CASE REPORT

Management of prematurely erupted teeth in newborns

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SUMMARY

The majority of natal and neonatal teeth are prematurely erupted primary teeth, whereas few are supernumerary in origin. They most commonly occur in mandibular central incisor region and often can lead to difficulty to the mother during breast feeding and tongue ulceration in newborn. Moreover, since majority of these have poorly developed roots and are mobile, there is always a fear of aspiration into respiratory passage. Extraction therefore is the most commonly rendered treatment for these teeth. This paper comprises cases of natal and neonatal teeth describing about their clinical characteristics and sequel. This paper has also highlighted the factor which needs to be considered during the management of natal/neonatal teeth and protocol followed at our centre.

BACKGROUND

Natal teeth are present at birth, whereas neonatal teeth erupt in first 30 days of life. Natal teeth are three times more common compared with neonatal teeth.¹ Their incidence is rare, ranging from 1:2000 to 1:3500.²⁻³ Majority of them are prematurely erupted primary teeth and only less than 10% are known to be supernumerary by origin.^{4,5} A prematurely erupted primary tooth can be easily differentiated from a supernumerary tooth with the help of radiograph usually indicated at the time of eruption of the primary tooth.⁶ Although, there is no gender predilection, however, a slightly higher prevalence has been cited in female by some authors.⁷ They most commonly occur in mandibular central incisor region followed by the maxillary incisors.⁸ Although, trauma, infection, malnutrition, hormonal stimulation, superficially placed tooth germ and maternal exposure to environmental toxins have been implicated as an aetiological factor, the exact aetiology of the condition still remains unknown.⁹ These natal/neonatal teeth often can lead to difficulties like pain to mother during breast feeding, tongue ulcerations and refusal to feed in newborn and risk of aspiration. The decision to extract is based on associated local and/or general complications, tooth prognosis and parental opinion.¹⁰

CASE PRESENTATION

This paper comprises seven cases who reported to the Unit of Paediatric dentistry with premature eruption of teeth in oral cavity. History revealed two of these to be erupted at birth (natal teeth), whereas other five had erupted in the first month of life (neonatal teeth). Associated anomalies/

syndromes were not present in any of these children except one child who was born prematurely in 34 weeks. In six out of seven cases, teeth were mobile in nature and mothers were experiencing difficulty during breast feeding, whereas in remaining one case although tooth was firm, it was leading to ulceration on ventral surface of tongue (figure 1A). Table 1 explains the demographic information of children and the characteristics of natal and neonatal teeth which were classified based on their clinical characteristics (Hebling classification 1997 (table 2)).

TREATMENT

In order to avoid feeding difficulty and prevent an accidental aspiration into the respiratory passage, extractions of mobile teeth were planned (figure 2A,B), whereas a significant improvement was seen in tongue ulceration following grinding

Figure 1 (A) Ulceration on ventral surface of tongue as a complication of neonatal tooth. (B) Resolution of ulceration after grinding of incisal edges of neonatal tooth.

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Table 1 Demographic and clinical characteristics of newborns

Case	Age	Sex	Time of tooth appearance	Associated problems	Tongue ulceration	Medical condition associate	Classification (Hebling 1997)	Administered with prophylactic vitamin K at birth	Treatment rendered	Tooth origin (supernumerary/ pre-erupted deciduous teeth)	Follow-up period (months)
Case 1	29 days	F	12 days	Mobility and difficulty in feeding	Absent	Premature birth 7.5 months	2	Yes	Extraction	Pre-erupted deciduous teeth	20 months
Case 2	1½ months	M	5 days	Mobility	Absent	None	2	Yes	Extraction	–	–
Case 3	1 month	F	15 days	Mobility	Absent	None	2	Yes	Extraction	Pre-erupted deciduous teeth	15 months
Case 4	1 month 5 days	M	10 days	Difficulty in feeding	Present	None	2	Yes	Grinding of incisal edges of tooth	Pre-erupted deciduous teeth	12 months
Case 5	18 days	M	Birth	Mobility and difficulty in feeding	Absent	None	1	No	Extraction	Pre-erupted deciduous teeth	24 months
Case 6	7 days	F	Birth	Mobility and difficulty in feeding	Absent	None	1	Yes	Extraction	Pre-erupted deciduous teeth	18 months
Case 7	25 days	M	21 days	Mobility and difficulty in feeding	Absent	None	2	No	Extraction	Pre-erupted deciduous teeth	24 months

of incisal edges of non-mobile tooth (figure 1B). Extractions of mobile teeth were performed under topical anaesthetic gel (2% lignocaine) with the help of gauze. Five out of these seven children were born at Post Graduate Institute of Medical Education and Research, Chandigarh, and had been administered with prophylactic vitamin k at birth. Two children were referred from other centres and prophylactic vitamin K had not been administered in them till the time of presentation. Vitamin K (1mg) was administered prior to extraction in cases where prophylactic dose was not been given immediately after birth.

