Multiple natal Teeth in a one-week-old baby: A Case report

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1 INTRODUCTION

Natal teeth present at birth, while neonatal teeth are those that erupted during the first month of life. Natal teeth occur more frequently than neonatal teeth at a ratio of approximately 3:1. The incidence of natal and neonatal teeth is 1:700 to 1:3500, respectively. Natal teeth usually occur in pairs; however, the presence of multiple erupted natal teeth is considered a rare condition. This paper's purpose is to present a case of one-week-old Saudi boy who was referred to the Pediatric Dentistry clinic for the evaluation of multiple natal teeth present in the lower and upper dental arches. Clinically child had multiple palpable elevations with shell-shaped crowns. Presentation and management description of the case are presented in this paper. Additionally, the ectodermal dysplasia diagnosis, which is confirmed by genetic testing, makes this as the first reported case of natal teeth in Ectodermal dysplasia infant.

One of the main objectives of the pediatric dentistry specialty is to provide oral and dental care to patient from infancy to adolescence.

Occasionally, infants are born with an early eruption of teeth in their oral cavity. When present at birth (ie, erupted in utero), such teeth are termed as natal teeth. When the eruption occurs during the first month of life, teeth are termed as neonatal teeth.

Both natal and neonatal teeth are anomalies with unknown etiology.

Their incidence is 1:700 to 1:3500, respectively. Natal teeth are more frequent than neonatal teeth with a ratio of approximately 3:1. Natal teeth usually occur in pairs most commonly located in the lower anterior mandible; however, the presence of supernumerary natal teeth is considered a rare condition occurring at rate of less than 10% of all reported cases.1 The majority of natal and neonatal teeth represent the early eruption of normal primary dentition.

Occasionally, natal teeth are associated with complications for both the neonate and the mother. Firstly, they may cause interruptions in breastfeeding as a result of discomfort and irritation to the mother's breast. Also, they may cause irritation and ulcerations of the ventral surface of the infant's tongue (known as Riga-Fede disease).2,3

2 CASE REPORT

A one-week-old Saudi boy was referred from neonatal intensive care unit to the section of pediatric dentistry at King Faisal Specialist Hospital and Research Center's dental department due to the presence of multiple intraoral structures.

He is a full-term baby, productive of elective cesarean section with APGAR score of 6, 7, and 8 in 1st, 5th, and 10th minutes, respectively. One hour after birth, he was admitted
to NICU due to respiratory distress, and then, he was discharged one day later.

He is known to have significant family history of ectodermal dysplasia from his mother Side. He has one older sibling who is medically fit and who had not experienced natal or neonatal teeth in infancy.

On general examination, the child appeared to have a symmetrical face without any obvious dysmorphic features (Figure 1). Intraoral examination revealed eight shell-shaped crowns located in the right, left, and anterior mandible as well as the left posterior maxilla (Figure 2). They exhibited grade III mobility (mobility of more than 1 mm in each direction and depressed in the socket). The lips, gingivae palate, tongue, floor of the mouth, and buccal mucosa were clinically within normal limits.

The mobility of the teeth poses a risk of aspiration; thus, the treatment plan was discussed with the parents and they agreed for the extraction of all the teeth to avoid possible aspiration. However, parent was informed that the chance that their child will have primary teeth is seldom after removal of those natal teeth. Primary pediatrician clears the child for dental extraction. Also, he was evaluated by the genetic department to exclude ectodermal dysplasia since the mother was a known case of ED. The genetic report revealed that diagnosis is not exclusive due to patient age; however, they recommended regular follow-up.

Child was booked one week later and dental extraction was done by tweezers without anesthesia and gentle curettage was performed on the extraction socket. The infant tolerated procedure very well. The extracted teeth had a crown but were lacking in roots. On his 1-week follow-up appointment, two natal teeth were found and they were mobile in posterior maxilla and were removed. At his 2-week and 3-month follow-up, the child was well and no abnormalities were reported. The child missed his dental recall appointment for a few years. Then, the mother brought her child to the dental clinic, with a concern that child has missing teeth; he was 4 years old at the time.

