craniofacial dysostosis, Sotos, adrenogenital, epidermolysis bullosa simplex, Down's, Van der Woude, and Walker-Warburg Syndromes.(Alvarez et al., 1993; Hersh & Verdi, 1992; Leachman et al., 2005; Ndiokwelu et al., 2004) Environmental factors such as Polychlorinated biphenyls (PCBs), polychlorinated dibenzo-*p*-dioxins (PCDDs), and polychlorinated dibenzofurans (PCDFs) have also been linked to the eruption of natal and neonatal teeth (Stamfelj et al., 2010). These are environmental pollutants that have the ability to cross the placenta, and levels of PCDD/Fs in a new-born's adipose tissue are comparable with those in their mother's breast milk (Mhaske et al., 2013). The superficial position of the tooth germ associated with hereditary factors seems to be most accepted theoretical possibility for the aetiology of natal /neonatal tooth (Hals, 1957). Therefore, the condition in the child might merely be a unique variation. The presence of natal/neonatal teeth in the mouth is surrounded by certain cultural beliefs/myths. In Nigeria, it is thought that the condition is a sign of a demonic child and that sacrifices should be offered to the gods to appease them (Oyejide & Aderinokun, 1992) Some people even think that the family should get rid of the child. In a study on nurses' attitudes and beliefs regarding natal/neonatal teeth in Ibadan, Nigeria (Bankole & Oke, 2013), reported that 41.3% of nurses said they would be startled and terrified if they assisted in the delivery of a baby with natal teeth at the

labour ward. Another 11.1% of them supported traditional/spiritual cleansing rites prior to the tooth extraction, and (39.7%) recommended extraction of such teeth. In another study on the attitudes and beliefs of Nigerian traditional midwives toward natal teeth in infants, Bankole et al. (2012) reported that 31.9% believed natal teeth were caused by evil spirits, 31.3% stated that children with such teeth behave oddly, and 41.1% were convinced the children will acquire evil spiritual powers. Due to this, 4.9% of them would advise parents to hide or get rid of the child.

Natal teeth are three times more common than neonatal teeth (Alvarez et al., 1993). Less than 10% of natal and neonatal teeth are supernumerary, while more than 90% of natal and neonatal teeth are prematurely erupted deciduous series of teeth.(Cunha et al., 2001) Females are more commonly affected.(Anegundi et al., 2002) The mandibular primary central incisor has been reported to be the most commonly affected tooth.(King & Lee, 1989) A study by Bodenhoff, & Gorlin (1963) reported 85% of natal teeth are mandibular incisors, 11% maxillary incisors, 3% mandibular canines and only 1% are maxillary canine or molar.

Diagnosis of natal/neonatal teeth is mainly based on clinical findings. However, radiographic examination is essential in order to determine whether these teeth belong to the normal dentition or are supernumerary. Radiographic examination also aids treatment planning so that no indiscriminate extractions would be performed. Clinically, these teeth typically appear in a variety of sizes and shapes, ranging from small, conical to those that may also resemble normal teeth. The maturity level determines how these teeth appear, although typically they may be loose, tiny, discoloured, tooth coloured or hypoplastic. Based on clinical characteristics, these teeth can be classified into: mature and immature (Spouge & Feasby, 1966). Mature natal/neonatal teeth are those that are completely developed in shape and structure, and closely resemble the other members of the primary series. Immature natal/neonatal teeth those that are irregular in shape, inadequate structure and do not resemble those of the primary dentition. Mature natal/neonatal teeth have good prognosis while immature natal/neonatal teeth have poor prognosis. Histological studies have shown that the majority of natal and neonatal teeth crowns are enveloped in hypoplastic enamel, varying in severity (Boyd & Miles, 1951; Rusmah, 1991). with no roots, a large amount of vascularized pulp, abnormal dentin development, and no cementum (Hals, 1957; Bodenhoff & Gorlin, 1963). Management of natal/neonatal teeth will depend on its presentation and certain factors. Extraction is the preferred treatment option if the natal tooth is supernumerary. However, extraction is also indicated if the tooth is excessively mobile and is at risk of

aspiration, a supernumerary, natal/neonatal teeth causing traumatic ulcers to ventral surface of the tongue as seen in Riga Fede's disease, traumatic injury to mother's breast and inconvenience during suckling. Cunha et al., 2001).

This article reports a rare case of a supernumerary maxillary natal tooth in the molar region in a 6 weeks old Nigerian infant who presented to the University of Benin Teaching Hospital (UBTH), Edo State, South-south Nigeria.

