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Case Report

Management of natal tooth of a 2 months old infant: a case report

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ABSTRACT

Natal and neonatal teeth are the type of supernumerary tooth which have various myths and superstitions associated with it. Natal teeth are the teeth which appear at the time of the birth whereas neonatal teeth appear within one month of life. Presence of natal teeth often risks the aspiration of teeth by infant and the mother also has difficulty in breast feeding and comes with the complaint of the same. The present case report of 2-month-old infant describes the management of natal teeth present in mandibular arch with mobility. After the consent of parents, the extraction of the shell-like tooth was done immediately and hemostasis was achieved. The follow up was carried out after 1 week to examine the normal healing of extraction site.

Keywords: Infant, Natal teeth, Neonatal teeth, Pre-deciduous teeth

INTRODUCTION

Supernumerary tooth is defined as "any tooth/ odontogenic structure that is formed from tooth germ in excess of usual number for any given region of dental arch".[1]

There are two types of supernumerary tooth-unilateral or bilateral/ single or multiple. It can occur in both the types of dentition primary or permanent and in any of the arch either maxilla or mandible.[2]

Natal teeth are also considered as supernumerary teeth. Natal teeth are defined as teeth being present at birth, and neonatal teeth are those that erupt during the first 30 days of life.[3]

Natal teeth were first noticed during Roman times by Titus Livius (59 BC) and Caius Plinius Secundus (23 BC) and were described in the cuneiform inscriptions found at Nineveh.[4]

It is referred to by various other names like dentitia praecox/dens connatalis/congenital teeth/ fetal teeth/ infancy teeth/ predecidous/ precaucious teeth. But the most widely used term to denote this kind of tooth is natal tooth.[5]

The prevalence of natal or neonatal teeth varies amongst the population, ranging from 1:1000 to 1:30,000 live births.[6]

The mandibular central incisor is most commonly found in infants with natal teeth which is followed by maxillary incisors, mandibular canines, and molars are rarely found.[7]

According to the literature, clinically natal teeth are categorized into 4 classes, a shell-like crown structure loosely attached to the alveolus by gingival tissue with no root, a solid crown loosely attached to the alveolus by gingival tissue with little or no root, eruption of the incisal margin of the crown through gingival tissue, and edema of the gingival tissue with an unerupted but palpable tooth.[8,9]

Spoug and Feasby (1966) have suggested that clinically, natal and neonatal teeth be further classified according to their degree of maturity.[10]

A fully mature natal or neonatal tooth has a good prognosis and can be maintained in the arch.

On the counterpart, the immature natal or neonatal tooth with an incomplete structural matrix has a poor prognosis and needs extraction.

The appearance of each natal tooth into the oral cavity can be classified into four categories as the teeth emerge into the oral cavity.[10,11]

Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of a root.

Solid crown poorly fixed to the alveolus by gingival tissue and little or no root. Eruption of the incisal margin of the crown through the gingival tissues. Edema of gingival tissue with an unerupted but palpable tooth.

Often the parents report with the chief complaint of feeding problems, loosening and risk of aspiration, ulceration of ventral part of the tongue and frenulum, lacerations on the mother's breasts.

CASE REPORT

A 2 months old female infant (Figure 1) reported to the department of pediatric and preventive dentistry with the chief complaint of presence of tooth in lower front region of the jaw. Parents of infants gave history of hospitalization which says the infant was shifted to neonatal intensive care unit (NICU) just after birth and was discharged after 1 week. After 7 days parents noticed the presence of tooth. The mother complaint of difficulty in breast feeding.

Figure 1: 2 month old infant with natal teeth.

After evaluating history oral examination was done. There was the presence of the tooth in mandibular anterior region, yellowish white opaque in color and exhibiting grade III mobility and the gingiva was normal (Figure 2). There were increased chances of aspiration of tooth. After evaluating history and clinical examination the diagnosis of natal tooth was made.

Figure 2: Pre -operative with natal teeth.

According to the vaccination chart the child was above 15 days therefore vitamin K prophylaxis was completed as stated by the parents.

We opted for the treatment of immediate extraction. Extraction was carried out after the topical application of local anesthesia with the help of sterile applicator (Figure 3). Post-extraction hemostasis was achieved and the patient was asked to sit in the operatory for 30 min. Post-operative instructions were also given and the patient was recalled after 1 week.

The extracted teeth had a shell-like crown (Figure 4).

Figure 3: Post extraction.

Figure 4: Shell like crown.

DISCUSSION

Natal teeth were first documented during the Roman times by Titus Livius (59 BC) and Caius Plinius Secundus (23 BC). Massler and Savara divided tooth into two groups according to the time of eruption. According to Shafer's, the predeciduous teeth have been described as hornified epithelial structures without roots, occurring on the gingiva over the crest of the ridge, which may be easily removed.

Natal tooth is the tooth which is being present from the time when the infant is born. Neonatal tooth is the tooth which erupts during the first 30 days of life. The prevalence of natal teeth varies from 1:7000 to 1:30000. Females are more commonly affected and also Muslim Children exhibit more natal/ neonatal tooth as compared to the Hindu children. Most common natal teeth present in infants are lower primary central incisors. Incidence of natal and neonatal teeth is mandibular incisors followed by maxillary incisors, then mandibular canine and the least found are molars and only 1% in maxillary posterior region.[7]

Other reports reveal it to be around 1 in 2000-3500 live births (Massler and Savara; Bodenhoff and Gorlin, 1963; Spouge and Feasby). There are certain misconceptions regarding natal teeth like in Malaysian community, natal teeth are considered as good fortune; in China, India, Poland, it is considered as bad omen, they believe the child born with natal teeth is monsters or bearers of misfortune.

