



**Case Report**

**Riga Fede Disease associated with a neonatal tooth - A Case report**

*Kirti Dua<sup>1</sup>, Amina Sultan<sup>2</sup>, Akanksha Juneja<sup>3</sup>,*

*<sup>1</sup>Undergraduate Dental Student, <sup>2,3</sup>Professor, Department of Pediatric and Preventive Dentistry, Jamia Millia Islamia, New Delhi*

*How to cite: Dua K et al, Riga Fede Disease associated with a neonatal tooth – A case report, Int J Pedo Rehab 2022; 7(2):1-4.*

<https://doi.org/10.56501/intjpedorehab.v7i2.271>

*Received : 20.05.2022*

*Accepted:05.07.2022*

*Web Published: 10.07.2022*

**ABSTRACT**

Riga Fede disease is defined as traumatic ulcerations on the ventral surface of the tongue in infants and neonates and most commonly occurs due to natal, neonatal teeth or erupting deciduous mandibular central incisors. The occurrence of natal or neonatal teeth is also a rare occurrence. This article represents a reported case of Riga Fede disease associated with a neonatal tooth in a 10 weeks old patient and its non-invasive management.

*Keywords: Natal Tooth; Neonatal Tooth; Riga Fede Disease; Residual neonatal tooth, Supernumerary tooth*

---

*Address for Correspondence:*

Akanksha Juneja

Address: Department of Pediatric and Preventive Dentistry,

Faculty of Dentistry, Jamia Millia Islamia,

New Delhi, India.

Email ID: [ajuneja@jmi.ac.in](mailto:ajuneja@jmi.ac.in)

© 2022 Published by MM Publishers. Selection and/or peer-review under responsibility of Saveetha Institute of Medical and Technical Science

**INTRODUCTION**

Riga Fede disease (RFD) is a rare and benign mucosal condition, characterized by a traumatic ulcerative lesion on the oral mucosa.<sup>1</sup> RFD commonly occurs on the ventral surface of the tongue but other areas of the oral cavity such as the gingiva, palate, lip, and floor of the mouth can also be rarely involved.<sup>2</sup> This lesion is commonly associated with natal and neonatal teeth in newborns and with deciduous mandibular incisors in older infants.<sup>3</sup> It can be asymptomatic or associated with pain, The recurrences have been reported in the literature that no sex predilection has been accounted for yet.<sup>2</sup> The ulcerations can result in severe complications due to interference with feeding and may lead to nutritional deficiency in infants.

This article represents a case of Riga Fede disease involving the ventral surface of the tongue associated with a neonatal tooth in a 10 week old infant.

**CASE REPORT**

A 10-week-old male infant was brought by her mother to the Department of Pediatric and Preventive Dentistry, Faculty of Dentistry, Jamia Millia Islamia, New Delhi, India with the chief complaint of ulcer on the tongue and irregular feeding for 4-5 days. She also mentioned that a single tooth erupted in the lower front region after 15 days of birth. His

medical history revealed that the baby was born full-term with normal delivery. There was no family history of any congenital or developmental disorders.

On Intra-oral Examination, the presence of an ulcerative lesion was noted on the ventral surface of the tongue. The lesion was circular, approximately 2 cm in diameter and yellowish red surrounded by a white halo. The presence of a tooth was also noted in the mandibular anterior (tooth 71) region. The tooth was small, conical, immobile, chalky white and has sharp edges [Figure 1]. A radiographic examination was done and it revealed the presence of a crown without root formation. It resembles the primary mandibular left central incisor and hence the tooth was confirmed as 71 [Figure 1].



**Figure 1:** Ulceration on the ventral surface of tongue in relation to neonatal tooth



**Figure 1:** Radiograph revealing the presence of the crowns without root formation.

Based on clinical and radiographic examination, a diagnosis of Riga Fede disease associated with early erupted deciduous left lower central incisor was made. After a thorough discussion with parents, we chose conservative treatment. The sharp edges of the tooth were smoothed with an abrasive metal strip used in orthodontics for proximal stripping [Figure 3] and a topical antiseptic was prescribed for the ulcerative lesion of the tongue. The patient was kept on observation for one week. After one week, the patient came with a resolving lesion [Figure 4] and the mother reported that the baby had resumed proper feeding. The patient parents were satisfied with the treatment. The patient was kept on further observation for one month and asked to come for review in the future.



**Figure 3:** Neonatal tooth after grinding the sharp edges



**Figure 4:** Ventral surface of the tongue showing resolving lesion after 7 days

## DISCUSSION

Ulcers of the lingual frenum in neonates with natal or neonatal teeth are referred to as Riga Fede disease. Based on the evidence in dental literature, in 90% of situations, natal and neonatal teeth are prematurely erupted primary incisors, whereas, in less than 10% of cases they are reported to be supernumerary teeth.<sup>4</sup> In our case, it was associated with the early eruption of the deciduous mandibular left central incisor.

<https://doi.org/10.56501/intjpedorehab.v7i2.271>

RFD is a rare disease commonly reported due to trauma from teeth as a main etiologic factor.<sup>3</sup> Tang et al., proposed that trauma is the only contributing factor to RFD development, he proposed that repetitive trauma on mucosa may cause the viral and toxic agents to breach into the submucosa and initiate an inflammatory reaction associated with tissue loss.<sup>5</sup> The tongue is the most commonly affected site as reported by many authors.<sup>3,6</sup> In the present case also the ventral surface of the tongue was involved.

