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Review Article

Neonatal Teeth: A Clinical Case Report with Review of Literature

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ABSTRACT:

The presence of teeth at birth (natal teeth) or within a month after delivery (neonatal teeth) is a rare condition. The teeth are often small, conical and yellowish and have hypoplastic enamel and dentin with poor or absent root formation. A newborn, 28-day-old female, with two mandibular incisor natal teeth was examined. The teeth were mobile and were extracted because of the fear of aspiration and refusal to feed.

Keywords: Natal Teeth, Neonatal Teeth, Management

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INTRODUCTION

Natal teeth are teeth present at birth, and "neonatal teeth" are teeth erupted within the first month of life. Premature eruption of a tooth at the time of birth or too early is combined with many misconceptions. They are further accompanied by various difficulties, such as pain on suckling and refusal to feed, faced by the mother and the child due to the natal tooth/teeth. Some families are so superstitious that the afflicted child may be deprived of parental love. The family hopes that the offending teeth be removed as soon as possible.¹

The incidence of natal teeth is approximately 1:2,000 to 1:3,000 live births. The most commonly affected teeth are the lower primary central incisors. Natal teeth usually occur in pairs. The eruption of more than two natal teeth is rare. The majority of natal teeth represent the early eruption of normal primary deciduous dentition. Less than 10% of natal teeth are

supernumerary. Natal teeth might resemble normal primary dentition in size and shape; however, the teeth are often smaller, conical and yellowish, and have hypoplastic enamel and dentin with poor or absent root formation. Complications include discomfort during suckling, sublingual ulceration, laceration of the mother's breasts and aspiration of the teeth. A dental roentgenogram is indicated to differentiate the premature eruption of a primary tooth from a supernumerary tooth. Tooth extraction is indicated if the tooth is supernumerary or excessively mobile. If the tooth does not interfere with breast feeding and is otherwise asymptomatic, no treatment is necessary.²

CASE REPORT

A 28-day-old female infant was referred to the Hind Institute of Medical Sciences, Lucknow with complaint of two teeth in the lower jaw since birth

Oral examination revealed two crowns of the teeth in the mandibular anterior region (Figure 1), whitish opaque in colour and exhibiting grade III mobility. The crown size was normal; the gingiva was of normal appearance. The parents confirmed that it was not present at birth, and only after 10-12 days after birth that the parents noticed this structure in the oral cavity. Parents also reported that the child would cry everytime, especially at the time of feeding. A diagnosis of neonatal tooth was made.

The infant was underweight. The body weight of the infant was seen to be deteriorating owing to an inability to suckle. The delivery was normal vaginal delivery and the perinatal history was normal. There was severe mobility associated with these teeth. A danger of aspiration of these teeth existed. Hence, a decision to extract them immediately was made. Extraction was carried out under local anaesthesia with epinephrine after application of a topical anaesthetic and careful curettage of the sockets was performed in an attempt to remove any odontogenic cellular remnants that might otherwise have been left in the extraction site (Figure 2 and 3). Post-extraction haemostasis was achieved. Postoperative instructions were given and a recall visit after 1 week was scheduled.



Figure 1: Pre-Operative Clinic Picture



Figure 2: Post- extraction Clinic Picture



Figure 3: Extracted Neonatal Teeth

REVIEW OF LITERATURE

Presence of natal tooth is one of the variations observed in the newborn's oral cavity. The folklore and misconceptions surrounding natal and neonatal teeth vary; in some cultures like Malaysian communities, a natal tooth is believed to herald good fortune; in others, its occurrence is considered bad omen. In China, Poland, India, and Africa, the affected children are considered to be monsters and bearers of misfortune. Shakespeare contributed his thoughts on natal teeth in 'King Henry the Sixth,' when he refers to Richard the Third in his quotation "teeth hadst thou in thy head when thou wast born to signify thou camest to bite the world".³ In England, the belief was that this condition would guarantee the conquest of the world.⁴

The presence of teeth at birth or within a month post-delivery is a rare condition. Massler and Savara have divided these teeth into two groups according to the time of eruption. They termed all teeth that are present at birth as natal teeth and those that erupt during the neonatal period (first 30 days of life) as neonatal teeth.^{5,6}

INCIDENCE

Incidence of natal teeth is 1:3000 live births. Most common natal teeth are lower primary central incisors. Incidence of natal and neonatal teeth is 85% in mandibular incisors, 11% in maxillary incisors, 3% in mandibular canine and molars and only 1% in maxillary posterior region.⁷ Of these 90% of teeth are primary and only 10% are supernumerary.⁸ Predilection for females was cited by some authors with Kates et al., reporting a 66% proportion for female against a 31% proportion for male. The presence of natal teeth can cause feeding problems, loosening and risk of aspiration, ulceration of ventral part of the tongue and frenulum.⁹