### CASE REPORT

A six-weeks old male infant presented to the paediatric dental outpatients' clinic in company of both parents with complaints of having a tooth in his mouth at birth. History revealed that a small tooth-like structure was first seen in the maxillary right molar region at birth by the mid-wife who then informed the child's mother. Child's mother claimed that the tooth-like structure became more pronounced and prominent after one week. There was no history of a similar presentation in family and no abnormalities. The delivery was by spontaneous vaginal birth, while the antenatal and perinatal history was essentially normal. Since birth, parents have been worried and concerned about the presence of a tooth in the child's mouth as this was their

fourth child and had no such experience with their other children. The tooth was grossly mobile. There was no history of traumatic injury to mother's breast, nor ulceration on the child's tongue, or inconvenience during suckling. There was also no history of any other congenital anomaly. This was the child's first visit to the dentist. As at time of presentation the infant had had three immunizations BCG, PENTA-1 and OPV. Mother cleans baby's mouth and tooth with a clean handkerchief daily. Medical history was essentially normal.

Examination showed a healthy-looking infant who weighed 4.1kg with a mobile whitish opaque coloured, tooth-like structure with irregular shape in the right maxillary molar region (Figure 1). No other anomaly was detected. Differential diagnosis of natal tooth, neonatal tooth and Bohn's nodule was made. Radiographic investigation (Figure 2) revealed a toothlike structure, the tooth also appeared to be a supernumerary and not part of the normal primary series. Radiograph showed a thin radiopaque shell with a radiolucent core. There were no distinct morphological delineation of enamel, dentine and pulp. There was also poor root development seen on radiograph. Based on clinical and radiographic examination a final diagnosis of natal tooth was made

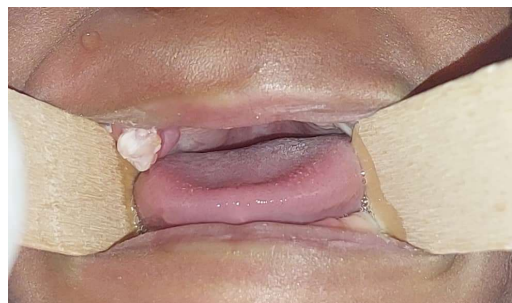
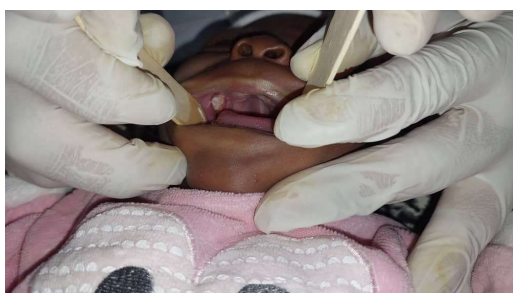


Figure 1: Clinical photograph of a right maxillary natal molar tooth in 6weeks old male infant.



Figure 2: A digital radiograph showing a thin radiopaque shell with a radiolucent core, no distinct morphological delineation of enamel, dentine and pulp, poorly developed roots and presence of tooth buds of the primary dentition. This confirmed the tooth as a supernumerary.

Tooth was extracted based on parents' insistence, the child being healthy, gross mobility of the tooth and also tooth was a supernumerary. Extraction was done by

applying topical anaesthetic in the maxillary molar region and extracted using a piece of gauze carefully to avoid aspiration of the tooth. Pressure was applied to

the extraction site to achieve haemostasis after curetting the socket to prevent the continued development of the dental papilla cells. The mother was then asked to breastfeed the child. Extraction and healing were uneventful (figure 3). Histopathology was not done for cultural reasons as child's parents insisted

on taking away the tooth to be buried. On one week recall appointment, extraction site was healing satisfactorily (figure 4). Parents had no further complaints. Patient was then scheduled for a six-monthly recall appointment to ensure adequate preventive oral health care.

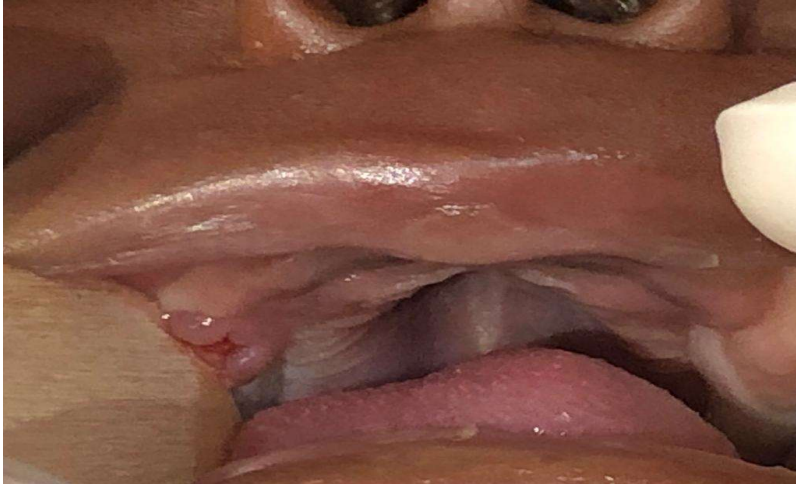


Figure 3: Clinical photograph showing extraction site after haemostasis had been achieved.



