

Management of Lingual Traumatic Fibroma in An Epileptic Patient Using Diode Laser

Abstract:

Traumatic fibroma is a benign exophytic and reactive oral lesion that develops secondary to repetitive trauma or irritation. Most commonly affected sites are tongue, buccal mucosa, and lower labial mucosa. These are well demarcated, smooth, pedunculated or sessile, exophytic lesions which are similar to the surrounding mucosa in color. Generally, it is non-tender but local irritation may lead to painful ulceration. Treatment plan includes complete excision and removal of the cause of irritation. Excision can be done by scalpel, electrocautery or Laser. The excision of the fibroma with diode laser is a safe procedure, with minimum postoperative discomfort and complications. Recurrences are rare but may occur due to repetitive trauma at the same site.

Key-words: Traumatic fibroma, Excision, Diode Laser, Epileptic patient

Introduction:

Traumatic fibroma also known as irritation fibroma, fibrous nodule or oral polyp[1] is a common benign exophytic oral lesion, develops secondary to repetitive trauma or irritation. It forms as a result of chronic repair process that includes granulation tissue and scar formation resulting in a fibrous submucosal mass.[2]

Epilepsy is a chronic disease, characterized by the risk of recurrent seizures. According to the International League Against Epilepsy, epilepsy is diagnosed by two or more episodes of unprovoked seizures.[3] Dental and tongue injuries are common problems in these patients, contributing to 58.6% which often leads to oral fibroma.[4]

We present the case of an epileptic patient with traumatic fibroma managed using 980 nm diode laser.

Case Report:

A 42 years old male patient presented with a growth on the left side of tongue since 15 days. On eliciting history, patient is a known case of epilepsy and had the last episode 21 days back, following which his mouth opening was drastically reduced. So, he took some ayurvedic medication and after 7 days when his mouth opening improved, he noticed a painless growth on the left lateral border of the tongue, which has increased progressively in size. Patient is diabetic and currently under medication.

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Received : 6 Nov., 2022, **Published :** 31 March, 2023

Access this article online	
Website: www.ujds.in	Quick Response Code 
DOI: https://doi.org/10.21276/ujds.2023.9.1.13	

How to cite this article: Farheen, Ellora Madan, Ritam C Pati, & Vishal Kumar. (2022). Management of Lingual Traumatic Fibroma in An Epileptic Patient Using Diode Laser. UNIVERSITY JOURNAL OF DENTAL SCIENCES, 9(1). 64-67

On examination, a well-circumscribed broad-based, exophytic mass (Fig. 1A) measuring approximately 15×7 mm (Fig 1B and 1C) was seen on the left ventrolateral aspect of the tongue. Color was pale compared to the surrounding tissue. It was firm in consistency, non-tender, non-fluctuant, non-reducible. No bleeding or discharge was noticed. Grossly decayed teeth i.r.t. 36, 37 and generalized attrition was present.



Fig. 1 : (A) Fibrotic growth on the left ventrolateral aspect of the tongue

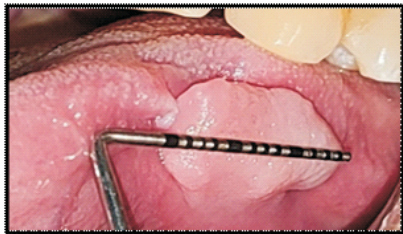


Fig. 1; (B) Width- 15 mm

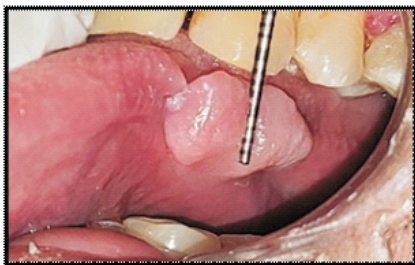


Fig. 1: (C) Length- 7 mm

Fig 1: Pre-operative photo and dimensions of the lesion

Management:

With the available data from our examination and investigations a provisional diagnosis of traumatic fibroma of tongue was made and excision of the fibrotic mass was planned. After scaling patient was recalled for surgery only after the clearance from neurosurgeon was obtained. The surgery was scheduled within a few hours of taking the anticonvulsant medication.

During surgery, stress free environment was maintained to make the patient feel comfortable and Midazolam nasal spray

and diazepam ampule (Fig. 2) was also kept chairside to combat any emergency situation. After adequate anesthesia, the fibrotic mass was held with a tissue forceps and was ablated using 980 nm diode laser in a contact mode using the following laser parameters: Power 0.9W, continuous mode. Sutures were placed and postoperative medications and instructions were given to the patient.



