Natal and Neonatal Teeth: A Comprehensive Review

Introduction

Natal and neonatal teeth are rare developmental anomalies that generate significant curiosity and clinical challenges. Natal teeth are defined as teeth present at birth, while neonatal teeth erupt within the first 30 days of life. The incidence ranges between 1:1,000 and 1:3,500 live births globally. These teeth are most commonly part of the normal primary dentition rather than supernumerary teeth. Although often benign, their presence can lead to complications such as Riga-Fede disease, feeding difficulties, and risk of aspiration. A comprehensive understanding of their prevalence, etiology, clinical features, management, and associations with systemic conditions is essential for pediatricians, dentists, and oral pathologists.

Embryological Basis

The development of natal and neonatal teeth is intricately linked to disturbances in odontogenesis. Tooth development begins around the 6th week of intrauterine life from dental lamina. Accelerated development of tooth germs or premature eruption due to superficial positioning of the dental follicle has been proposed as embryological explanations. Abnormal interactions between epithelial and mesenchymal tissues may also play a role.

Prevalence

The global prevalence of natal teeth ranges from 1 in 1,000 to 1 in 3,500 live births. Studies suggest a slightly higher occurrence of natal teeth compared to neonatal teeth. In India, prevalence studies have reported rates between 0.07% and 0.16% of live births. These teeth show no consistent gender predilection, though some reports suggest a slight female predominance.

Etiology

The etiology of natal and neonatal teeth is multifactorial. Key factors include:

- Genetic predisposition – familial clustering has been reported.
- Superficial positioning of tooth germ close to gingival margin.
- Hormonal stimulation – particularly maternal endocrine influences.
- Syndromic associations – Ellis-van Creveld syndrome, pachyonychia congenita, Hallermann-Streiff syndrome.

• Systemic diseases – congenital syphilis, cleft lip and palate.
• Environmental factors – infection, malnutrition.

Clinical Features

Natal and neonatal teeth most commonly appear in the mandibular central incisor region. They are usually small, conical, yellow-brown in color, and may demonstrate enamel hypoplasia. The mobility is often high due to poor root development, predisposing them to exfoliation and aspiration. Riga-Fede disease, characterized by ulceration on the ventral surface of the tongue, is a classic complication.

Classification

Spouge and Feasby (1966) proposed a classification of natal teeth:
• Shell-shaped crown, poorly fixed, no root.
• Solid crown, poorly fixed, little/no root.
• Eruption of crown's incisal margin through gingiva.
• Swelling of gingiva with unerupted tooth palpable.

Complications

Complications associated with natal and neonatal teeth include:
• Feeding difficulties due to interference with suckling.
• Maternal discomfort during breastfeeding.
• Riga-Fede disease.
• Risk of aspiration if the tooth is highly mobile.
• Caries susceptibility due to enamel hypoplasia.

Management and Handling

Management depends on mobility, associated complications, and whether the tooth is part of the normal primary dentition or supernumerary. Approaches include:
• Observation – if tooth is stable and does not interfere with feeding.
• Grinding/polishing sharp edges – to prevent trauma.
• Extraction – indicated if tooth is highly mobile (Grade II/III), causes trauma (Riga-Fede), or is supernumerary.
• Radiographic evaluation – ideally performed to distinguish normal vs supernumerary teeth, though avoided in very young neonates unless essential.

Relation to Congenital Syndromes and Systemic Diseases

Natal teeth are associated with several congenital syndromes and systemic conditions, including:
• Ellis-van Creveld syndrome

• Hallermann-Streiff syndrome
• Pachyonychia congenita
• Pierre-Robin sequence
• Congenital syphilis

The presence of natal teeth may sometimes serve as a marker for underlying genetic or systemic anomalies.

Prognosis

Most natal teeth, if retained, integrate into the primary dentition, though enamel defects may persist. If extracted, normal eruption of succedaneous permanent teeth is usually unaffected. Early recognition and appropriate management can prevent complications and reassure parents.

Discussion

The rarity of natal and neonatal teeth continues to make them a subject of clinical interest. While the etiology remains multifactorial, genetic and embryological factors are predominant. Their occurrence highlights the delicate interplay of developmental processes during odontogenesis. Management should be individualized, balancing the risks of extraction in neonates against the complications of retention. Multidisciplinary collaboration between pediatricians and dentists is essential for optimal outcomes.

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