

Oral Teliangectaticum Granuloma Secondary to Microtrauma Caused by Natal Tooth

Suganya Balasubramanian¹, Selvakumar Haridoss², Kavitha Swaminathan^{1,2}

¹Department of Pediatric and Preventive Dentistry, SRM Dental College, Ramapuram, Chennai, Tamil Nadu, India

²Department of Pediatric and Preventive Dentistry, Faculty of Dental Sciences, Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu, India

Vascular oral mucosal lesions are relatively uncommon in infants, but some developmental factors like microtrauma, local gingival irritation, or the presence of natal teeth can incite these lesions in neonates.¹ Oral teliangectaticum granuloma (OTG), also known as pyogenic granuloma, is a reactive, inflammatory, hyperplastic benign lesion of newborns, with unknown pathogenesis affecting the skin and oral mucosa. It is a rapidly growing lesion that may interfere with feeding, lip closure, and breathing.² The purpose of this report is to acquire knowledge in etiological factors, and the pediatricians and pediatric dentists should be mindful of this unusual clinical presentation and the treatment modality to avoid further complications.

A phenotypically healthy mother of a 2-week-old male infant reported with the chief complaint of the presence of mobile teeth attached to a mass of soft tissue in the lower gum pad region. The tooth was present at birth, and the tissue was initially smaller. Then, it gradually increased to its present dimension leading to difficulty and pain on maternal feeding, and the infant exhibited extreme crying while feeding that consistently decreased the quantity of milk consumption. Medical history revealed normal, uncomplicated full-term birth, and the newborn was later diagnosed with neonatal jaundice and then treated with phototherapy. Clinical examination displayed a solitary natal tooth present on the mandibular left anterior alveolar ridge. The tooth was yellowish with a pinkish hue at the cervical region, normal in size and shape exhibiting Grade 2 mobility. The growth was an elevated sessile mass, pinkish in color, irregular in shape, soft in consistency, measuring 1 × 0.5 × 0.4 cm in dimension, lingually surrounding the natal tooth (Figure 1A). Investigations included an excisional biopsy of the lesion followed by histopathological examination.

Differential diagnosis comprised congenital epulis, gingival cyst of the newborn, pulp polyp, gingival hamartoma, and peripheral ossifying fibroma. On considering the lesion presentation, child's age, tooth mobility, and increasing feeding difficulty, it was definite to perform an excisional biopsy of the lesion and extraction of the natal tooth under local anesthesia, with antibiotic cover.

After obtaining a neonatologist's opinion and informed consent, local anesthesia with 2% xylocaine (with adrenaline) was given, and the natal tooth was extracted followed by the surgical excision of the tissue from its base (Figure 1B). Hemostasis was achieved, and immediate feeding was encouraged. The extracted tooth had a shell-shaped crown structure and was poorly attached to the alveolus with the absence of root. Histological section revealed connective tissue stroma containing inflammatory cell infiltration and increased endothelial lined blood vessels proliferation (Figure 1C). At 1 week, adequate healing of the post-surgical site with no signs of recurrence was evident. At 3 months review, the pain and difficulty while feeding were completely resolved. This ultimately led to an average weight gain and better quality of life.

Oral teliangectaticum granuloma is a reactive lesion of newborns, with indefinite pathogenesis affecting oral mucosa and skin.¹ Several etiological factors such as trauma, foreign

Corresponding author:

Suganya Balasubramanian

✉sugi.balu93.sb@gmail.com

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Figure 1. (A) Pre-operative clinical picture of mobile natal tooth lingually attached to the mass of soft tissue in the lower gum pad region. (B) Post-operative image showing complete healing of surgical site along with the macroscopic features of excised tissue and extracted tooth. (C) Histological section reveals connective tissue stroma showing inflammatory cell infiltration, increased proliferation of endothelium-lined blood vessels suggestive of oral telangiectaticum granuloma.

bodies, or local gingival irritation can cause excessive growth of connective tissue in neonates.^{1,2} In the present case, the presence of mobile natal tooth could be an etiological factor for the development of lesion. The most common site of occurrence is the upper anterior alveolar mucosal region, but in our case, it is the lower anterior gingival region.³ It is a distinct type of inflammatory hyperplasia that has an elevated lesion with pedunculated or sessile base with a smooth or lobulated surface.⁴⁻⁷ Vascular proliferation, chronic inflammatory infiltration with granulation tissue formation, and elongated rete pegs beneath the epithelium are its histological characteristics.^{2,7,8} Occurrence of natal tooth is rare. Such occurrences concomitant with reactive gingival growths like reactive fibrous hyperplasia, and pulp polyp were rarely reported.^{2,8-10}

A report of OTG in a week-old infant presented with a swelling concomitant with a mobile natal tooth on the mandibular anterior alveolar ridge. The authors concluded that the mobile natal tooth could influence the development of OTG.⁶ This concurs with the current case where the tumor was clinically and histopathologically compatible with OTG. An important history reported was that the child primarily displayed a mobile natal tooth at the area of lesion. This could then be measured as the key etiologic factor associated with friction or constant micro-trauma to the tissues. García et al¹¹ reported 2 cases, where OTG allied with early tooth eruption; they specified that micro-trauma to the gingival tissues on tooth eruption can be associated with OTG development, this corresponds with the current report, where the natal tooth with related OTG factor was due to the microtrauma caused by the erupting natal tooth to the gingival tissues.

It is also important to distinguish from other comparable lesions such as epulis, gingival cysts of the newborn, eruption cysts, pulp polyp, or gingival hamartoma. Congenital epulis develops as a pedunculated lesion arising on the alveolar ridge, histologically appearing as pseudo-epitheliomatous hyperplasia with granular eosinophilic cytoplasm.⁵ Gingival cysts of newborn are non-reactive and are not associated with erupting teeth. They are seemingly smaller (about 1 mm), whitish in color, and sub-epithelial in origin.¹² Eruption cysts normally resolve after the tooth eruption, and no surgical intervention is required.¹³ Due to comparable color and vascular nature of the lesion, hemangiomas

can also be a possible diagnosis, but their sites of occurrence are the lips, tongue, buccal mucosa, and palate.¹²

The literature demonstrates that excisional biopsy is the most recommended procedure than leaving it for spontaneous regression.^{5,10} Oral telangiectaticum granuloma rapidly grows in size that can interfere with feeding process causing nutritional deficiencies or interfere with airway leading to breathing difficulties in the newborn. Therefore, immediate care of surgical excision of the lesion along with complete removal/withdrawal of the etiological factor is recommended, to evade the recurrence rate of the lesion.

Hence, the presence of natal tooth or its poor insertion to the gingival tissues can cause increased friction or constant local irritation to the soft tissues resulting in the development of these conditions. It is important that pediatricians as well as pediatric dentists should be aware of these conditions and appropriate treatment to be done to avoid further complications.

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