ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 3, Issue – 3, May - 2020, Page No. : 410 - 414

Natal Tooth Involving Mandible– A Case Report

[1]Dr. Debanjali Mukherjee, M.D.S (Oral Pathology & Microbiology), Senior Lecturer, Dr. B.R Ambedkar Institute of Dental Sciences And Hospital, Patna, Bihar.

Corresponding author: Dr. Debanjali Mukherjee, M.D.S (Oral Pathology & Microbiology), Senior Lecturer, Dr. B.R Ambedkar Institute of Dental Sciences and Hospital, Patna, Bihar.

Citation of this Article: Dr. Debanjali Mukherjee, "Natal Tooth Involving Mandible– A Case Report", IJDSIR- May - 2020, Vol. – 3, Issue -3, P. No. 410 – 414.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

'Natal' tooth (present at birth) or 'neonatal' tooth (erupt within first 30 days of life) is relatively rare developmental alterations of teeth. The prevalence rate is 1 in 2000 to 3500 live births. Clinically, natal teeth may be of normal size and shape but the teeth are often smaller than deciduous teeth. Commonly natal teeth are conical in shape and yellow brownish in colour with poor or no root formation along with hypoplastic enamel and dentin. If natal tooth is asymptomatic without mobility or interfere with breast feeding, no treatment is necessary. If the natal tooth causes complications like difficulty and discomfort during suckling, sublingual ulceration, laceration of the mother's breasts and aspiration of the tooth ,the treatment of choice is extraction of the natal tooth. In this case report, a natal tooth of normal size and shape with yellow brownish colour along with grade III mobility was present in the mandibular anterior region of 2 days old infant. The tooth was extracted under topical anaesthesia due the chances of accidental aspiration and difficulty in breast feeding the infant.

Keywords: Natal tooth, prevalence, mandibular incisor, treatment modalities.

Introduction

Natal and neonatal teeth were first documented by Titus Livius in 59 BC[1]. According to Massler and Savara (1950), natal teeth are present at the time of birth and neonatal teeth erupt within 30 days of life. Teeth erupting within 1-3.5 months are usually referred to as early infancy teeth [2].

The incidence of natal and neonatal tooth has been investigated in multiple studies. Zhu and King[3] reported the incidence rate of natal teeth 1:716 whereas Chow[4] reported an incidence rate of 1:2000.Natal teeth are reported more often than neonatal teeth (approximate ratio of 3:1) and natal teeth have a greater predilection for women[5]. King and Lee[6] reported that the teeth affected most often are the lower primary central incisors. According to the study by Bodengoff,[7] 85% of natal teeth are mandibular incisors, 11% maxillary incisors, 3% mandibular canines and only 1% are maxillary canine or molar.

The exact etiology of natal tooth is unknown but hypovitaminosis, hormonal stimulation, trauma, febrile states and syphilis may be the cause for the presence of natal tooth. Even hereditary factors or an underlying syndrome could predispose to its occurrence. But the current concept suggests that the presence of natal tooth is attributed to a superficial position of developing tooth germ, which predisposes the tooth to erupt early[5]. Boyd and Miles[8] reported that the erupted primary central incisors were not located in an alveolus but slightly below on the surface of the alveolar bone, very much above the germ of the permanent successor.

Clinically, the natal teeth are poorly developed with hypoplastic enamel and dentin along with poor or no root development [9].

Natal tooth management is dependent on a number of factors. If the natal tooth is supernumerary, the treatment of choice is extraction. When the tooth is excessively mobile, extraction is the hour of need to prevent the risk of exfoliation and swallowing or aspiration[10]. Mother and the child may also face various complications like pain on suckling, refusal to feed due to presence of the natal tooth or teeth[11].

Here, I am presenting a case of natal tooth involving anterior mandibular region of 2 days old otherwise healthy female infant.

Case Report

2 days old female infant from a semi urban area had reported to a private clinic with the chief complain of presence of a tooth in lower jaw since birth. The medical and family history was unremarkable. No abnormalities were detected on general examination. Intraoral examination revealed a yellow brownish crown [Figure 1(a),1(b)] of normal shape and size with grade III mobility. Radiographic examination was not done considering the age and limited mouth opening. Based on the history and clinical appearance, it was diagnosed as natal tooth. Extraction was planned, since it was mobile and interferes with feeding and was done under local anaesthetic gel. The extracted tooth had a crown only without any root [Figure2].Postoperative homeostasis was achieved and postoperative instructions were given to the mother.

The patient was re-evaluated after 2 days, and the healing was satisfactory [Figure-3].

Discussion

Natal teeth are present at birth and neonatal teeth are erupted within the first month of life[2]. In the present case natal tooth was seen in a 2 day old infant.

Natal teeth can be classified into following categories[5]

Category 1: A shell-like crown structure loosely attached to the alveolus by a rim of oral mucosa, no root.

Category 2: A solid crown loosely attached to the alveolus by oral mucosa, little or no root.

Category 3: The incisal edge of the crown just erupted through the oral mucosa. Category 4: A mucosal swelling with the unerupted tooth but palpable.

