

# Traumatic Fibroma: A Case Report

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## Abstract:

**Background:** Irritational / traumatic fibroma is a reactive lesion that represents most common oral lesions of the soft-tissue, caused by local traumas or plaque-induced inflammation, calculus, overhanging margins and restorations, which may lead to esthetic and functional problems. It can occur at any age group from almost any soft-tissue site, buccal mucosa tongue, gingiva. However, the buccal mucosa is more commonly involved.

**Case presentation:** The article presents the case of a 30-year-old female patient with an intraoral swelling at the right side of the cheek mucosa since 4 months. On examining the lesion clinically, it was found to be a well circumscribed, smooth, slightly tender, firm and lobulated pink swelling measuring approx. 3 cm × 3 cm in its greatest diameter in relation to right cheek mucosa near mandibular premolar region. The swelling was associated with traumatic occlusion. The cause of the trauma as well as management of the lesion along with clinico-histological diagnosis is addressed. Complete surgical excision of the lesion was planned. Laser was used for excision of the lesion and the excised lesion as it is comparatively less invasive, easy, the relatively simple and safe method with easy handling of the tissues without any bleeding or scarring. The excised lesion was then sent to histopathology for diagnosis. The case was diagnosed as irritational fibroma after the clinical findings and histological evaluations.

**Conclusion:** Proper evaluation of the case with careful clinical and histological diagnosis is essential for the management of irritational fibroma. Lasers provide a non-invasive and effective treatment modality for the management of the such lesions.

**Keywords:** Overgrowth, fibro-Epithelial Hyperplasia; Traumatic Fibroma; Swelling; Buccal Mucosa

## Introduction

Fibroma in the oral cavity is known to be the most prevalent benign growth.<sup>1</sup> Traumatic fibroma is a frequent, benign, slow-growing tumor of soft tissues.<sup>2</sup> This typically is an asymptomatic mass that increases slowly in size.<sup>3</sup> Any irritants, such as plaque, calculus,

overhanging margins and restorations, may be the causal factors for these lesions.<sup>4,6</sup> Fibroma may be because of the injury or local inflammation of a focal fibrous hyperplasia.<sup>4,7,8</sup> Within this article we present a case of a 30-year old female with traumatic fibroma in the right buccal mucosa of the oral cavity.

### **Case Presentation**

A 30 years old female had reported to the Department of Periodontics, Sharad Pawar Dental College, Sawangi (M), India, with the chief complaint of growth in the right cheek mucosa region since 4 months. She had no relevant medical or dental history as evidenced with a comprehensive case history reported. It started initially as a small lesion four months ago which steadily increased to the current size. Chewing and normal oral function have been hampered by growth. Intraoral inspection showed a single, painless, sessile, well circumscribed mass with smooth surface. On palpation, it was firm in consistency, and lobulated swelling measuring approximately 3\*3 cm in its maximum diameter in relation to tooth numbers 35 and 36 on the lower right side of the buccal mucosa associated with sharp cusp leading to traumatic occlusion with the right side.

### **Management:**

An informed consent was taken from the patient as she was informed about the treatment procedure. Routine blood investigations were performed and they were within the normal range. After performing initial periodontal therapy and occlusal corrections which included selective cuspal grinding, the lesion was excised completely from its base using a soft tissue diode laser in pulse mode with continuous wavelength and 3-3.5 W power for 3×60 seconds under local anesthesia and with the use of protective armamentarium. The tip of the fibre was in contact with the edges of the lesion during surgery. No suturing was done. Post-operative medications, Amoxicillin (500mg) and Paracetamol/Acetaminophen and Serratiopeptidase were prescribed for a period of 5 days from the day of surgery. The instructions were given to the patient that included maintenance of the surgical site, soft diet and maintenance of oral hygiene. A follow up after 3 days, 1 week and at the end 1 month was done. After the surgery the patient reported no pain or discomfort. The lesion healed with no recurrence.

### **Histopathology:**

After complete surgical removal of the lesion in Toto, the tissue was send for histopathological diagnosis which showed the following appearance under different magnifications-

4X- Under scanner view, H & E stained tissue section comprised of overlying epithelium and underlying connective tissue stroma.

