

Traumatic Fibroma of Tongue: Short Article

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Abstract:

Traumatic or irritational fibroma is a common benign exophytic and reactive oral lesion that develops secondary to injury. Fibroma is a result of a chronic repair process that includes granulation tissue and scar formation resulting in a fibrous submucosal mass.

The most common sites of traumatic fibroma are the tongue, buccal mucosa and lower labial mucosa. This article presents the case of a 35-year-old female patient with 2 months-long proliferation on the tip of the tongue. Here, electrocautery was used for the complete excision of the lesion. The main advantages of using it is effective hemostasis that can be achieved in a short span, is less invasive, and better postoperative phase.

Keywords: Case report, Traumatic fibroma, Electrocautery.

Introduction

Oral mucosa and soft tissues are constantly exposed to multiple low-intensity internal and external injuries, which may produce different reactive anomalies, including chronic infectious/inflammatory processes, physical or chemical irritations, and neoplastic tumor-like conditions ; common examples of this type of stimuli are cheek & tongue biting, trapped food, impacted biofilm/debris, sharp edges of broken or carious teeth, and overhanging dental restorations or orthodontic appliances.^(1,2)

Possible consequences of such irritating factors is the occurrence of localized proliferative hyperplastic progressive lesions.⁽³⁾

Focal fibrous hyperplasia (traumatic fibroma, irritation fibroma, fibrous epulis) is considered the most common soft-tissue benign neoplastic lesion in the oral cavity.^(4,5)

It constitutes around 20% of the oral reactive hyperplastic lesions and females are affected almost twice as frequently as males^(1,5). Its clinical manifestations are a pedunculated or sessile firm mass, with a few centimeters in diameter, smooth-surfaced (surface can be hyperkeratotic or ulcerated), yellowish-white or mucosal colored (pink to red), and more frequently present in the gingiva and mucosa (along the line of occlusion).⁽⁶⁾ Other less common intraoral sites are the tongue, lower lip, hard palate, and floor of the mouth.^(3,6) Histologically, this entity is characterized by an unencapsulated solid, nodular mass of dense and sometimes

hyalinized fibrous connective tissue; it is composed of interlacing collagen fiber bundles, within which there are fibroblasts and some small blood vessels.⁽²⁾ It rarely causes erosions in the underlying bone tissue or separation of adjacent teeth.⁽⁵⁾

The removal of the etiological factor is mandatory. In several cases, it disappears after this measure. When the lesion persists, the first treatment option is surgical excision and recurrences are very uncommon.⁽⁷⁾ Various surgical options, including the conventional scalpel and laser, have been suggested; electrosurgery and cryotherapy are other available treatment options The aim of this report is to describe the clinical presentation, provided treatment, and follow-up of a fibroma on the tip of the tongue, an unusual location, in a 35 year old lady.

Differential diagnosis for tongue fibroma:

Lipoma of tongue

Lipoma is the most common benign neoplasm of adipose tissue. It's occurrence in the oral cavity only 1–4% of all benign tumors.⁽⁸⁾ Lipoma of tongue occurs only 0.3% of all tongue tumors.⁽⁹⁾ In the oral cavity, they are commonly present as slow growing asymptomatic lesion with characteristic yellowish color and soft consistency. This condition is mostly seen in adults. The most common site of lipoma in the oral cavity is buccal mucosa,⁽⁸⁾ but lipoma of tongue, floor of mouth, gingiva, retromolar area are very rare.

Pyogenic granuloma of tongue

Pyogenic granuloma is a benign non neoplastic mucocutaneous lesion evolving in response to local irritation. In oral cavity, this lesion mostly affects the gingiva and rarely affects buccal mucosa and tongue

Giant cell fibroma (GCF) of tongue

It is an unusual fibrous mucosal mass with several unique features separating it from other oral fibrous hyperplasias⁽¹⁰⁾. GCF is found predominantly in Caucasians in first three decades of life with slight female predilection.⁽¹¹⁾ The etiology for GCF remains unknown and does not appear to be associated with chronic irritation⁽¹⁰⁾. It typically manifests as an asymptomatic sessile or pedunculated mass that is commonly mistaken for other growths such as fibroepithelial polyp, pyogenic granuloma, and fibroma and can be diagnosed accurately based only on its distinctive histopathology.

Case Report

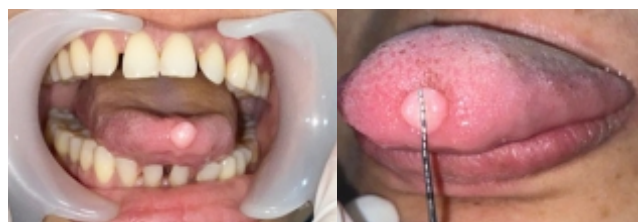
A 35 year-old woman reported to the Department of Periodontics, with chief complaint of growth on the tip of the tongue. It was 5 mm in diameter, normal coloured, fibrous, pedunculated and asymptomatic. The patient was systemically healthy. The patient discovered the lesion around two months ago with a slow increase in size. The patient accidentally bit her tongue while chewing. The patient frequently scrubbed the lesion against the incisal edges of the lower anterior teeth. The lingual frenum was normal and oral hygiene was considered as good. Based on the initial examination and the natural history of the lesion, the presumptive clinical diagnosis determined was a traumatic fibroma .

Following oral prophylaxis, it was decided to perform an excisional biopsy of the growth under local anesthesia using electrocautery.

Surgical Procedure:

The patient gave informed consent after being apprised of the treatment procedure. Blood tests were conducted and found to be within normal limits.