Figure 4: Clinical photograph showing extraction site at one-week post-extraction review appointment.

## DISCUSSION

Natal teeth are rare occurrences that are often associated with a lot of parental anxiety and cultural beliefs. Studies have reported that 90% of natal and neonatal teeth are primary teeth, and only 10% are supernumerary teeth (Kates et al., 1984; Cunha et al., 2001). This means that natal teeth that are supernumerary are quite uncommon. Majority of natal teeth are found in the mandibular incisal region (85%) and only 1% found in the canine and molar region (Bodenhoff & Gorlin, 1963). This case was a supernumerary molar tooth found in the right maxillary

region, further emphasising the rarity of this case hence a need for proper reporting and documentation. Very few Nigerian studies (Denloye & Aderinokun, 2007; Olatosi et al., 2012) have reported the presence of natal teeth in the maxillary molar region. Although research suggest that natal/neonatal teeth are commonly found in females (Anegundi et al., 2002) in this case the patient was a male.

Although there is no established cause for natal and neonatal teeth, a number of factors have been proposed. The most acceptable factor being superficial position of the tooth germ associated with hereditary

factors (Hals, 1957). The exact aetiology in this patient was not known but it will be safer to assume the most accepted factor. The child in this case report is the fourth child in the family and parents claimed that there was no known family history of natal tooth in the family. Consequently, the condition in the child might merely be a unique variation (Bankole et al., 2017). Clinically, natal tooth could be mature or immature (Spouge & Feasby, 1966). Immature natal or neonatal teeth are those that have an unusual shape, lack the proper structure and differ from the main primary dentition. This case was that of an immature, irregularly shaped natal tooth. Radiographic investigation revealed a bizarre tooth morphology and presence of tooth buds of the primary dentition, which further confirmed the tooth as a supernumerary. Decision making on treatment options for natal teeth can be difficult, especially since there is a debate on conservative treatment or tooth extraction. Clinical and radiographic assessment are important factors when making decisions on treatment for these patients. Tooth extraction is taken into consideration in the following: mobile tooth, supernumerary tooth, traumatic injuries to soft tissues such as the tongue and disruption of breastfeeding (Cunha et al., 2001), which was done in this case as the natal teeth was grossly mobile, immature and a supernumerary. However, a few researchers (Deep et al., 2011) have advised against tooth extraction especially if natal tooth is of the normal primary series (mature natal tooth). Also, some have argued that when extraction is performed in newborns, there is risk of haemorrhage (Rusmah, 1991). Others have reported risk of bleeding following extraction in new-borns occurring if the extraction was done before the child was 10 days old and the extraction was done without prior administration of vitamin K (Berendsen & Wakkerman, 1988) This waiting time before tooth extraction in new-borns is necessary because it takes time for the commensal flora of the intestine to establish itself and generate vitamin K, which is necessary for the liver to produce prothrombin (Rusmah, 1991). Some authors also recommended that curettage should be done in addition to extraction to prevent formation of residual natal teeth (King & Lee, 1989) while others reported that extraction done under topical anaesthesia does not require curettage instead regular follow-up is advised to monitor for possible development of residual natal teeth (Dyment et al., 2005). Conservative treatment methods, such as removing the sharp edges by grinding them down or using a composite resin, have been used (Deep et al., 2011). However, if conservative treatment fails or if the tooth is very loose it should be extracted since the latter can result in aspiration (van der Meij et al., 2012). There are strong social and cultural beliefs with unfavourable social acceptance to natal/neonate teeth in Nigeria and

most parents insist that such teeth be extracted, whether it is mature or immature, supernumerary or the primary series (Aderinokun & Onadeko, 1990). In this case an extraction was done based on the tooth's immaturity, excessive mobility, hence at risk of aspiration and being a supernumerary tooth. Also, the child in this case report was a six-weeks old healthy baby, that meant that the child was more than 10 days old hence there was reduced risk of bleeding complication.

## CONCLUSION

Neonatal and natal teeth are rare, and the exact aetiology is still unknown. Natal tooth in the maxillary molar region is even rarer and more so a supernumerary natal tooth. The associated problems include risk of aspiration of the tooth, traumatic ulcers to child's tongue and mother's breast. Diagnosis is mainly clinical although radiographic investigation is essential to determine if the tooth is of normal dentition or supernumerary and in treatment planning. Regular follow-up is also crucial. Cultural and societal beliefs play a huge role in its management.

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