OUTCOME AND FOLLOW-UP

All the cases were recalled for follow-up examination and were assessed clinically and radiographically. Follow-up radiograph differentiated a supernumerary tooth from an early erupted primary tooth (figure 3A,B). The absence of corresponding primary tooth in six out of seven cases during recall examination revealed that natal/neonatal teeth were prematurely erupted primary teeth. One case did not report for recall visit. Counseling was provided to all the parents to reduce their fear due to beliefs and misconceptions.

DISCUSSION

Management of natal/neonatal teeth is governed by many factors including tooth prognosis, risk of aspiration, difficulty in breast feeding, risk of haemorrhage and beliefs/misconceptions which should be taken into consideration in treatment planning.

Preoperative evaluation of teeth is important to assess their development, root formation, mobility and hence the risk

of aspiration. It is also very essential to rule out difficulty in feeding to mother or in a child due to tongue ulcerations. The decision to extract a natal or neonatal tooth should be

Figure 2 (A) Clinical photograph of 18 days infant with natal teeth in mandibular anterior region. (B) Extracted mandibular anterior teeth.

Table 2 Hebling classification of natal/neonatal teeth (1997)

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

Figure 3 (A) Clinically missing primary mandibular central incisors after 2 years of follow-up (B) Two years follow-up radiograph with missing primary mandibular central incisors.

weighted depending on complications associated with it against the loss of space and mesial drifting of permanent tooth leading to crowding in permanent dentition. Aesthetic concern is another limiting factor that guides the conservative management of premature primary teeth as child would remain without teeth till eruption of corresponding permanent teeth. Grinding or smoothening of incisal edges can be an alternative to extraction to prevent complications associated with these teeth. Covering the incisal portion with composite resin could also serve the purpose.¹¹

Six cases included in this paper were associated with mobility and a subsequent risk of aspiration leaving extraction as an only treatment option, whereas one case managed conservatively with grinding of incisal edges of offending tooth. Clinical problems associated with natal/neonatal tooth, therefore, many a times make an extraction mandatory. However, in such a situation, where an extraction is indicated, it is safer to wait till child become 10 days old. A newborn cannot produce vitamin K at birth and this waiting period of 10 days before tooth extraction helps to establish intestinal commensal flora that synthesise vitamin K. It is required for the production of prothombin in liver and coagulation of blood.^{12 13} There may be cases where due to difficulty in feeding, trauma or risk of aspiration, it is not advisable to wait and extractions should be carried out as soon as possible to prevent the complications. In such a scenario, it is advisable to consult a

paediatrician/neonatologist prior to extraction to evaluate the need for vitamin K administration. If a child has not been given vitamin K prophylaxis at birth, a dose (0.5–1.0 mg) should be given intramuscularly.¹⁴ Two of seven cases presented in this case series were administered with vitamin K (1 mg) before extraction after consulting with a paediatrician, whereas remaining five cases already had vitamin K prophylaxis immediately after birth.

An association also has been reported between premature teeth in newborns and certain syndromes. The commonly associated syndromes include Ellis-Van Creveld syndrome (chondroectodermal dysplasia),¹⁵ Hallermann-Streiff (oculo-mandibulodyscephaly with hypotrichosis),¹⁶ Rubinstein-Taybi, Pierre-Robin, cleft lip and palate, ectodermal dysplasia, cranio-facial dysostosis.¹⁷ Although, none of the child included in this case series was syndromic, a thorough systemic evaluation is very essential in children with premature tooth eruption.

The fact cannot be denied that premature eruption of teeth in mouth of a newborn is associated with lot of superstitions. Often, the affected child may become deprived of love and affection from parents. The families are so concerned that they want premature tooth to be removed as early as possible. Therefore, along with the management of natal/neonatal teeth, psychological counselling of the parents is also very important.

Learning points

- ▶ The presence of natal/neonatal teeth though is uncommon in newborn; often they can be associated with clinical problems and psychological trauma.
- ▶ A comprehensive diagnosis, treatment planning and parental counselling with due consideration to child physiology is required for management of these teeth.

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Reminder of important clinical lesson

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