Domínguez-Cruz et al., classified RFD into two classes – Precocious RFD and Late RFD.<sup>7</sup> Precocious RFD is associated with natal and neonatal teeth and it does not correlate with neurological disorders whereas late RFD is associated with primary dentition and has a strong correlation with neurological disorders.

The diagnosis of RFD is usually made from typical history and clinical features. However, a biopsy can help in the differential diagnosis. The differential diagnosis includes bacterial or fungal infections, allergy and immunologic diseases, tumors, primary syphilis, tuberculosis, and agranulocytosis.<sup>2</sup> Early diagnosis of RFD is usually recommended as the absence or failure of treatment may result in deformity of the tongue, dehydration, or improper nutrient uptake, leading to overall growth retardation of the infant.<sup>8</sup>

The management ranges from doing no treatment, modifying the feeding pattern or weaning the patient, treating symptoms with anesthetic agents, to eliminating the source of the trauma, which involves extraction of the offending tooth/teeth.<sup>6</sup> The preferred, conservative therapy involves smoothing sharp incisal edges, teething rings, and adding composite over sharp edges. Usually, the ulceration heals within a month and leaves a fibrous scar externally on the lingual surface of the tongue.<sup>9</sup>

In our case the neonatal tooth was immobile and a part of primary dentition which reinforced us to adopt a conservative approach. The smoothing of the sharp incisal edge was done which decreased the further trauma to the lesion and a topical antiseptic was prescribed for symptomatic relief. Many authors preferred extraction over conservative treatment due to rapid healing of lesion following extraction, and excessive mobility of the tooth which enhances the risk of aspiration by the infant when it exfoliates. While planning extraction, we must get complete blood investigations as the human coagulation system is not fully matured in newborns.<sup>10</sup> Post extraction complications are uncommon, but residual natal or neonatal teeth or continued radicular growth have been reported, requiring further treatment.<sup>4</sup> However in this case conservative treatment led to healing of the ulceration and relieving of the symptoms, so extraction was deferred.

The patient has been asked for a review after 1 month to check for any mobility in the tooth or any relapse of Riga Fede disease which may require further intervention. If conservative treatment therapy does not lead to the resolution of the lesion in this case in the future, it may eventually require us to extract the neonatal tooth although this must be regarded as the last alternative.

## CONCLUSION

The RFD and neonatal teeth are rare conditions, but dentist and pediatrician should be aware of these conditions as it hampers the normal feeding of the baby which can further contribute to malnutrition and poses a major concern for parents. Treatment planning plays a crucial role in the management and should be done carefully considering all the important aspects and sequel of treatment.

## FINANCIAL SUPPORT AND SPONSORSHIP - Nil

## CONFLICTS OF INTEREST - There are no conflicts of interest

## REFERENCES:

1. Machuca G, Rodríguez S, Vargas M, Suárez C, Bullón P. Management of Riga-Fede disease: a case report. *Journal of Disability and Oral Health*. 2007;8(1):28.
2. Joseph BK, Bairava Sundaram D. Oral traumatic granuloma: report of a case and review of literature. *Dental Traumatology*. 2010 Feb;26(1):94-7.
3. Hegde RJ. Sublingual traumatic ulceration due to neonatal teeth (Riga-Fede disease). *Journal of the Indian Society of Pedodontics & Preventive Dentistry*. 2005 Mar 1;23(1).
4. Sultan A, Siddiqui M, Juneja A. Prematurely erupted teeth in neonates: A report of three cases. *Int J Oral Health Dent* 2020;6(2):156-159
5. Tang TT, Glicklich M, Hodach AE, Oechler HW, Mccreadie SR. Ulcerative eosinophilic granuloma of the tongue: a light-and electron-microscopic study. *American journal of clinical pathology*. 1981;75(3):420-5.

6. Baghdadi ZD. Riga–Fede disease: association with microcephaly. *International Journal of Paediatric Dentistry*. 2002 Nov;12(6):442-5.
7. Domingues-Cruz JA, Herrera A, Fernandez-Crehuet PA, Garcia-Bravo BE, Camacho F. Riga-Fede disease associated with postanoxic encephalopathy and trisomy 21: a proposed classification. *Pediatric dermatology*. 2007 Nov;24(6):663-5.
8. Baroni A, Capristo C, Rossiello L, Faccenda F, Satriano RA. Lingual traumatic ulceration (Riga–Fede disease). *International journal of dermatology*. 2006 Sep;45(9):1096-7.
9. Buchanan S, Jenkins CR. Riga-Fedes syndrome: natal or neonatal teeth associated with tongue ulceration. Case report. *Aust Dent J*. 1997 Aug;42(4):225-7.
10. Wang CH, Lin YT, Lin YT. A survey of natal and neonatal teeth in newborn infants. *Journal of the Formosan Medical Association*. 2017 Mar 1;116(3):193-6.



Published by MM Publishers  
<https://www.mmpubl.com/ijpedorehab>

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.  
To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Copyright © 2022 Vidhi Jaiswal, Anshula Neeraj Deshpande, Bhavna Dave, Seema Bargal, Poonacha Koodakandi S, Bhavya Shah