ETIOLOGY

Etiology of natal and neonatal teeth is debatable. The presence of natal and neonatal teeth is definitely a disturbance of biological chronology whose etiology is still unknown. It has been related to several factors such as:^{10,11,15}

- Superficial position of the germ
- Endocrine disturbances
- Infection: For example, congenital syphilis appears to have varying effect; in some cases, it has erupted early, while in others it has been retarded.
- Nutritional deficiency, e.g., hypovitaminosis
- Febrile status: Fever, exanthemata during pregnancy tend to accelerate eruption as they do in various other processes.
- Environmental factors: Polychlorinated biphenyls (PCB) and dibenzofurans seem to increase the incidence of natal teeth. These children usually show other associated symptoms, such as dystrophic finger nails, hyperpigmentation, etc.
- Some investigators, however, suggest that natal teeth may be associated with some syndromes such as Hallerman-Streiff, Ellis-Van Creveld, Craniofacial Dysostosis, Multiple Steacystoma, Congenital Pachyonychia, and Sotos Syndrome

CLINICAL FEATURES

Morphologically, natal and neonatal teeth may be conical or may be of normal size and shape and opaque yellow-brownish in colour. They may reveal an immature appearance with enamel hypoplasia and small root formation. Natal teeth may exhibit a brown-yellowish/whitish opaque colour. 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.¹³

On the basis of clinical characteristics, these teeth were then classified into: Mature-when they are fully developed in shape and comparable in morphology to the primary teeth; immature- when their structure and development are incomplete

Hebling (1997) recently classified natal teeth into 4 clinical categories:¹⁴

1. Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of a root;
2. Solid crown poorly fixed to the alveolus by gingival tissue and little or no root;
3. Eruption of the incisal margin of the crown through gingival tissue;
4. Edema of gingival tissue with an unerupted but palpable tooth.

MANAGEMENT

The importance of a correct diagnosis of natal and neonatal teeth has been pointed out by several investigators who used clinical and radiographic findings in order to determine whether these teeth belonged to the normal dentition or were supernumerary, so that no indiscriminate extractions would be performed.¹⁴

If the natal or neonatal tooth is of primary dentition, then evaluation of eruption and space maintenance would be required. Neighbouring deciduous teeth

may drift towards site of extracted natal/neonatal tooth on eruption. Despite this, it is widely accepted that space loss and anterior crowding in the permanent dentition are not a sequelae of extraction of deciduous incisor teeth. If extraction is carried out, it is necessary to ensure that the underlying dental papilla and Hertwigs epithelial root sheath are removed by gentle curettage as root development can continue if these structures are left *in situ*.¹⁵

Indications for removal include risk of dislocation, subsequent aspiration, and traumatic injury to the baby's tongue and/or the maternal breast. Natal or Neonatal teeth that show mobility of more than 1mm are indicated for extraction; this is due to the probability of aspirating or ingesting natal teeth. Another reason for the removal of the natal/neonatal tooth is to alleviate feeding difficulties or complications like Riga- Fede disease.¹⁶

If extraction is the treatment of choice, it can be deferred till the child is 10 days of age or more and has proper blood levels of vitamin K. This ten-day waiting period is to allow the normal flora of the intestine to become established to produce vitamin K, an important factor for prothrombin production in the liver.¹⁷ Since parenteral vitamin K prevents a life-threatening haemorrhagic disease of the newborn, the American Academy of Paediatrics recommends that all newborn be given a single intramuscular dose of 0.5 to 1 mg of vitamin K. If it is not possible to postpone the extraction, a consultation with the paediatrician should be initiated, so they can assess if there is a need to administer vitamin K. Once extraction is performed, it is essential to remove the underlying dental papilla and Hertwig's epithelial root sheath during the extraction of natal tooth/teeth to prevent the development of root structure that could continue if these structures are left.¹⁸

CONCLUSION

Neonatal teeth are less common, and although its exact etiology is still unknown, it can cause difficulties in breastfeeding to the mother and may eventually lead to discontinuation of breastfeeding. This condition should be assessed properly and managed independently in order to come up with the best treatment option, apart from minimising the likelihood of a poor weight gain in the infant. Extraction is a viable option if the tooth is mobile or when associated complications are present. This measure also allows immediate continuation of breastfeeding, prevents growth and nutritional deficiency, as well as enables effective healing of oral and tongue ulcers.

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