Neonatal Tooth—How Dangerous Can it Be?

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The term "neonatal teeth" is applied to those teeth which erupt within the first 30 days of life. Case of a fifteen day old infant is presented here with a neonatal tooth that led to serious complications. An attempt has been made to highlight that these predeciduous teeth can sometimes lead to dangerous consequences about which the general dentist must be aware of and must take prompt action.
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INTRODUCTION

Neonatal teeth are those that emerge through the gingiva during the first month of life. Neonatal teeth erupt in various regions of the maxillary and mandibular arch. Massler and Savara suggested that natal teeth are present in the oral cavity from birth; on the other hand, neonatal teeth erupt during neonatal period, i.e., within 30 days after birth.[1,2]

Incidence of neonatal teeth is very low. In previous studies, it has been estimated to be between 1: 1,000 and 1: 30,000.[3,4] Natal and neonatal teeth erupt in the same position as that of deciduous teeth in the arch, more common in mandibular than maxillary arch, and are more in the incisor region than the canine and molar regions. Various investigators noted that 85% erupt in mandibular incisor region, 11 % in maxillary incisor region, 3% in mandibular canine region and 1% in maxillary canine and molar regions.

In this article we present case of a fifteen day old infant with a neonatal tooth that led to serious complications. At the same time we would like to highlight that these predeciduous teeth can sometimes lead to dangerous consequences about which the general dentist must be aware of and must take prompt action.

CASE REPORT

A 15 day old infant visited the clinics with a large swelling below the chin and high grade fever (Figure 1). The mother gave history of single tooth eruption in the anterior part of lower jaw when he was 7 days old. The child was born at home. The infant had no problem in milk feeding by breast but one day there was sudden abscess formation below the chin which increased to the present size in a matter of 2-3 days.

On examination, a small rudimentary tooth resembling an incisor was seen attached to the anterior mandibular alveolar ridge loosely by the mucosa. A swelling was present associated with the chin, red in color, filled with pus. The infant had high grade fever and breathing difficulties.

Emergency drainage of the abscess to provide respiratory clearance and removal of the neonatal tooth was done under general anesthesia. The fluid was sent for biochemical evaluation. The extracted tooth was only a crown resembling incisor with no root formed (Figure 2). A ground section of the tooth showed layers of normal enamel and dentin (Figure 3). The biochemical report stated it to be a sterile abscess.

DISCUSSION

Several terms have been used in the literature to designate teeth that erupt at a much earlier age or those present at birth are called congenital teeth, fetal teeth, predecidual teeth and dentitia praecox.[4,5,6] If the primary teeth erupt during the third to the fifth month of life, they are termed precocious dentition.[1] Natal teeth are more frequent than neonatal teeth, ratio being approx. 3: 1. [7]

Figure 1. Clinical picture of a 15 day old infant with a neonatal tooth and associated large abscess below the chin.

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Figure 2. Extracted neonatal tooth with only crown formation

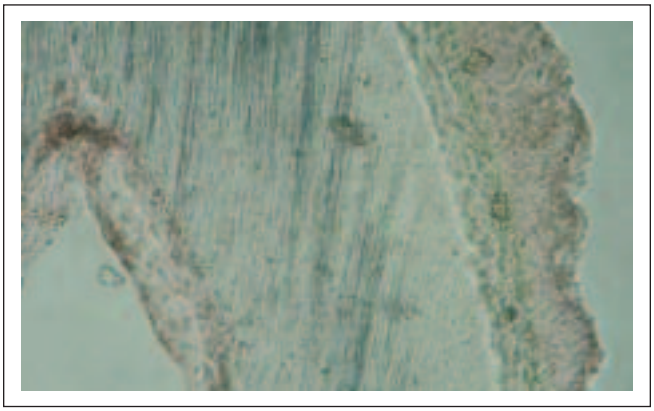

Figure 3. Ground section of the neonatal tooth where enamel and dentinal layers of the crown are visible.

Spouge and Feasby, classified natal and neonatal teeth as mature or immature; *mature* when they are fully developed in shape and comparable in morphology to the primary teeth and *immature* when their structure and development are incomplete.[4, 8]

Hebling (1997) recently classified natal teeth into 4 clinical categories: [4,8]

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

The cause of the condition is unknown. It is likely that the most frequent cause is developmental. Various investigators have put forth various views.

During initiation and proliferation stage excessive development causes formation of natal teeth. Hyperactivity of osteoblastic cells within the tooth germ may also be a reason, as suggested by another group of investigators. Superficial positioning of tooth germs during developmental period, endocrinal disturbances, association with various syndromes, and increased rate of eruption during or after febrile states, inheritance, congenital syphilis and dietary deficiencies can also be various other causes.[1,4,5]

Morphologically, natal and neonatal teeth are conical or normal in size and shape. They are usually opaque, yellowish-brown in color.[8] Crowns of these teeth are normal without any radicular portion due to lack of root formation. Ground section of natal and neonatal teeth showed a hypomineralized enamel, irregular arrangement of enamel rods, irregular dentino-enamel junction, dentinal tubules, more cellular and numerous vascular channels with endothelial cells and large pulp chamber.[1, 9]

Various complications have been described following the premature eruption of the teeth. When the teeth are not fully erupted, pressure on them maybe painful. This factor may cause the infant to refuse the nipple. The teeth may lacerate the breasts during feeding. The teeth are loose and movable in the early stages and there is a constant danger of the teeth becoming detached and either, swallowed or aspirated, especially during nursing. Natal teeth may cause sublingual ulcerations (Riga-Fede).[1,2,4,5]

Treatment may include grinding to smooth the teeth, or in some cases, extraction. On certain occasions, they will exfoliate spontaneously or require extraction because of excessive mobility, concerns regarding aspiration or the loss of attachment with subsequent development of abscess, as was probably seen in our case.[7] Periapical abscess is also possible if enamel breakdown leads to caries.[3].

In the past, Massler and Savara advocated regarding the neonatal teeth saying "to leave them alone, unless they are causing difficulty to the infant and mother."[1, 3] The same thoughts were of Spouge and Feasby who pointed out, "inhalation of one of these teeth has never been reported in the literature, and the danger is probably more imaginary than real."[2, 3]

CONCLUSION

After seeing the serious complications, special care must be taken regarding neonatal teeth.

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