

## Case Report

### Natal and neonatal teeth: A case series and mechanical perspective

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#### ABSTRACT:

Teeth that have erupted into the oral cavity at birth in an infant are called natal teeth. They neither have roots nor are firmly attached to the alveolar ridge. These teeth may be a supernumerary or prematurely erupted primary tooth. Natal or neonatal teeth occasionally result in pain and refusal to feed and can produce maternal discomfort because of abrasion or biting of the nipple during nursing. Ulceration, bleeding, and discomfort of the tongue due to its repetitive rubbing across a natal tooth during swallowing and movement is called Riga-Fede disease. If the tooth is mobile with a danger of detachment and aspiration, extraction may be warranted. Decisions regarding extraction of prematurely erupted primary teeth and smoothing the incisal edge should be made on an individual basis.

**Keywords:** Natal teeth, infant, oral ulcer, supernumerary

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#### INTRODUCTION

Natal teeth are defined as the presence of teeth at birth which usually erupt during the intrauterine life. Meanwhile, neonatal teeth refers to the eruption of teeth during the first 4 weeks of life<sup>1</sup>.

In majority of the cases (95%) natal and neonatal teeth are part of the normal primary dentition and, in a few cases (5%), are supernumerary teeth<sup>2</sup>. When compared to each other, the natal teeth are more prevalent than neonatal teeth, in the proportion of 3:1<sup>3</sup>. Its incidence has been reported to be around 1:800 to 1:6000 birth<sup>4</sup>. They are commonly found in the jaw, in the region of central incisors. The eruption of more than two teeth is rare. However, some cases of multiple teeth have been found in the literature<sup>5</sup>. There is no significant prevalence as to the side of the oral cavity where these teeth erupt<sup>6</sup>.

Clinically, natal and neonatal teeth may be of normal size and shape. However, most of the time, they are small, conical and poorly developed, presenting a yellow-brown discoloration and enamel hypoplasia<sup>7,8</sup>. The soft tissue around these teeth may be hyperplastic, with edema, hyperemia and/or prone to bleeding<sup>9,10</sup>. Radiographic images, show low

radiopacity, wide and minimal pulp chamber, or absence of root formation<sup>11</sup>. Due to the poor root development, these teeth are highly mobile and may cause pain and discomfort both to the child and mother during breastfeeding.

The most common complication associated with natal and neonatal teeth is Riga-Fede's disease, which is defined as a traumatic ulceration located in the ventral region of the tongue<sup>12</sup>. Normally the lesion begins as an ulcerated area which, due to the continuous trauma of sharp incisal edges these teeth may progress to an ulcerative granuloma<sup>13</sup>, impairing sucking and feeding which can add to nutritional deficiencies<sup>14</sup>.

The present case series report describes multiple cases of neonatal and natal teeth that presented with feeding difficulties to the department of paediatric and preventive dentistry, Punjab Government Dental College and Hospital, Amritsar.

#### CASE 1

A 2-month-old baby girl was brought by her parents to the department with a complaint of a loose tooth in their baby's mouth. The mother complained of pain and discomfort during breastfeeding session. Due to

the continuous pain during breastfeeding, the mother became reluctant to continue breastfeeding and instead, milk formula was given.

Examination of the oral cavity of the baby revealed a neonatal tooth over the anterior mandibular ridge. The tooth measured 2 mm x 1 mm in size and was whitish, opaque with grade III mobility

After a thorough discussion with the parents, the neonatal tooth was extracted under local anesthesia. The tooth had a crown but lacked a root. Following extraction, the baby did not have any complications such as bleeding and infection. The wound healed well within 3 days and the mother could successfully resume breastfeeding the baby.



**Fig.1: Neonatal tooth seen with respect to the lower anterior region**



**Fig.2: Extraction and hemostasis**

### CASE 2

A one-month-old baby boy was brought to our department by the parents with a complaint of loose tooth in the lower front region of their baby's mouth. The mother complained of difficulty in suckling and incomplete nursing associated.

### CASE 3

A forty-five days old infant reported to the department by parents with a chief complaint of ulcerated area on the ventral surface of tongue. The mother of the baby reported that there was breastfeeding. No history of associated pain with the tooth was present.

Examination of the oral cavity of the baby revealed grade III mobile neonatal tooth on anterior mandibular ridge. The tooth was 2 mm x 2 mm in size and was whitish, opaque with grade III mobility.

Since the tooth was grade III mobile, extraction was planned and done under local anesthesia. Following extraction, the baby did not have any complications or delayed healing.



**Fig.3: Neonatal tooth with respect to anterior mandibular ridge**



**Fig.4: Extraction done**

Clinical examination revealed a tooth with sharp incisal edge and grade three mobility. The ventral surface of the tongue showed a 7 mm x 8 mm ulcer extending from under border of the tongue to the lingual frenulum. Baby was otherwise in good health. There was no regional lymphadenopathy. The intraoral mucosa revealed no other lesions. A clinical diagnosis of Riga-Fede disease due to repetitive trauma resulting from to and fro movements of the tongue against anterior natal teeth was made.

