CASE REPORT

Minimal Invasive Approach for Management of Lingual Swelling on Ventral Surface of Tongue

Anupama Kajal1, Sandeep Tandon2, Meenakshi Sharma3, Chahita M Lalchandani4

ABSTRACT

Pediatric dentistry is a specialty of dentistry focusing mainly on oral health care of children. Early diagnosis and prompt treatment is key of a good treatment plan and effective results. Sometimes in infants, it is not possible to make a confirmatory diagnosis due to lack of cooperation, which is the biggest challenge of kids dentistry. In such cases, we need to take into consideration the psychological and physiologic aspect of child to find an alternative treatment plan, which is time saving and painless. Here, we present a unique case management of lingual swelling on the ventral surface of tongue in a 9-month-old girl child with a minimal invasive approach, thus avoiding a time-consuming and invasive surgical treatment plan.

Keywords: Lingual swelling, Minimum invasive approach, Tongue.

INTRODUCTION

The oral mucosa presents lesions of the tongue in all age groups that may range from a small nodular swelling and ulcer formation in an infant of a few days old to an ulcer or a lesion in a 70-year-old. The most common reason for the appearance of an ulcer may be trauma to the soft tissues in an infant due to the presence of natal teeth and presence of a sharp tooth in case of older individuals. These lesions have to be clinically evaluated for the final treatment, to avoid any recurrence.1 In cases when proper evaluation is not possible especially in infants who can’t open their mouth for long time, we as a pedodontist need to find an alternative approach for the treatment, which does not hinder child’s physiological and psychological health.

Thus, the aim of this clinical case is to manage lingual swelling on the ventral surface of the tongue in a 9-month-old female child with a unique minimal invasive approach.

CASE DESCRIPTION

A 9-month-old female patient was referred to the Department of Pediatric Dentistry with a painless swelling of 3-month duration on the ventral surface of the tongue in the medial plane. There was no pain associated with the swelling as per history given by the parents. The parent could not recollect any history of trauma. On examination, the swelling was of the same color as that of the normal mucosa, firm in consistency, nonulcerated measuring about $13 \times 7$ mm (Fig. 1). Parent gave history of appearance of swelling only after eruption of lower central incisors and increased with time. The patient was noticed with a continuous habit of movement of the tongue over lower incisors during clinical examination. The child was very uncooperative, weak in health due to immature birth, was not opening mouth even for initial diagnosis procedure, and was not feeding properly due to lesion on the tongue. It was concluded on the basis of history given by the parents (as swelling appeared only after eruption of lower central incisors) and clinical examination that fabrication of some protective appliance can hinder repeated trauma of the tongue due to lower incisors and can save procedural time.

Fig. 1: Lingual swelling on the ventral surface of the tongue

1,2,4Department of Pediatric and Preventive Dentistry, RUHS College of Dental Sciences, Jaipur, Rajasthan, India
3Department of Pedodontics and Preventive Dentistry, RUHS College of Dental Sciences, Jaipur, Rajasthan, India

Corresponding Author: Anupama Kajal, Department of Pediatric and Preventive Dentistry, RUHS College of Dental Sciences, Jaipur, Rajasthan, India, Phone: +91 9660791404, e-mail: anupamakajal31@gmail.com

How to cite this article: Kajal A, Tandon S, Sharma M, et al. Minimal Invasive Approach for Management of Lingual Swelling on Ventral Surface of Tongue. Int J Clin Pediatr Dent 2020;13(S-1):S102–S105.

Source of support: Nil

Conflict of interest: None

A custom-made impression tray was fabricated on the cast of any other random patient of almost same age group to achieve a tray of the size of the patient (Fig. 2). Impression was made with...
an impression compound material (Fig. 3), and impression was poured to achieve cast of the female child patient (Fig. 4). The appliance was fabricated with the self-cure material (Fig. 5) and delivered to the patient (Fig. 6). Follow-up was done twice after 1-week duration twice.

On 1st week of the follow-up period, swelling size was reduced. Swelling completely subsided at the second follow-up period of 14 days (Fig. 7). The patient was recalled for follow-up visit at 6 months to check any recurrence of the lesion and no recurrence was noticed (Fig. 8).
Minimal Invasive Approach for Management of Lingual Swelling on Ventral Surface of Tongue

On the follow-up visit posttreatment, parents displayed satisfaction with the treatment as the child was feeding properly.

**DISCUSSION**

Lingual lesions in infants are reactive diseases of the mucosa seen in different forms like ulcers and swelling. They are the results of repeated trauma of the tongue due to mandibular incisors during forward and backward tongue movements.

In this case, lingual swelling was observed and the onset of lesion was directly associated with eruption of mandibular incisors and its size continuously increased with time with child’s protrusive and retractive movements of the tongue.

Other differential diagnosis could be Riga-Fede disease (RFD); traumatic lesions of tongue include mucocele, ranula, and breastfeeding keratosis.