His medical history revealed that child had blood sample for genetic testing, and the result confirms the diagnosis of (ED-12) Ectodermal Dysplasia 12. Gene KDF1, mutation Exon 2:c.753 > A (p.Phe251Leu).

Autosomal dominant inheritance, ED-12 is characterized by abnormal development of 2 or more ectodermal structure like hair, teeth, or nail.

In this case, child has a normal growth and development. He has thick hair, no dark pigmentation around the mouth; however, his skin is very dry.

Intraoral examination shows the absence of most of his primary teeth except upper primary canines and lower second primary molars which were fully erupted; resorption of the lower alveolar ridge was also noted (Figure 3).

Child has regular follow-up appointment at the dental clinic to evaluate his condition and to formulate a treatment plan that may include constructing a removable denture in order to enhance esthetic and function.
3 | DISCUSSION

The etiology of natal and neonatal teeth remains undetermined. They may appear as an isolated dental finding but are sometime associated with developmental anomalies like cleft lip and palate, and syndromes such as chondroectodermal dysplasia, Hallermann-Streiff (Mandibulo-oculo-facial dyscephaly with hypotrichosis) and ectodermal dysplasia. Environmental factors, particularly polychlorinated biphenyls, appear to increase the incidence of natal teeth.  

Even though a clear causative factor is yet to be determined for natal teeth, it was found to be related to various conditions, including superficial position of the tooth germ, increased eruption rate due to pyretic incidents, hormonal stimulation, developmental abnormalities, syndromes, family history, and osteoblastic activity within the germ zone related to the remodeling phenomenon. The presence of relatives with a history of natal or neonatal teeth was found in 15% of cases.

Ectodermal dysplasia by definition is a defect in the development of tissues derived from ectoderm like teeth, nails, hair, and sweat gland and skin. The presence of natal teeth in a child affected by ED is uncommon. This case report showed extraordinary event of natal teeth in ectodermal dysplasia infant.

The appearance of each natal tooth into the oral cavity can be classified according to Hebling into four categories as the teeth emerge into the oral cavity.

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 the gingival tissues.
4. Edema of gingival tissue with an unerupted but palpable tooth.

If the degree of mobility is more than 2 mm, the natal teeth of category (1) or (2) usually need extraction.

If extraction is the treatment of choice, it can be deferred till the child is 10 days of age or more and has appropriate blood levels of vitamin K to prevent risk of bleeding. This 10-day waiting period is to allow the normal flora of the intestine to become established to produce vitamin K, an essential factor for prothrombin production in the liver. Since parenteral vitamin K prevents a life-threatening hemorrhagic disease of the newborn, the American Academy of Pediatrics recommends that all newborns be given a single intramuscular dose of 0.5 to 1 mg of vitamin K.

After extraction is done, gentle curettage of the socket is generally recommended. This is necessary to prevent Hertwig’s epithelial root sheath from forming root structures.

4 | CONCLUSIONS

The occurrence of natal teeth is highly uncommon in infants affected with Ectodermal Dysplasia. Early consultation with the pediatric dentist is recommended to prevent complications such as risk of aspiration, deformity, or mutilation of the tongue. The decision to maintain or remove these teeth should be considered on a case-to-case basis and tailored according to patients’ situation. To our knowledge, this is the first reported case of the presence of multiple natal teeth in Ectodermal dysplasia infant.

DATA AVAILABILITY STATEMENT

The datasets in this case report are available from the corresponding author on reasonable request.

CONFLICT OF INTEREST

All authors declare that no associations with commercial entities, no conflicts of interests, and no funding or financial support was obtained for the case report.

AUTHOR CONTRIBUTIONS

Dr Aziza Aljohar: led the writing; Dr Hadeel Alwakeel: collected the data also review the manuscript; Dr Antonio Palma: help in treating the child and help in preparation of the manuscript.

ETHICAL APPROVAL

The manuscript was reviewed by the ethical committee at King Faisal Specialist: Hospital before the submission. No funding was obtained for this case report.

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