Since the tooth was grade III mobile, therefore, in order to prevent the risk of aspiration and treat the repeated ulceration of the ventral surface of the tongue, extraction of the natal tooth was chosen as the treatment option for the rapid resolution of the lesion and for encouraging effective nursing. Follow up revealed that the child was feeding normally. The ulcer healed completely within a week following extraction.



**Fig.5: Ventral surface of the tongue showed ulcer due to the presence of natal tooth.**



**Fig. 6: Resolution of the ulcer following extraction with natal tooth seen after 1 week.**

#### **CASE 4**

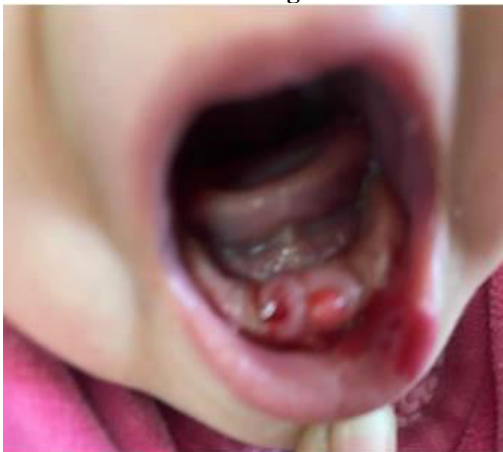
A one-month-old baby girl with her parents reported to the department with the chief complaint of loose tooth in the lower jaw since birth associated with continuous crying and refusal to suck milk.

Oral examination revealed a crown of the tooth in the mandibular anterior region, whitish opaque in colour and exhibiting grade III mobility. The crown size was normal and gingiva looked slightly inflamed. A diagnosis of natal tooth was made.

Since tooth was severely mobile, immediate extraction was the treatment of choice. The tooth was extracted under topical anesthesia. The patient was re-evaluated after 3 days and the recovery was found to be uneventful.



**Fig.7: Natal tooth seen with respect to lower right anterior region.**



**Fig.8: Extraction of natal tooth was done**

#### **CASE 5**

A twenty eight days old baby boy brought in the department with the mother who reported to the department with a complaint of loose tooth in her baby's mouth. Clinical examination of the oral cavity revealed to natal teeth with respect to lower right anterior region. The surrounding gingiva seemed to be healthy. No other associated systemic manifestations were associated.

Since the tooth is grade III mobile, the tooth was extracted considering it to be safest treatment option for the patient.



**Fig.8: Natal teeth seen with respect to the lower anterior region**



**Fig.9: Extraction of natal teeth**

#### **DISCUSSION**

This article presents a case series of natal and neonatal teeth belonging to the normal series of deciduous dentition.

The etiology of natal and neonatal teeth remains undertermined. 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, Hallerman-Streiff and ectodermal dysplasia<sup>15,16</sup>. Environmental factors, particularly polychlorinated

bisphenyls, appears to increase the incidence of natal teeth<sup>15</sup>.

As per the location, studies have shown that most of the teeth are in the region of lower incisors which is in agreement with all the cases presented in this case series<sup>17</sup>. According to some authors<sup>18</sup>, 85% of the teeth involved are lower incisors, 11% are upper incisors, 3% canines and lower molars and only 1% canines and maxillary molars.

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<sup>19</sup>:

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

One of the main complications of the natal and neonatal teeth is the presence of the Riga Fede disease, as presented in the second clinical case. It has been observed in the literature that, in most cases, the extraction of these teeth is the treatment of choice. This decision of extraction or maintaining the tooth in the arch depends on various factors such as degree of mobility, problems and discomfort being caused to the mother, problems during suctioning by the infant, the possibility of traumatic injury and the dentition to which the tooth belongs: normal primary or supernumerary<sup>20</sup>.

However, in our case report we proceeded with the extraction as the treatment of choice, since the presence of the teeth was compromising breastfeeding and causing significant discomfort to both mother and child along with being grade III mobile.

According to the other authors<sup>21</sup>, mild to moderate irritation on the tongue and small mobility of these teeth can be resolved with more conservative treatment, that is, treating the sharp edges of the teeth in question with abrasive instruments. The addition of composite resin may also be a viable treatment alternative<sup>22</sup>.

However, this was not followed as a treatment option in our cases hence all the teeth were showing excessive mobility and presented with the risk of aspiration. Hence, considered best to be extracted to avoid any further complications.

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<sup>23</sup>.

Further, it should also be noted that if exodontia is required, it should be avoided until the newborn is 10 days old in order to avoid the risk of bleeding, considering the inability of the child's intestinal flora to produce vitamin K necessary

for the production of prothrombin, essential in the coagulation process<sup>24</sup>. In cases requiring immediate tooth extraction, the dental surgeon should request an evaluation by the pediatrician for prophylactic prescription of the appropriate dose of vitamin K which should be administered before the surgical procedure in order to provide safe extraction<sup>25</sup>.

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