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Case Report

Neonatal teeth concomitant with fibrous hyperplasia: A rare case report

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ABSTRACT

Eruption of tooth at about 6 months of age is a momentous stage in child's life and is an emotional event for the parents. Though, a tooth present in the oral cavity of new born can lead to a lot of delusions. The occurrence of natal and neonatal teeth is a scarce anomaly, which for centuries has been associated with assorted superstitions among different ethnic groups. Natal teeth are more frequent than neonatal teeth, with the ratio being approximately 3: 1. Natal and neonatal teeth are of paramount importance not only for a dentist but also for a paediatrician since their presence may lead to numerous complications. Early detection and treatment of these teeth are recommended because they may induce deformity or mutilation of tongue, dehydration, inadequate nutrients intake by the infant, and growth retardation, the pattern and time of eruption of teeth and its morphology. This paper reports a rare case, wherein a neonatal tooth has led to the development of a fibrous hyperplasia in 10 months old infant.

1. Introduction

Tooth eruption at about 6 months of age is a milestone both in terms of functional and psychological changes in the child's life and in emotional terms for the parents[1] as it is a keenly awaited event for them. Any untoward incidence associated with this event brings about a glut of reactions from the parents. Teeth observed at birth are considered as natal teeth, or, if observed during the first 30 days, as neonatal teeth, based on the classification given by Massler and Savara in1950.[2]

The rare occurrence of natal and neonatal teeth has led to their association with superstition and folklore.[3] In countries like Poland, India, and Africa, superstition prevailed for a long time, and in many African tribes children born with teeth were murdered soon after birth because they were believed to bring misfortune to all they would contact.[4] The presence of teeth at birth was considered a bad omen by the family of Chinese, who believed that when these natal teeth would start to bite, one of the parents would die. In England, the belief was that babies born with teeth would grow to be famous soldiers, whereas in France and Italy the belief was that this condition would guarantee the conquest of the world.[5]

Term such as Dentitia praecox, dens connatalis, congenital teeth, fetal teeth, infancy teeth, predeciduous teeth, and precocious dentition are used formerly for natal and neronatal teeth.[6] Natal teeth are more frequent, approximately three times more common than neonatal teeth, with the most common localization being the mandibular region of central incisors (85%), followed by maxillary incisors (11%), mandibular cuspids or molars (3%), and then maxillary cuspids or molars (1%). Natal or neonatal cuspids are extremely rare.[7] Most frequently, these teeth are precociously erupted from the normal complement of primary teeth (90%-99%). Only 1% to 10% of natal and neonatal teeth are supernumerary.[8]

The exact aetiology has yet to be proved, but there is a correlation between natal teeth and hereditary or environmental factors and some syndromes. Today, this phenomenon attracts significant interest and concern to both parents and clinicians owing to their clinical characteristics

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(small size, conical shape, great mobility) which can cause complications such aspiration or the loss of attachment with subsequent development of abscess, feeding difficulties including Riga-Fede disease, where the presence of natal or neonatal teeth in association with nursing or sucking leads to ulceration at the ventral surface of the tongue.[4,6] Here is a rare case report of gingival hyperplasia associated with neonatal teeth.

2. Case Report

A 10 months old female infant was brought by the parents to the Department of Pediatric and Preventive dentistry, Hazaribagh College of Dental Sciences and Hospital with a chief complaint of swelling of gums in the lower front region of the mouth. The medical history of the child revealed that she was healthy, born of a normal full-term delivery with no complications. The only unexpected finding deciphered by the parents was eruption of teeth in the lower front teeth region one week after the birth. The parents did not consult any dentist as neither the mother nor the child had any problem during feeding. However, when the child was around 11-12 weeks old, a growth was noticed around the neonatal teeth which gradually increased in size. Oral examination and history of present illness revealed a pedunculated growth, measuring approximately 0.5 x 0.8 cm and the neonatal teeth in the mandibular anterior region with respect to 71 was embedded in the growth and 81 was intact and non-mobile [Figure 1]. The mass was firm in consistency, dark pink in colour (same as gingiva) and had a smooth surface. The radiograph confirmed that the neonatal tooth belonged to the complement of normal primary dentition (71 and 81) and was not a supernumerary tooth [Figure 2]. It was decided to excise the lesion after obtaining informed consent from the parents. Haematological examinations including full blood count and clotting profile were done before surgery and all the values were within normal range except haemoglobin value which was lower than the normal. A paediatrician was consulted and patient was kept on required nutritional diet and recalled after one month. On rescheduled date, again haemoglobin level examination done after obtaining normal range surgery was scheduled. Under local anaesthesia which was well tolerated by the patient, growth was excised using BP blade no 15 [Figure 3]. Irrigation was done using normal saline and povidone iodine. Finger pressure was given to stop the bleeding. Mother was told to feed the infant as its helps in stoppage of bleeding [Figure 4] and wait for about half an hour to check haemorrhage [Figure 5]. The mass [Figure 6] was removed and was sent for histopathological examination which on grossing showed an embedded tooth within the soft tissue. The haematoxylin and eosin section [Figure 7] revealed the presence of hyper parakeratinised stratified squamous epithelium with ulceration. Thin and long rete ridges were present and underlying fibro cellular connective tissue showed coarse collagen fibres running in different directions with increased cellularity. Cells like fibroblasts, chronic inflammatory cells like lymphocytes and plasma cells and few blood vessels were also evident in connective tissue stroma. Based on these histopathologic features, the lesion was diagnosed as a fibrous (gingival) hyperplasia. Patient was recalled after a month. No complication or recurrence was reported.