Fig. 2: Emergency medications

Histopathological evaluation (Fig. 3B) of the excised tissue (Fig. 3A) suggested hyperplastic stratified squamous surface epithelium with long and elongated rete ridges extending deep into the overlying fibrovascular connective tissue stroma. The connective tissue showed numerous vascular channels engorged with RBCs along with dense diffuse chronic inflammatory cells predominantly consisting of lymphocytes. These findings confirmed the diagnosis of fibro-epithelial hyperplasia.

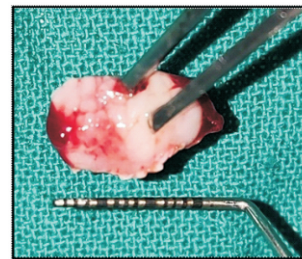


Fig. 3 : (A) Excised tissue sent for histopathology

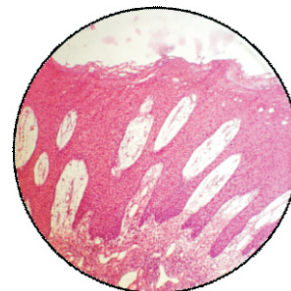


Fig. 3 (B) 10X microscopic view

Fig. 3: Excised tissue and histopathologic section

Sutures were removed after 10 days. 10th day post-operative result (Fig. 4A) showed uneventful healing tissue and no pain was present as reported by the patient. Oral hygiene instructions were reinforced to the patient. At 1 month post-operative visit, complete healing was seen (Fig. 4B). At 9 months post-operative visit (Fig. 4C) no further complications were noticed.



Fig.4 (A) 10 days post-operative



Fig. 4 (B) 1 month post-operative



Fig. 4 (C) 9 months post-operative
Fig. 4: Post-operative results

Discussion:

Reactive hyperplasias are also known as focal fibrous hyperplasia, oral fibroma or fibromatosis fibroma, commonly occur secondary to oral injury.[2], The term fibroma is a misnomer as they are not true neoplasms but merely fibrous overgrowths that occur due to some trauma or chronic irritation.[5] In our case there is a probability that during that seizure, 21 days back, trauma to the tongue had occurred.

Mollaoğlu M et al.[4] in his study reported that 82.5% of patients have sustained injury due to an epileptic seizure out of which dental and tongue injury has occurred in 58.6% of the patients.

Patient was having complete trismus for 7 days following the seizure, because of the trauma to the temporomandibular joint (TMJ) due to forceful clenching during epileptic seizures. A similar post-ictal trismus was reported because of bilateral luxation of the TMJ due to forceful clenching of the jaw by Finister J et al.[6] So TMJ disorders are common in cases of seizures.

Enlarged tissue masses clinically appear paler than the surrounding tissue due to the hyperkeratosis caused by the repetitive trauma[2]. These lesions produce discomfort and difficulty to the patient during eating and speech. So, excision is recommended along with regular follow up.[7] As in our case also patient was finding difficulty while mastication and speech so we planned for excision.

Literature suggests that, for epileptic patients surgical clearance should be obtained from the neurophysician and precautionary measures like scheduling the surgery within a few hours of taking the anticonvulsant medication, maintaining a stress free environment, keeping chairside emergency medications etc.[8] should be followed for any invasive procedures in these patients. So accordingly, all the protocols were followed.

The different methods used for surgical treatments include scalpel excision, electrocautery, laser surgery. Diode lasers have many advantages like less scarring, bleeding, pain, infection, swelling, surgical time and a good coagulation.[9] As tongue is a highly vascularized tissue and considering all these advantages laser surgery was opted. Studies also revealed that laser make sterile conditions by reducing bacteremia at the site of operation.[10] Jain M et al.[5] and

Jinal D et al.[10] reported that the histopathological section of fibro-epithelial hyperplasia revealed connective tissue has haphazardly arranged dense bundles of collagen fibers, constricted blood vessels of varying sizes and dense inflammatory infiltrate chiefly comprising of lymphocytes and plasma cells. These findings are similar to the histopathologic evaluation of our case.

Lastly, sutures are usually not necessary after laser procedures but it results in less post-operative pain and also close approximation of the wound edges results in faster healing. So, sutures were placed.

Conclusion:

Intra-oral soft tissue injuries in epileptic patients are quite common. These lesions are purely traumatic origin and hence are classified as traumatic fibroma or fibro-epithelial hyperplasia. Surgical excision is the treatment of choice for these lesions. They usually do not recur after excision but repeated trauma may cause recurrence of the lesion.

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