10X- H & E lesional tissue section showed parakeratinised stratified squamous epithelium which appeared to be stretched and atrophic with short and blunt rete-pegs. The underlying connective tissue stroma showed dense collagenous fibre bundles with many fibroblasts which were plump with spindle shaped nuclei. Many endothelial lined blood vessels of varying shapes & sizes with intravasated RBCs were seen. Mild chronic inflammatory cell infiltrate seen.

40X- under high power view, all findings of low power view were confirmed.

Clinic-pathological features suggestive of FIBROMA.

At re-valuation after 1 month:

During and after the surgery the patient reported no pain or discomfort. The soft tissue healing was satisfactory; no scarring could be detected over the operated area.

## **Discussion**

Some of the oral lesions, such as irritational fibroma and mucocele, caused by oral habits such as lip biting / sucking, those associated with traumatic occlusions, and local etiological factors have been mentioned in the literature. Fibroma is the result of a chronic repair process that involves the formation of granulation tissue and scars resulting in a fibrous sub-mucosal mass.<sup>9</sup> Parkavi et al 2018 also in their case report presented diagnosis, histological aspects and surgical management of irritational fibroma due to local trauma.<sup>2</sup> A study was performed by Santiago Torres Domingo et al. in 2008 to examine the occurrence and form of the most common oral mucosal benign tumors among 300 patients which revealed 153 (53.3%) histologically diagnosed as fibroma, indicating that this is the most common oral cavity benign tumor.<sup>10</sup>

It is often treated with surgical excision and recurrence is rare unless the source of irritation/trauma is completely removed. Sixty-six percent of irritation fibromas have been reported in females. Its prevalence is rare during the 1st decade of life. The lesion may be sessile or may have a pedunculated base and usually slowly progressing to its maximum size within a couple of months. The size rarely exceeds 1.5 cm. However, in the present case the lesion was much comparatively much larger in size. It is usually self-limiting without malignant transformation. However, long term evaluation is required to observe transformation and recurrences of such lesions.

Various treatment modalities have been used to treat such lesions which include the use of surgical scalpel, electrocautery, lasers, etc., depending on clinical and anatomical considerations. However, compared to conventional methods, laser surgery is less time consuming, less painful, more accurate in the treatment of soft tissue lesions, produces less scar and tissue contraction, causes less damage to the adjacent tissues, provides visibility owing to bloodless field during surgery and maintains elastic tissue properties.<sup>11,12</sup> Use of lasers have also shown to provide predictable treatment outcomes following various aesthetic periodontal procedures like gingival depigmentation and is found to be relatively better patient compliance.<sup>13,14</sup> In the above-mentioned case, the patient was satisfied with laser surgery because it was a painless procedure, both intra-and post-operatively.

Various studies on traumatic lesions and fibroma were reported. Rathi et al reported a case of traumatic pseudo-lipoma in 3-year-old child<sup>15</sup>. Cases of different types of fibroma were reported by Swarnkar<sup>16</sup>, Verma et al<sup>17</sup>, Gondivkar et al<sup>18</sup>, Lohe et al<sup>19</sup> and Dulani et al<sup>20</sup>.

## **Conclusion**

Complete excision of the lesion with the use of laser along with management of the source of the trauma or irritation remains mandatory to prevent its recurrence. Excision with the diode laser was a safe, quick procedure with minimal complications.

