

Natal teeth (a case report)

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Summary

Teeth that are present in newborn infants are called "natal teeth". In some cases, the infant is born without teeth, but eruption may occur in the first 4 weeks following delivery. These types of teeth are called "neonatal teeth". The incidence of the appearance of natal and neonatal teeth has been reported to be between once every 1000 and once every 6000 births. Natal teeth may be uncomfortable for a nursing mother and present a risk of aspiration and swallowing by the infant if they are loose. Also, they may cause irritation and trauma to the infant's soft tissues. Under these circumstances, natal teeth need to be extracted. In this article, a case report is presented where a natal tooth was present in the mandibular incisor region. Because the tooth caused problems in the nursing process and ran a risk of aspiration, it was removed and histopathologically examined.

Key words: natal tooth, neonatal tooth, hypoplasia.

Introduction

Teeth already present in newborn infants are called „natal teeth“. In some cases, even though the infant is born edentulously, eruption may occur in 4 weeks following birth. These teeth are called „neonatal teeth“ [1]. The incidence of the neonatal and natal teeth has been reported to vary between once every 1000 and once every 6000 births [1-4]. Studies showed that the incidence of occurrence of natal and neonatal teeth is 85% in mandibular incisors, 11% in maxillary incisors, 3% in mandibular canines and molars and only 1% in maxillary posterior regions [5]. More than 90% of natal and neonatal teeth are prematurely erupted whereas less than 10% are supernumerary [6]. For this reason, unless they are highly mobile, cause trouble in sucking and create traumatic sublingual ulcerations, attempts should be made to retain these teeth in the mouth.

A case report is presented in this article where an infant was born with natal tooth.

Case

A 10 days old male newborn infant was brought to our clinic after the parents noticed a tooth-like structure in the mandibular left incisor area (*Figure 1*).



Figure 1. The intraoral appearance of the infant

Medical history revealed that the infant was delivered by vaginal route following a 40-week pregnancy and he was the first and the only child

of the family. His birth weight was 2872 gr. The medical history showed that the infant was born with a tooth-like structure in the mandibular left deciduous central incisor area. Clinical examination at the Pediatrics clinic revealed that the tooth-like structure caused trouble for the nursing mother and the case was referred to our clinic on the 10th day following delivery.

In the intraoral examination, the tooth was diagnosed as „natal tooth“ since it was present in the infant's mouth at the time of the delivery. The

tooth was highly mobile and caused discomfort for the nursing mother and at the same time presented a potential risk for the infant; therefore, the removal of the tooth was planned. Because the physiological bleeding and clotting time of the infant was established, the natal tooth was removed on the 10th day following delivery.

The removed natal tooth had dimensions of 6 mm to 4 mm and the root development had been completed. It also had a hypoplastic appearance (*Figure 2 A and B*).



