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A Case Report Of Occurrence Of Traumatic Tongue Injury Due To Neonatal Tooth In A Healthy Infant

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Abstract –

Riga-Fede disease is a mucosal disorder which is benign in nature and can present as ulceration of oral soft mucosa. It is usually associated with repetitive trauma occurring of the specific area such as due to presence of neonatal or natal teeth. The aim of the present case report is to present Riga-Fede disease and its treatment for a 5 month old healthy female infant. Following the elimination of trauma source (extraction) complete healing of the lesion along with improvement in child overall health was observed at 1 week follow up visit. The clinical presentation of the disorder can be puzzling with various oral malignancies. Hence, the diagnosis and treatment of this disease are very important.

Key Words: infant, neonatal, ulcer, benign

Introduction

The teeth that are present at birth are known as natal teeth, however when teeth erupt during neonatal period i.e. initial one month of birth are known as neonatal teeth. The presence of teeth at birth or within a month after delivery is rare.[1] Presence of natal tooth causes recurring trauma to gums or soft tissues in the oral cavity which might lead to the development of Riga-Fede disease. The prevalence of natal or neonatal teeth ranges from 1 in 2000 to 1 in 3000 live births and lower central incisors are most commonly affected teeth.[2]

The actual cause of Riga Fede disease (RFD) is not known. It can be confused with nonaccidental trauma (NAT) from forced feeding or other abusive trauma because it presents with injury of oral structures including the sublingual frenulum and often results in problems with growth.[3] There has been little exploration into the etiology for RFD and it is sparsely described in pediatric literature. There are reported associations with microcephaly and neurologic diseases, but most cases occur in infants and toddlers underage of 2 years with premature eruption of teeth.[3]

Riga Fede disease is a reactive traumatic mucosal disease characterized by persistent ulceration of the oral mucosa. It develops as a result of repetitive trauma of the tongue by the anterior primary teeth during forward and backward movement. The history and clinical features are most often so typical that there is seldom a need for additional histopathological examination.[4] Because of its macroscopic and microscopic features, many lesions are confused with RFD such as tuberculosis, myofibroma and sarcoma. RFD can be asymptomatic or occasionally associated with pain.[4]

Management of neonatal teeth, varies according to area, associated religious beliefs and the management ranges from conservative to surgical interventions. The present case report concerns a 5 month old child who presented with feeding difficulties, and was subsequently diagnosed with a neonatal tooth complicated by Riga-Fede disease.

Case Report

A 5-month-old female child reported to the Department with a chief complaint of presence of teeth in lower tooth region (Figure 1). While taking the history the mother informed that the tooth wasn't present during the birth and had erupted within the first month of child life. The mother complaint about having difficulty in breastfeeding and had observed an ulcer on the under surface of the tongue. Mother also complaint that due to inability of child to get proper feed the child used to be grumpy and crying all the time. No significant prenatal, natal, post-natal family and medical history was observed. The patient was not under any medication at present. On intraoral examination an erupted tooth in lower central incisor region was observed along with a lesion on ventral surface of the tongue, having a diameter of 2 cm was observed (Figure 2). The lesion was erythematous and uplifted, with firm border coated by yellowish white slough (Figure 2a). A clinical diagnosis of Riga Fede disease was made. Based on the clinical presentation decision of extracting the neonatal tooth was made. The parents were informed about the same and after their agreement they were instructed to get laboratory investigations : Bleeding time (BT), Clotting Time (CT) and Vitamin K levels done.

After receiving the reports and pediatric consultation the extraction of neonatal tooth was done. Patient was prescribed for the use of analgesic gel to support in lesion healing.

At 1 week follow up visit complete healing of the extraction socket along with healed lesion on ventral surface of tongue was observed. The parents were satisfied with the treatment and highlighted the fact that the child feeding had also improved along with her behaviour.

Figure 1 – Clinical image showing presence of tooth in lower anterior region in 5 month old child

Figure 2 – Clinical image highlighting the injury under tongue (2a) due to eruption of neonatal teeth (2b)

Discussion

RFD begins as an ulcerated area with prominent raised edges. With repeated trauma, it may progress to an enlarged, fibrous mass with the appearance of an ulcerative granuloma with

superficial necrosis. Oral lesions usually appear as ulcerations in the midline of the tongue ventral surface.[5] Microscopic findings mainly show an inflammatory infiltrate composed of numerous eosinophils with lymphocytes, macrophages, plasma cells and mast cells.[1] In the case reported the patient had irritability and difficulties with breastfeeding because of the injury on the ventral surface of the tongue, which could eventually generate nutritional damage among other problems.