Fig. 1: Preoperative view of the lesion

Fig. 2: Radiographic view showing 81 and 71 engraved in mass

3. Discussion

The definite aetiology of neonatal tooth is yet to be known although some suggest that it may be of hereditary origin.[6] However, some are of the opinion that various endocrinal disturbances, nutritional deficiency, or environmental factors such as polychlorinated biphenyls and dibenzofurans may lead to its occurrence. The treatment planning for neonatal tooth depends on various factors which include the degree of mobility, inconvenience during suckling or breastfeeding, and whether it is a supernumerary tooth or is a part of the normal dentition.[9]

Fig. 3: Excision of Gingival overgrowth

Fig. 4: Finger pressure given to stop haemorrhage

Fig. 5: Postoperative view- excised lesion with minimal bleeding

Fig. 6: Excised mass

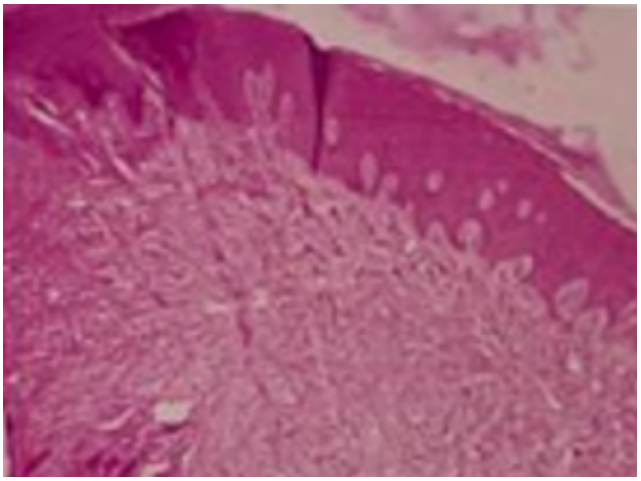

Fig. 7: Histopathological picture presenting fibrous hyperplasia

Treatment of natal and neonatal teeth should be planned prudently, due to its several hitches and premature loss of primary teeth may causes loss of space and collapse of developing arch with resultant malocclusion in permanent dentition. No treatment is required if the tooth is asymptomatic, and breastfeeding is not impaired. The extraction of the tooth should be done only if the tooth is supernumerary, or if the tooth is extremely mobile with a possible risk of aspiration. If extraction is the treatment of choice, it can be postponed till the child becomes 10 days old or more only after the appropriate blood levels of Vitamin K are attained. In general, extraction in newly born infants may cause bleeding problem because the bacterial flora present in the digestive tract of new born infants may be ineffective in the production of Vitamin K during the first 10 days following delivery.[10] Since parenteral Vitamin K prevents a life threatening haemorrhagic disease

of the new born, the American Academy of Paediatrics recommends that all new born infants should be given a single intramuscular dose of 0.5–1 mg of Vitamin K.[11]

After extraction of the tooth, curettage of the socket should be performed to avoid continued development of the cells of dental papilla failure to which might result in further eruption of the odontogenic remnants.[12] If the tooth is not indorsed for extraction, smoothening of the cusp tips or incisal edges may be required to prevent any trauma to the feeding breasts or the opposing gum pad.[13] Additionally, for no extraction cases, proper oral hygiene maintenance instructions and the importance of regular dental visit should be elucidated.

The present case suggests that the development of fibrous hyperplasia may be due to microtrauma caused by eruption of the tooth[14] and chronic low-grade irritation to the gingival tissues from the neonatal tooth.[15] The mass was excised due to its gradual increase in size and difficulty in feeding. The clinician should assess the risk of haemorrhage due to the hypoprothrombinaemia commonly present in new-borns. In our case, haematological examinations including clotting profile was done and since patient was 10 months old vitamin K was not recommended. Early diagnosis and treatment of these teeth are of utmost importance due to risk of aspiration, irritation and trauma to soft tissues and even conciliate child's ability to feed which may result in nutritional deficiency in infant.

4. Conclusion

'Natal and Neonatal teeth' is a rare occurrence allied with complications like Riga-fade disease and nursing problems. Nowa-days these teeth are of prodigious concern to parents as well as health professionals because of negation of child to feed due to pain connected with suckling and the risk of aspiration and being swallowed during nursing because of their great mobility. Hence, to avoid any complications, early diagnosis and adequate treatment should be of primary concern in the management of natal and neonatal teeth. A detailed oral examination of the new born should always be carried out, and if diagnosed with neonatal tooth, appropriate treatment is necessary for the furtherance of the infant. Parental counselling and proper follow ups are needed for supervising the development of the dentition.

5. Conflicts of Interest

All contributing authors declare no conflicts of interest.

6. Source of Funding

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