Riga-Fede disease is a benign and uncommon mucosal disorder, characterized by an ulceration of the tongue, often caused by repetitive traumatic injuries due to backward and forward movements of the tongue over the mandibular anterior incisors.

The expression “traumatic ulcerative granuloma with stromal eosinophilia” (TUGSE) refers to a chronic but self-limiting reactive ulcer of the oral mucosa. Although common in infants (between 1 week and 1 year of age), RFD has been reported in older patients and in a patient with acquired immunodeficiency syndrome. Riga-Fede disease is most commonly associated with the eruption of the primary lower incisor in older infants or natal-neonatal teeth in newborns. Mucocele commonly arises due to alterations in the minor salivary glands, occurring in approximately 2.7% of patients under the age of 1. It can be of two types: extravasation and retention mucoceles, the former affecting the lower lip most frequently. Extravasation type often affects the younger age group and results due to trauma. Clinically, it presents as bluish (depending on the proximity to the surface), translucent, and fluctuant swelling, which may cause mechanical obstruction during feeding. Diagnosis can be confirmed by fine needle aspiration biopsy (FNAB) and histopathological evaluation. Conventional treatment includes surgical excision. In such cases of infants with compromised health issues lesion management with a minimal invasive approach is a wise treatment approach, as painful and long time-consuming surgical procedure could negatively affect emotional, physical, and psychological development of the infant.

With regard to that, this case report brings forward conservative treatment option for small age group and with compromised health issues patients where it is not possible to go for large treatment modalities, to make a customizable approach possible for each patient taking into consideration factors involving the financial viability of the individual, duration of treatment, age of patient, health of patient, etc. However, prospective studies for other effective modalities have been suggested.

**REFERENCES**

1. Sarada P, Sampath Reddy CH, Patil AK, et al. Solitary nodular lesion of tongue: a rare entity. J Clin Diagn Res 2014;8(2):256–258. DOI: 10.7860/JCDR/2014/8073.4075.
2. Ceyhan AM, Yildirim M, Basak PY, et al. Traumatic lingual ulcer in a child: Riga-Fede disease. Clin Exp Dermatol 2009;34(2):186–188. DOI: 10.1111/j.1365-2230.2008.02796.x.
3. Baroni A, Capristo C, Rosselli L, et al. Lingual traumatic ulceration: Riga-Fede disease. Inter J Dermatol 2006;45(9):1096–1097. DOI: 10.1111/j.1365-4632.2004.02554.x.
4. Joseph BK, BairavaSundaram D. Oral traumatic granuloma: report of a case and review of literature. Dent Traumatol 2010;26(1):94–97. DOI: 10.1111/j.1600-9657.2009.00816.x.
5. Elzay RP. Traumatic ulcerative granuloma with stromal eosinophilia: Riga-Fede’s disease and traumatic eosinophilic granuloma. Oral Surg Oral Med Oral Pathol 1983;55(5):497–506. DOI: 10.1016/0030-4220(83)90236-0.
6. Taghi A, Motamedi MK. Riga-Fede disease: a histological study and case report. Indian J Dent Res 2009;20(2):227–229. DOI: 10.4103/0970-9290.52893.
7. Santos Cunha V, Rocha Zanol JD, Sprinz E. Riga-Fede-like disease in an AIDS patient. J Int Assoc Physicians AIDS Care (Chic Ill) 2007;6(4):273–274. DOI: 10.1177/1545109707304299.
8. Hegde RJ. Sublingual traumatic ulceration due to neonatal teeth (Riga-Fede disease). J Indian Soc Pedo Prev Dent 2005;23(1):51–52. DOI: 10.4103/0970-4388.16031.
9. Slayton RL. Treatment alternatives for sublingual traumatic ulceration (Riga-Fede disease). Pediatr Dent 2000;22(5):413–414.
10. Goho C. Neonatal sublingual traumatic ulceration (Riga-Fede disease): reports of cases. ASDC J Dent Child 1996;63(5):362–364.
11. Patil S, Rao RS, Majumdar B, et al. Oral lesions in neonates. Oral Lesions in Neonates 2016;9(2):131–138. DOI: 10.5005/jp-journals-10005-1349.
12. Onderoglu L, Saygan-Karamursel B, Deren O, et al. Prenatal diagnosis of ranula at 21 weeks of gestation. Ultrasound Obstet Gynecol 2003;22(4):399–401. DOI: 10.1002/uog.207.
13. Singh GB, Rai AK, Arora R, et al. A rare case of congenital simple cystic ranula in a neonate. Case Rep Otolaryngol 2013;2013::841930. DOI: 10.1155/2013/841930.
14. Kiat-Amnuay S, Bouquot J. Breastfeeding keratosis: this frictional keratosis of newborns may mimic thrush. Am Acad Pediatr 2013;132(3):e775–e778. DOI: 10.1542/peds.2012-2796.