The etiology of natal and neonatal teeth may be related to various factors i.e., superficial position of the tooth germ, increased eruption rate, hormonal stimulation, developmental abnormalities ,syndromes, heredity, and osteoblastic activity within the germ zone related to the remodelling phenomenon[10]. Natal teeth may be associated with some syndromes like Hallermann-Steriff syndrome, Elllis-van creveld syndrome, steatocystoma, multiplex, congential pancyhonchia, Wiedemann-Rauten strauch, cleft lip and palate[12]. Predilection for females was cited by some authors. Kates et al., reported a 66% proportion for female against a 31% proportion for male[13]. In the present case natal tooth was also involving lower anterior region of 2 day old female infant.

Natal and neonatal teeth are conical or normal in shape and size. They usually have an opaque yellow brownish colour. The dimensions of the crowns of natal teeth are smaller compared to primary teeth that have erupted normally[10].In this case report natal tooth was of normal shape and yellow brownish in colour.

They are usually attached to soft tissue pad above the alveolar ridge, occasionally covered by the mucosa which results in increased mobility[1]. Occlusal or periapical radiograph may differentiate supernumerary tooth from primary tooth. However, there is difficulty in proper positioning of film in the mouth of newborn and also during growth and development phase primary teeth undergo initiation of crown calcification which makes radiographic interpretation difficult[14].Radiographic examination was not done considering the age and limited mouth opening.

Due to premature eruption of natal tooth ,the uncalcified enamel matrix wears off and the incomplete mineralization leads the tooth to become yellow brownish in colour along with continuous breakdown of enamel[13].Root formation is prevented as the Hertwig's sheath degeneration occur due to cervical changes of dentin and cementum due to increased mobility[15]. The enamel of natal tooth is described as hypo mineralized or dysplastic because the mineralization process of enamel is interrupted by early eruption[10].The enamel thickness for natal tooth is 300mm and for neonatal tooth it is 135mm, whereas in normal primary teeth the enamel layer is between 1000 to 1200mm[16].The dentinal area did not reveal any significant differences between normal primary tooth and natal tooth. Although SEM studies of natal tooth shows large interglobular spaces with abnormal cell inclusions[10].

Treatment plan should be decided according to (1) degree of mobility and implantation (2) convenience during suckling, (3) interference with breastfeeding, and (4) if the tooth is supernumerary or is part of the normal dentition. If the erupted tooth is diagnosed as part of the normal dentition, maintenance in the mouth is considered the primary treatment option unless it becomes a source of injury to the baby[10]. Extraction is the treatment of choice for mobile natal tooth to prevent the risk of dislocation and consequent aspiration. Traumatic injury to the baby's tongue and/or to the mother's breast, have been also described as reasons for the extraction[17]. Martine et al. (1998) suggested smoothening of the incisal margin as another option for non-mobile teeth.Goho[18] (1996) reported his treatment by covering the incisal margins with composite resin or Glass Ionomer Cement. Feeding splint[19] was reported by Bjuggren (1973).

Intraoral radiograph could not be taken due to lack of co-operation from the baby. It was decided to extract the mobile natal tooth to prevent aspiration and to ensure proper feeding for the baby.

The parents were explained the process in detail about the need for removal of mobile natal tooth .There was a danger of aspiration, due to which decision to extract them immediately was made. Parents were also informed about the chances of the absence of permanent central incisor in the future, as it was difficult to take intraoral periapical radiograph to rule out whether the natal tooth belongs to permanent dentition or was supernumerary. Thus, extraction was planned, since it was mobile and interferes with feeding. Extraction was done under local anaesthetic gel. The extracted tooth had a crown without root formation. Postoperative homeostasis was achieved and postoperative instructions were given to the mother.

The patient was re-evaluated after 2 days, and the healing was found to be satisfactory.

Conclusion

Natal and neonatal teeth in the oral cavity need proper evaluation and diagnosis in each case to provide the best treatment coupled with scientific knowledge, clinical common sense and parental opinion. Pediatricians may play a important role to detect these teeth and early consultation with dentist for prevention of further complications. Also parental counselling to bring awareness and recall visits are equally important for supervising the development of the future dentition.Thus, the clinicopathological, diagnostic and treatment modalities of natal tooth along with a case report is discussed herewith.

Figure: 1(a)

Figure: 1(b)

Figure 1(a, b): Intraoral photograph showing 2-days old female infant with crown of natal tooth in the anterior mandibular area,exhibiting gradeIII mobility.

Figure 2: Extracted natal teeth with no root development.

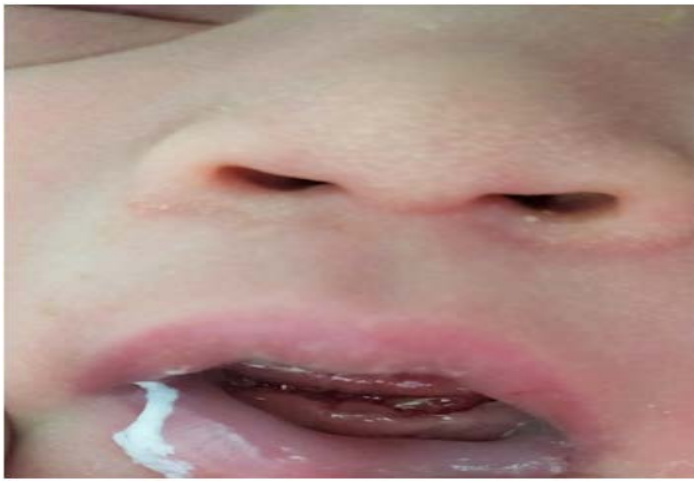

Figure 3: Postextraction follow up photograph showing satisfactory healing

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