Figure 2. The appearance of the natal tooth following extraction

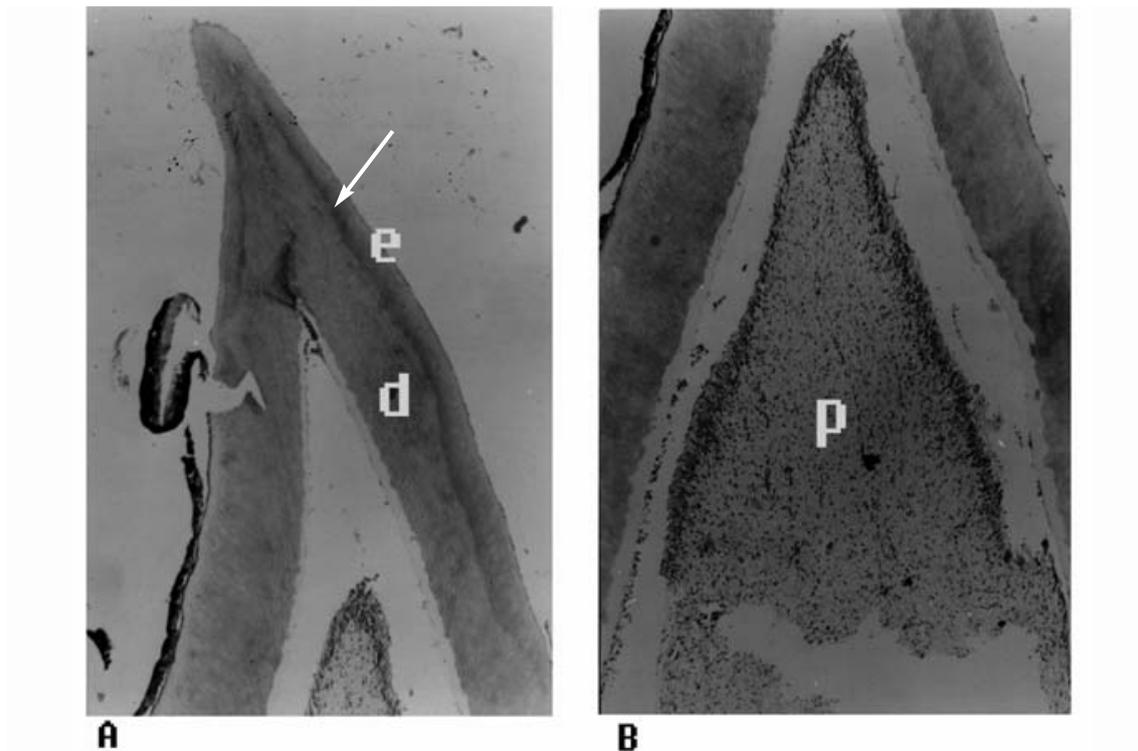


Figure 3. A - The outer enamel (white arrow) and the subadjacent dentin layers at the tip of the tooth.
B - Beneath the dentine, pulp tissue consisting of mesenchymal cells with a peripheral odontoblastic layer is visible (40 X Hematoxyline Eosin)

The natal tooth was also histologically examined following extraction.

It was fixed in 10% formaldehyde for 48 hours. Following a decalcification process by 10% formic acid, routine pathological tissue examination was undertaken. Cross-sections having 5-micron thickness were taken from the paraffin blocks and stained with hematoxylin-eosin (HE). The sections were evaluated under light microscope.

The light microscope examination showed a tooth structure covered with enamel, with dentin sub adjacent to it. (*Figure 3-A*). In the center of the tooth, pulp tissue consisting of vascular mesenchymal cells was present with a peripheral cellular odontoblastic layer (*Figure 3-B*).

Discussion

Natal teeth erupt in the intrauterine period and are present in the infant's mouth during birth. On the other hand, neonatal teeth start erupting following delivery. These teeth have no association with normal or deciduous dentition [7]. In our case, the tooth was present in the newborn infant's mouth during birth; therefore, it was diagnosed as „natal tooth“. Natal teeth have been reported as relatively uncommon in many investigations, appearing once out of 1000 to 6000 births [1, 2, 4].

More than 90% of the natal and neonatal teeth were reported as prematurely erupted. On the other hand, 1-10% of these teeth erupt as supernumerary [1, 3, 6].

The natal tooth presented in our case report was extracted after the appropriate bleeding and clotting time were established in the infant, because it exhibited high mobility.

Natal and neonatal teeth are most frequently encountered in the mandibular central incisor region (80-90%) [1, 3], and less often in the mandibular first deciduous molar [4, 8, 9], mandibular canine [1, 8] and maxillary [1, 3, 4] regions. The incidence of their appearance in the maxillary molar region is less than 1% [6]. The natal tooth in our case was located in the mandibular central incisor area, which is the most frequent site of occurrence.

The etiology of natal teeth was studied in many investigations. Following these studies,

various etiological factors have been proposed such as the normal development of the tooth germ following early formation, the early development of the germ following normal germ formation, the development of the tooth germ in close proximity to the surface of the oral mucosa and the subsequent early eruption [1, 3, 10, 11] and the displacement of the tooth germ during development. Heredity was also reported to play a major role in the etiology of natal and neonatal teeth; however the mode of inheritance is not clear. In familial cases of natal teeth, the incidence was reported to vary between 8-62%. The medical history of our patient revealed that the mother led a normal pregnancy period and a similar situation and the family history was negative for similar dental anomalies. Also, no prenatal exposures were reported.

Generally speaking, in case patients are having problems with the sucking function and an inflammation coexists (Riga-Fede disease) or the natal and neonatal teeth have erupted supernumerarily in the dental arch, they need to be removed [7, 12]. On the other hand, if the natal and neonatal teeth are actually prematurely erupted deciduous teeth, the porous enamel surfaces and cutting edges should be treated with composite resins and attempts should be made to retain the teeth [13, 14]. In some cases, even if they are prematurely erupted deciduous teeth, natal teeth need to be removed, because they may exhibit high mobility and pose a potential risk of aspiration and swallowing [15]. However, procedures like extraction, which may cause bleeding, should always be undertaken 8-10 days following birth [16, 17], because the bacterial flora present in the digestive tract of the newborn infants may be ineffective in the production of Vitamin K during the first 10 days following delivery. K Vitamin plays a major role in the prothrombine synthesis in the liver. This important detail was taken into consideration in our clinical case, and the highly mobile tooth was removed 10 days following delivery.

Although their occurrence is rare, it is still possible for dental practitioners to encounter natal teeth in daily practice. In these cases, it is important to make the right decision, taking into consideration the adverse effects these teeth may have for both the infant and the mother.

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