

NATAL TEETH, NEONATAL TEETH AND RIGA-FEDE SYNDROME: A CASE REPORT**¹Dr. Zahoor Hussain Daraz, ²Dr. Dannis Brij, ³Dr. Berkheez Shabir and ⁴Dr. Rehana Afshan**¹Registrar Paediatrics GMC Baramulla Kashmir, India and Visiting Consultant Dhidhoo Atoll Hospital MOH Maldives.²Dental Officer, Dhidhoo Atoll Hospital, MOH Maldives.³Consultant Gynaecologist, MOH Maldives.⁴Consultant Radiologist, G.B. Panth Children Hospital, Sonvar, Srinagar, Kashmir, India.***Corresponding Author: Dr. Zahoor Hussain Daraz**

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Article Received on 25/08/2019

Article Revised on 14/09/2019

Article Accepted on 04/10/2019

INTRODUCTION

The presence of natal and neonatal teeth is quite a rare phenomenon with prevalence of about 1 : 716 to 1 : 3500 live births^[1-3, 6-7] occurring generally with incidences of two or even three teeth.^[1] Such teeth are commonly present in the mandibular incisor region with a 66% predilection for females.^[6]

Eruption of teeth in an infant is a much awaited occasion however if natal or neonatal teeth is present, it leads to a variety of confusions and is a cause of worry and anxiety in family, truly so, because there are various problems, like pain on suckling and refusal to feed faced by the mother and the child. Neonate is at the risk of development of various complications like, dehydration, malnutrition and failure to thrive due to extreme painful nature of the sublingual ulcer caused by such teeth. This ulcer is almost inevitable due to infantile tongue thrusting reflex. Neonate develops ulceration of the ventral surface of tongue called as Riga-fede

disease/syndrome and the most dangerous complication is the chance of aspiration during feeding.

CASE REPORT

A healthy male newborn (Term 38weeks) was born at Dhidhoo Atoll hospital (Ministry of Health of Maldives). On examination of oral cavity, a crown of one tooth was revealed in the mandibular anterior area (Fig. I), white opaque in color and showing grade-III mobility. The size of crown was normal with normal appearing gingiva. A diagnosis was made of a "natal tooth".

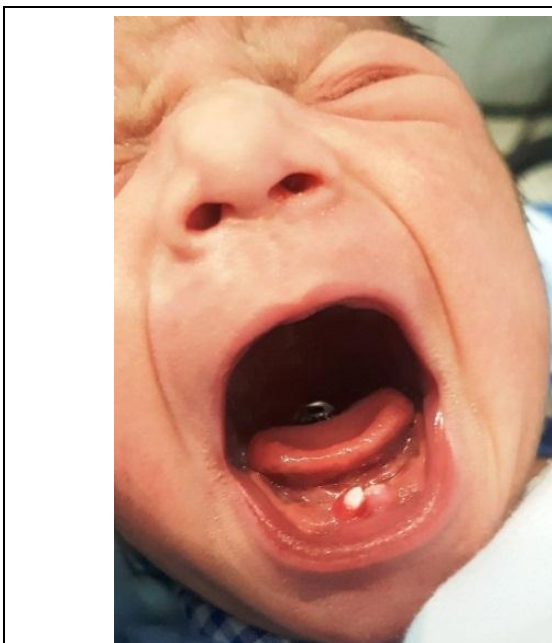


Fig. I: A 1-day-old Male newborn showing crown of the tooth in the mandibular anterior area

Fig. II: Patient presented with neonatal tooth on 8th day of life with sublingual ulceration

Treatment of choice was immediate extraction to avoid complications, a pediatrician and a dental officer were consulted and as a part of immediate medical care vitamin K (1.0mg) was administered intramuscularly to prevent hemorrhage. Tooth was extracted under local anesthesia given topically. The patient was kept under observation with mother and breast feeding was monitored. Patient was discharged in a stable condition. Reevaluation after 5 days revealed eruption of another

adjacent anterior mandibular tooth. Diagnosis of "Neonatal teeth" was made. (Fig. II)

