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Management of Recurrence of Early Infancy Tooth Following Natal Teeth Extraction: An Unusual Case Report

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ABSTRACT: *Natal tooth are the teeth which can be present at birth whereas neonatal tooth appears within 30 days after birth which is an unusual and rare situation. The exact etiology behind this is unknown and various factors may be related to these teeth. Both natal and neonatal teeth are notably important for pediatric dentists and pediatricians. This case report describes the management of 24 days old infant with a mobile mandibular natal tooth related to Rigafede disease. After 45 days, there's a recurrence of early infancy tooth followed by extraction of natal tooth.*

KEYWORDS: Riga fede disease, Natal teeth, early infancy teeth,

INTRODUCTION

The regular age for an eruption of deciduous mandibular incisor tooth is 6-7 months [1]. Massler and Saveral defined teeth/teeth present since birth as "natal teeth" and those erupting within first 30 days of life are "neonatal tooth"[2]. Mandibular incisors are the most generally affected tooth with a predilection rate of 66% for girls [3]. The prevalence rate of natal tooth varies from 1: 716 to one: 3500 live births [4]. Most natal and neonatal tooth is taken into consideration as premature erupting teeth of the normal primary dentition and is supernumerary [5]. An exact etiology isn't recognized. Hereditary components, endocrinal abnormalities, or environmental elements can also play a vital role [6]. Sometimes, developing teeth germs of both (natal and neonatal teeth) are present in a strange location underneath the alveolar bone. [7]. The natal and neonatal tooth are

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usually associated with Riga-Fede syndrome which includes trauma to the undersurface (ventral) of the tongue and tip. The prevalence rate of Rigafede disease is 6-10% of the cases of total natal and neonatal teeth [8]. Careful analysis and evaluation of those infants are exceedingly recommended to prevent aspiration and trauma to the tongue and mother's breast. Recurrence of early infancy tooth accompanied with the aid of extraction of natal teeth has not been mentioned before. So, this case report is describing the occurrence of early infancy tooth following extraction of natal tooth.

CASE

A 24-day-old male newborn with his mother was referred to the department with the chief complaint of oral wound of the tongue and difficulty in breastfeeding. Medical history was not relevant. The patient's mother reported that the lower tooth was present since birth. Extraoral examination confirmed anormal healthy face without lymphadenopathy. On Intraoral examination, it revealed a single mandibular crown in the anterior gumpad with respect to 81 [Figure 1a], faint whitish opaque in hue, usually smaller than primary teeth, and exhibiting grade III mobility of more than 2 mm. The crown size was normal; the lips, palate, the gingiva, floor of the mouth, and surrounding buccal mucosa were healthy and normal in clinical appearance. On examination of the tongue, there was ulceration of 1x 1 cm on the ventral surface which was tender on palpation [Figure 1a]. A diagnosis of natal tooth associated with Rigafede disease was made based on history and clinical examination. Since the tooth was grade III mobile, immediate extraction under topical local anesthesia in a knee to knee position was done [Figure 1b], which the patient tolerated well. No vitamin K supplement was given to the child since the mother took the vitamin K dose priorly. The extracted tooth had a crown without root [Figure 1c]. The patient was followed up after half an hour of extraction. Bleeding was arrested and there were no complications [Figure 1d]. After 45 days, again the patient reported to the department with a fresh complaint of reappearance of lower teeth [Figure 2a] which is causing difficulty in feeding and sore breast. On extraoral examination, the patient was normal in appearance. On intraoral examination, a single crown of whitish color was present in the lower arch with grade I mobility with respect to 71 region. On radiographic examination, a lower crown was present in 71 region without root [Figure 2b]. A diagnosis of early infancy teeth was made. The parent's consent was taken to extract the teeth. Since it was causing pain to the mother during breastfeeding, extraction was done with a gauge placed lingually to prevent aspiration of teeth [Figure 2c]. Extracted teeth had a crown with no roots [Figure2d]. Follow up examination was uneventful. [Figure 3]

DISCUSSION

The natal and neonatal tooth varies in form, length, and shade. It could be either normal shape or conical with an opaque yellow-brownish color. It is generally smaller in dimension as compared to normally developed primary teeth [9]. In normal deciduous teeth, the thickness of enamel layer

is between 1000 and 1200 mm whereas the enamel thickness in case of natal teeth is less as 300 mm and 135 mm for neonatal teeth [10]. The etiology behind natal and neonatal teeth is not determined and is related to several factors, including the superficial position of the tooth germ, hormonal fluctuations, developmental abnormalities, syndromes, heredity, increased eruption rate due to recurrent fevers, and osteoblastic activity related to the remodeling phenomenon.[11] To differentiate supernumerary teeth from normal dentition, proper diagnosis is must. Before providing any treatment, several factors should be considered (1) degree of mobility,(2) Chances of aspiration,(3) Problem associated with suckling, (4) Difficulty in feeding milk and (5) if the tooth is of the normal dentition or supernumerary (6) injury to tongue/soft tissue. . According to some investigators, extraction is the choice of treatment if associated with RigaFede disease. However, others do not recommend removal and advice trimming and smoothing of sharp incisal margin[12].

No extraction should be done before the child is 10 days since an appropriate level of vitamin K is not present. This ten-day golden period is essential for prothrombin production by liver by allowing the normal gut flora to get established to produce vitamin K. All infant should be given a single intramuscular dose of 0.5 to 1 mg of vitamin K which is recommended by the American Academy of Pediatrics [13] since our child was 24 days old and his mother already took vitamin K priorly, no additional vitamin K was advised to the child.

CONCLUSION

Pediatricians are usually the first person to detect natal and neonatal teeth in infant. Early consultation and reference to a pediatric dentist can prevent complications. Proper diagnosis and evaluation of such cases are important to provide the better treatment options. The decision to preserve or remove those tooth have to be assessed by means of taking knowledgeable consent in each case independently. Radiographic examinatin is an essential diagnostic aid. Thus far, no studies mentioned the recurrence of early infancy teeth followed by extraction of natal teeth.

Informed consent: Informed consent from parents has been taken to publish photographs without revealing true identity.

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Figure 1(a) Natal tooth w.r.t 81 associated with tongue ulceration on ventral surface . (b)Extraction done in knee to knee position (c) Natal tooth devoid of root (d) Post extraction picture

Figure 2 (a)Early infancy tooth w.r.t 71 after 45 days (b)Radiograph showing crown wrt 71 (c) Extraction in knee to knee position (d) Extracted early infancy tooth

Figure 3 : Post extraction picture