It is important that professionals have a thorough knowledge of etiology, clinical features and presentation of RFD as sometimes natal or neonatal teeth can also be associated with an underlying syndrome. Proper assessment, diagnosis, and treatment in such cases is always beneficial for overall development of the child. Failure to diagnose and treat properly may result in inadequate intake of nutrients and dehydration by the baby, increasing the potential for infection at the site.[6] As with this case, the diagnosis was made with reference to the typical features of the same. An accurate diagnosis of neonatal tooth is crucial, and clinical and radiographic imaging can be used to distinguish between normal and supernumerary dentition. One advantage of radiography is that it can verify the presence or absence of tooth germ in the area of the primary teeth.[7]

The management of this condition can be a challenge since there is a debate between conservative treatment and tooth extraction. Tooth extraction is considered in the following cases:

(i) mobile teeth,
(ii) injury to the tongue and adjacent soft tissues,
(iii) interference with breastfeeding, as well as
(iv) supernumerary teeth.

Nevertheless, a few studies have recommended against tooth extraction. Conservative treatment modalities, which involve measures like grinding the sharp edges or placing a composite resin, have been practiced.[4,8] However, neonatal teeth should definitely be extracted if conservative treatment fails or if the tooth is loose, because the latter can lead to aspiration.[9]

Conclusion

Neonatal teeth are the ones which erupt into the oral cavity within 30 days of birth. The eruption of neonatal and natal teeth should be differentiated from primary teeth as it can create misinterpretations in parent mind. The premature eruption of teeth can lead to Riga Fede disease which presents as a benign ulcerative lesion, causing difficulty in breastfeeding and leading to malnutrition to a baby. Numerous treatment options are available in literature such as smoothing of incisors sharpened edges, use of topical jelly for protection, composite restoration, and in utmost cases, extraction of tooth.

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References

1. Volpato LE, Simões CA, Simões F, Nespolo PA, Borges ÁH. Riga-Fede Disease Associated with Natal Teeth: Two Different Approaches in the Same Case. Case Rep Dent. 2015;2015:234961.
2. Senanayake MP, Karunaratne I. Persistent lingual ulceration (Riga-Fede disease) in an infant with Down syndrome and natal teeth: a case report. J Med Case Rep. 2014 Aug 22;8:283.
3. Lee JJ, Sarangam M, Feldman KW, Tieder JS. Riga-Fede Disease: A Case of Sublingual Trauma Not Associated With Abuse. Pediatric Emergency Care. 2021 Dec 1;37(12):e1735-7.
4. van der Meij EH, de Vries TW, Eggink HF, de Visscher JG. Traumatic lingual ulceration in a newborn: Riga-Fede disease. Italian Journal of Pediatrics. 2012 Dec;38(1):1-5.

5. Costacurta M, Maturo P, Docimo R. Riga-Fede disease and neonatal teeth. Oral Implantol (Rome). 2012 Jan;5(1):26-30.
6. Kariya PB, Shah S, Singh S, Buch A. Riga-Fede Disease Associated with Syndactyly and Oligodactyly: A rare Occurrence. J Clin Pediatr Dent. 2019;43(5):356-359.
7. Kumar, S. (2022). A quest for sustainium (sustainability Premium): review of sustainable bonds. Academy of Accounting and Financial Studies Journal, Vol. 26, no.2, pp. 1-18
8. Allugunti V.R (2022). A machine learning model for skin disease classification using convolution neural network. International Journal of Computing, Programming and Database Management 3(1), 141-147
9. Viswanatha KKRC, Reddy A, Elango N M (2019). Diabetes Kaggle Dataset Adequacy Scrutiny using Factor Exploration and Correlation, International Journal of Recent Technology and Engineering (IJRTE) Vol. 8.
10. Patil S, Rao RS, Majumdar B, Jafer M, Maralingannavar M, Sukumaran A. Oral Lesions in Neonates. Int J Clin Pediatr Dent. 2016 Apr-Jun;9(2):131-8.
11. Graillon N, Dumont N, Guyot L. Maladie de Riga-Fede: ulcération traumatique de la langue chez un nourrisson [Riga-Fede disease: traumatic ulceration of the tongue in an infant]. Rev Stomatol Chir Maxillofac Chir Orale. 2013 Apr;114(2):113-5.
12. Çavuş Ş, Özmen B. Riga-Fede disease in the upper jaw in an infant. Dermatol Ther. 2017 Sep;30(5).