Sharp tooth edges were molded to prevent ulceration. Patient was advised for follow up after 3 days. Patient presented with sublingual ulceration. Ulcer was covered by yellow fibrino-purulent membrane which could be wiped off. Mother complained of pain while feeding the baby and ulceration was gradually increasing. Another diagnosis of "Riga-Fede Syndrome" was made. (Fig. III)

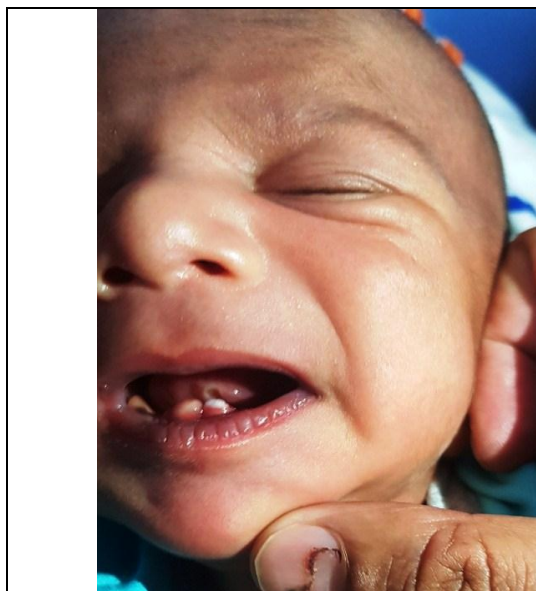


Fig. III: Showing sublingual ulceration [Riga-Fede Syndrome]



Fig. IV: Extracted tooth with Normal crown without roots

As blunting sharp tooth edges did not prevent ulceration due to infantile tongue thrusting reflex. Management was extraction of the tooth. Under the coverage of 1 mg of Vit-K given intra muscularly tooth was extracted under local anesthesia infiltrated before the procedure. Extraction was successfully done without hemorrhage. During the procedure gentle curettage was done to remove the dental papilla sheath. Baby tolerated local anesthesia well and exclusive breast feeding was started after 30 minutes. Suckling was observed and baby was discharged in a stable condition. The extracted teeth had a normal crown but were devoid of roots. (Fig. IV).

REVIEW OF LITERATURE

One of the variations observed in the newborn's oral cavity is the presence of natal teeth.^[2] The Superstitions and misconceptions surrounding natal and neonatal teeth differ from country to country. In Malaysia it is believed to herald good fortune while in other countries its presence is considered a bad omen. Famous writer and philosopher Shakespeare has mentioned natal teeth in 'King Henry the Sixth'^[3] In England, this condition would signify the belief to conquer the world by the person with natal teeth.^[4]

Classification of such teeth into 2 groups was given by Massler and Savara, according to the time of eruption. They used terms for all teeth present at birth as natal teeth and those that erupt during first 30 days of life as neonatal teeth.^[3, 5-7]

CLASSIFICATION

In 1966 Spoug and Feasby gave a clinical classification of natal and neonatal teeth as per the degree of maturity found in such teeth.^[4]

Fully developed with good prognosis for maintenance is termed as mature natal or neonatal tooth.

The tooth with incomplete or substandard structure with apparent poor prognosis for maintenance is termed as immature natal or neonatal tooth.

Another classification categorizes teeth into 4 types according to their appearance in the oral cavity during oral examination.^[4, 8]

Poorly fixed to alveolus with shell shaped crown and absence of a root.

Poorly fixed to the alveolus with solid crown having little or no root.

Eruption of the incisal margin of the crown through the gingival tissues.

Unerupted but palpable tooth with gingival oedema.

The natal teeth of category (1) or (2) need extraction.^[8] If the degree of mobility is more than 2 mm for the fear of aspiration.