Some of the synonyms which is used to denote natal tooth are: Dentitia praecox, dens connatalis, congenital teeth, fetal teeth, infancy teeth, predeciduous teeth.[5] Spoug and Feasby divided the natal and neonatal teeth according to their degree of maturity. A mature natal or neonatal tooth is one which is nearly or fully developed and has relatively good prognosis for maintenance.

The term immature natal or neonatal tooth, on the other hand, implies a tooth with incomplete or substandard structure; it also implies a poor prognosis

According to Shafers, the natal teeth is divided according to their appearance in the oral cavity. Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of a root.

Solid crown poorly fixed to the alveolus by gingival tissue and little or no root. Eruption of the incisal margin of the crown through the gingival tissues. Edema of gingival tissue with an unerupted but palpable tooth.

Whilst the exact aetiology for these teeth is unknown (Leung and Robson), suggested causative factors include infection, febrile states at birth, malnutrition, hypovitaminosis and maternal exposure to environmental toxins (Leung, Cunha et al and Alaluusua et al). The most accepted aetiology is a superficial position of the developing tooth (Bulut et al).[8,25]

Clinically the natal teeth are poorly developed and smaller in size and conical or normal in shape. They can be immature and can exhibit enamel hypoplasia. Sometimes there is the presence of root. They are brown-yellowish/ whitish opaque color. They are attached to a pad of soft tissue above the alveolar ridge, occasionally covered by mucosa and as a result have an exaggerated mobility with the risk of being swallowed or aspirated, in most of the cases.[12]

The literature reflects the association of natal teeth with reactive fibrous hyperplasia, congenital hydrocephalus associated with congenital glaucoma Walker Warburg syndrome, bilateral mandibular hamartomas, pyogenic granuloma, peripheral ossifying fibroma, eruption cyst, gingival fibrous hamartoma. Darwish et al reported a case of natal teeth in association with bifid tongue and deaf mutism.[11,14-17]

The radiographs of natal teeth reveal hollow calcified cap of enamel and dentin without any pulpal tissue, more like celluloid crown in appearance.

Natal and neonatal teeth were first observed by Howkins microscopically in 1932. Further investigations were carried out by Boyd and Miles. Histologically the crown of natal tooth consists of thin layer of dysplastic or hypomineralized enamel, irregular dentin and osteodentinin the cervical portions and interglobular dentin in the cervical regions. Incisal edge lacks the enamel. Hertwig's epithelial sheath and cementum can be absent too. Sometimes there can be a greater number of blood vessels in pulpal tissue.[16]

There are many possible complications of natal and neonatal teeth, including pain felt by the mother or wounding of the nipple when suckling (Primo et al). The baby may also experience pain during suckling due to the tooth rubbing against the tongue, along with traumatic ulceration to the underneath of the tongue and reluctance to feed (Leung and Robson) which can cause sublingual ulceration (Riga-Fede disease).[25] The constant ulcerations may interfere with proper sucking and feeding and there are chances of nutritional deficiencies in neonate and cause infants' failure to gain weight.[17] The major complication can be aspiration of the mobile tooth.

Epulis and Bohn's nodules are often confused with natal teeth. Bohn nodules are keratin- filled cysts scattered over the palate, most numerous along the junction of the hard and soft palate and apparently derived from palatal salivary gland structures.[8] Epulis are tumor-like growths of the gum that might be either sessile or pedunculated, and are reactive rather than neoplastic lesions. Other differential diagnoses include lymphangioma and hamartoma of the alveolar ridge.

The diagnosis of natal teeth is purely based on complete history, oral examination of infant and by clinical findings. A proper examination should be done by looking at the surrounding structures like gingiva, sublingually. According to the citations, diagnosis is important to plan treatment, keeping in view the maintaining of the normal dental occlusion.[10]

Natal teeth may be associated with syndromes like Ellis-van Creveld syndrome, Jackson-Lawler, Hallermann-Streiff, steatocystoma multiplex with natal teeth.[18]

If the natal teeth are not mobile for four months and is asymptomatic no intervention is required.[19] Extraction should be the choice of management if the tooth is mobile as it can aspirated by the infant while suckling. If extraction is planned then the pediatric dentist should be careful to avoid unnecessary trauma to the surrounding structures. Before extraction, a thorough history of vaccination should be consulted from the parents like Vitamin k prophylaxis is utmost important as it is one of the clotting factors. If vitamin K has not been administered at birth, prophylactic administration of vitamin K (0.5e1.0 mg, IM) is advocated before and if required after extraction, as vitamin K is essential for the production of prothrombin in liver. Extraction of tooth should be followed by curettage of socket to prevent continued development of cells of dental papilla.[16] Failure to curett socket might result in eruption of odontogenic remnants and necessitate future treatment.[20]

CONCLUSION

Natal and neonatal teeth are rare occurrence and it is not associated with any misconceptions. Therefore, the infants with erupted teeth should be thoroughly examined for further management and parent counselling should also be the part of the treatment so as to bring awareness about myths. The parents should make the visit to the dentist as soon as they notice the tooth in oral cavity of an infant. The intervention should be done immediately to avoid any complications.

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