An infiltration anesthesia of lignocaine containing 1:200,000 adrenaline was given in the area of interest. The electrocautery unit was set to cutting mode and the growth was excised *en masse* using the loop electrode with normal saline for irrigation. Haemostasis was achieved. The specimen was then transferred to a vial containing 10% formalin and sent for histopathological assessment. Prior to discharge, post-operative instructions were given to the patient with the advice to take analgesics should the need arise. The one-week recall revealed eventful healing .No recurrence of the growth was observed during the two-month and 6 -month follow up periods.

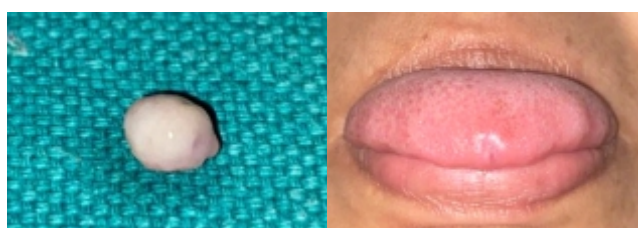


Pre-Operative photographs



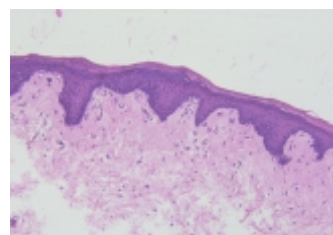
Pre-suturing

Excised Growth



Fibroma excised with electrocautery

Follow up after one week



**Histopathological Picture :
Excised growth**

Histological examination revealed that the epithelium was predominantly hyperparakeratinized, atrophic, and hyperplastic . The underlying connective tissue consists of dense collagen fibers. Numerous dilated and congested capillaries of variable sizes and focal aggregates of moderate to dense chronic inflammatory cell infiltrate were evident subepithelial . Based on the clinical and histopathological findings, we confirmed the diagnosis of traumatic fibroma.

Discussion:

In the oral cavity, fibroma seems to be the most prevalent benign soft-tissue neoplasm. In fact, it is indeed the localized proliferation of the dense collagenous fibers produced by regional trauma rather than prolonged irritation instead of a real neoplasm.

Traumatic fibroma is essentially a fibrous submucosal mass that consists of granulation tissue and scar tissue. Traumatic fibromas, according to Barker and Lucas, show a pattern of collagen organization based on the location of the lesion and

the extent of aggravation. The two types of patterns are a radiating pattern and a circular pattern. The authors postulated that when there is a greater degree of stress, a radiating pattern arises in immobile areas (e.g., the palate), but less trauma causes a circular pattern to appear in flexible regions (e.g., cheeks).

Conclusion:

Proper evaluation of the case with careful clinical and histological diagnosis is essential for the treatment of traumatic fibroma. Although benign, it can be quite bothersome to the patient and requires surgical removal. From the patient's and clinician's point of view, excision with electrocautery is an effective method of removing the fibroma. It remains the most effective for a variety of oral lesions, with greater patient acceptance and greater physician convenience.

References:

1. Kadeh H, Saravani S, Tajik M. Reactive hyperplastic lesions of the oral cavity. *Iranian Journal of Otorhinolaryngology*. 2015 Mar;27(79):137.
2. Manchanda AS, Narang RS, Singh B, Mahajan K. RETROSPECTIVE ANALYSIS OF FOCAL FIBROUS HYPERPLASIA. *Indian Journal of Comprehensive Dental Care (IJCDC)*. 2015 Jul 1;5(2).
3. Soyele O. O., Ladeji A. M., Adebisi K. E., Adesina O. M., Aborisade A. O., Olatunji A. S., et al. Pattern of distribution of reactive localised hyperplasia of the oral cavity in patients at a tertiary health institution in Nigeria. *Afr Health Sci*. 2019; 19 (1): 1687-94.
4. Kashyap B, Reddy PS, Nalini P. Reactive lesions of oral cavity: A survey of 100 cases in Eluru, West Godavari district. *Contemporary clinical dentistry*. 2012 Jul;3(3):294.
5. Kale TA. Focal fibrous hyperplasia a reactive lesion. *International Journal of Dental Clinics*. 2013 Jul 1;5(3):29-31.
6. de Santana Santos T, Martins-Filho PR, Piva MR, de Souza Andrade ES. Focal fibrous hyperplasia: a review of 193 cases. *Journal of Oral and Maxillofacial Pathology: JOMFP*. 2014 Sep;18(Suppl 1):S86.
7. Vergotine RJ. A giant cell fibroma and focal fibrous hyperplasia in a young child: a case report. *Case reports in dentistry*. 2012 Jun 3;2012.
8. Fregnani ER, Pires FR, Falzoni R, Lopes MA, Vargas PA. Lipomas of the oral cavity: clinical findings, histological classification and proliferative activity of 46 cases. *International journal of oral and maxillofacial surgery*. 2003 Feb 1;32(1):49-53.
9. Srinivasan K, Hariharan N, Parthiban P, Shyamala R. Lipoma of tongue—A rare site for a rare site for a common tumour. *Indian Journal of Otolaryngology and Head & Neck Surgery*. 2007 Mar;59:83-4.
10. Gnepp DR. *Diagnostic surgical pathology of the head and neck e-book*. Elsevier Health Sciences; 2009 Apr 7.
11. Weathers DR, Callihan MD. Giant cell fibroma. *Oral Surgery Oral Medicine and Oral Pathology*. 1974;37(3):374–384.