CLINICAL ASPECTS

On clinical examination, the natal teeth are small or normal in size; shapes vary between normal and conical. Absence of root or small root formation with immature appearance and hypoplastic enamel is revealed very often. The colors vary between whitish –opaque to yellowish brown. Teeth are attached loosely with the soft tissue above the alveolus and in certain circumstances covered by mucosa. Such teeth have increased mobility with a risk of getting swallowed or aspirated.^[1, 11] In one of the studies by Bigeard *et al.* it has been revealed that the dimensions of the crown of these teeth are smaller than the primary teeth under normal conditions.

RADIOGRAPHIC FEATURES

The usual radiographic feature of the tooth consists of a hollow calcified cap of enamel and dentin without pulp tissue, rather like a celluloid crown in shape.

TREATMENT AND MANAGEMENT

Evaluation of eruption and space maintenance is required if the natal or neonatal tooth is of primary dentition.^[12] There are chances that neighboring deciduous teeth may drift towards site of extracted natal/neonatal tooth on eruption. Despite this fact it is accepted that anterior crowding are not a sequel of extraction of deciduous incisor teeth in the permanent dentition. Once extraction procedure is carried out, it is important to make sure that Hertwigs epithelial root and the underlying dental papilla sheath are removed by gentle curettage as chances of development of root are high if these structures are left *in situ*.

Indication of removal of natal teeth is when they are poorly developed, highly mobile, interfere with breast feeding and associated with soft tissue growth. Vitamin K (0.5—1.0 mg, i.m.) prophylaxis is advocated because of the risk of hemorrhage since vitamin K is essential for the production of prothrombin in the liver and the commensal flora of the intestine might not have been established until the child is 10 days old.

Riga Fede disease caused by the natal teeth could be managed by blunting, molding and rounding of the incisal sharp edges of the teeth.^[10] Riga Fede disease management has varied over time. Early treatment consisted of excision of the lesion. Allwright advocated maintaining the neonatal tooth by smoothening of incisal

edge with an abrasive instrument.^[16] Such treatment may suffice in cases of mild-to-moderate irritation to the tongue. However if ulcer is denuded and large and baby has strong tongue thrusting reflex extraction can be performed.^[12]

DISCUSSION

Based on clinical findings, the patient was diagnosed as natal teeth, neonatal teeth and a sublingual traumatic ulcer / Riga-Fede disease respectively. Occurrence is rare but the consequences make it an important condition for pediatricians and oral health professionals.^[15] Sublingual ulceration is intensely painful, which leads to multiple conditions like dehydration, malnutrition and failure to thrive.^[15] Painful nature of lesion is linked with the incapacity to communicate, that can lead to intellectual impairment.^[14] Hence, the timely diagnosis and treatment will prevent all the above mentioned complications.

Predilection is strong for the lower central incisors in view of the fact that they are normally the first teeth to erupt. However degree of maturity is more important than the time of eruption. Mature natal teeth have better prognosis.^[3]

If the natal teeth are loose, they should be removed shortly after birth while the newborn infant is still in the hospital. The possibility of aspirating or ingesting natal teeth is reported to be a reason for extraction of mobile teeth.

Teeth that are stable beyond four months have a good prognosis. Esthetically, they are not pleasing due to the discoloration.^[9] Pediatric dentists should make every effort to educate parents and the medical community on the preferred treatment for natal teeth. If extraction of a natal tooth is indicated, then it should be performed by a dentist to avoid unnecessary trauma to the area.^[10] Periodic follow-up by a pediatric dentist to ensure preventive oral health care is very essential. Hence to avoid any complication, early diagnosis and adequate treatment should be of prime concern in the management of natal teeth.^[8]

Ooshima *et al.* reported that natal tooth extraction should be followed by curettage of the alveolar socket to halt the proliferation and development of dental papillary cells which can grow in few months and look like teeth.^[13]

Eruption of other primary teeth is usually followed by teething symptoms like drooling of saliva infantile diarrhea etc. though reported by Massler, Savara, and Spouge, were not seen in the present case report.^[6]

We conclude that all newborns must be carefully examined for anomalies and oral examination must be regarded as important as other systems. Occurrences of natal teeth, neonatal teeth must be excluded and when found should be evaluated and managed as early as possible to avoid possible complications.

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