## References:

- [1] Esmeili T., *et al.* "Common benign oral soft tissue masses". *Dental Clinics of North America* 49 (2005) 223-240.
- [2] Parkavi A., *et al.* "Irritational Fibroma: A Case Report". *Acta Scientific Dental Sciences* 2.10 (2018): 68-72.
- [3] Kirti Saharan., *et al.* "Irritational fibroma of gingiva in a young female: A case report". *Journal of Medicine, Radiology, Pathology and Surgery* 4 (2017): 15-17.
- [4] Sachit Anand Arora., *et al.* "Irritational Fibroma: A Case Report". *International Journal of Oral Health and Medical Research* 2.5 (2015).
- [5] Mathur LK., *et al.* "Focal fibrous hyperplasia: a case report". *International Journal of Dental Clinics* 2.4 (2010).
- [6] Nartey NO., *et al.* "Localized inflammatory hyperplasia of the oral cavity: clinico-pathological study of 164 cases". *Saudi Dental Journal* 6.3 (1994): 145-150.
- [7] Jafarzadeh H., *et al.* "Oral pyogenic granuloma: a review". *Journal of oral science* 48.4 (2006): 167-175.
- [8] Baldawa R., *et al.* "An unusually large oral pregnancy tumor". *Pravara Medical Review* 3.4 (2011): 23-26.
- [9] Pedrona IG, Ramalhob KM, Moreirac LA, Freitasd PM. Association of two lasers in the treatment of traumatic fibroma: Excision with Nd: YAP laser and Photobiomodulation Using InGaAlP: A case report. *JOLA*. 2009; 9: 49- 53.
- [10] Torres-Domingo S, Bagan JV, Jiménez Y, Poveda R, Murillo J, Díaz JM, *et al.* Benign tumors of the oral mucosa: A study of 300 patients. *Med Oral Patol Oral Cir Bucal*. 2008; 13: E161-E166.
- [11] Ferreira L, Nary-Filho H, Carvalho JA. Aplicação do laser em Odontologia: Um enfoque buco-maxilo-facial. *Sao Paulo: Salusvita* 1996;15:237-55.
- [12] Pai JB, Padma R, Divya, Malagi S, Kamath V, Shridhar A, *et al.* Excision of fibroma with diode laser: A case series. *J Dent Lasers* 2014;8:34-8.
- [13] Suryavanshi, Pooja P *et al.* "Comparative evaluation of effectiveness of surgical blade, electrosurgery, free gingival graft, and diode laser for the management of gingival hyperpigmentation." *Journal of Datta Meghe Institute of Medical Sciences University* 12 (2017): 133 - 137.
- [14] Dr.Shilpa B.S, Dr. Thakare Kaustubh S., Dr. Pooja Suryavanshi, Dr.Priti Charde, Dr.Vikas Pakhare, Management of gingival depigmentation using LASER- A case series, *GLOBAL JOURNAL FOR RESEARCH ANALYSIS* : Volume-6, Issue-3, March-2017.
- [15] Rathi, Nilesh V., Prasana T. Dahake, Kaustubh Thakre, and Sachin S. Pawade. "Traumatic Pseudo-Lipoma in 3-Year-Old Child." *CONTEMPORARY CLINICAL DENTISTRY* 3, no. 4 (December 2012): 487-90. <https://doi.org/10.4103/0976-237X.107451>.
- [16] Swarnkar, Manish. "Giant Calcifying Aponeurotic Fibroma of Web Space: Case Report with Review of Literature." *JOURNAL OF KRISHNA INSTITUTE OF MEDICAL SCIENCES UNIVERSITY* 8, no. 2 (June 2019): 99-102.
- [17] Verma, Esha, ArunKumar Bhimashankar Chakki, Sharanbasappa Chandrashekar Nagaral, and Kiran Kumar Ganji. "Peripheral Cemento-Ossifying Fibroma: Case Series Literature Review (Vol 2013, 930870, 2013)." *CASE REPORTS IN DENTISTRY* 2013 (2013). <https://doi.org/10.1155/2013/827247>.
- [18] Gondivkar, Shailesh M., Amol R. Gadail, Revant Chole, Rima V. Parikh, and Swati Balsaraf. "Ossifying Fibroma of the Jaws: Report of Two Cases and Literature

- Review.” *ORAL ONCOLOGY* 47, no. 9 (September 2011): 804–9. <https://doi.org/10.1016/j.oraloncology.2011.06.014>.
- [19] Lohe, V. K., S. S. Degwekar, R. R. Bhowate, R. P. Kadu, M. B. Motwani, A. D. Indurkar, and S. B. Dangore. “Rapidly Maturing Juvenile Ossifying Fibroma: A Case Report.” *DENTOMAXILLOFACIAL RADIOLOGY* 40, no. 3 (March 2011): 195–98. <https://doi.org/10.1259/dmfr/67780763>.
- [20] Dulani, Rajesh, Samir C. Dwidmuthe, Sandeep Shrivastava, Pradeep Singh, and Sharad Gupta. “Huge Chondromyxoid Fibroma of Proximal Third Tibia Masquerading as an Aneurysmal Bone Cyst: A Rare Case Report.” *SOUTH ASIAN JOURNAL OF CANCER* 2, no. 1 (March 2013). <https://doi.org/10.4103/2278-330X.105875>.

Photographs:



Fig 1: Pre-operative clinical view.



Fig 2: Surgical excision of the lesion by laser



Fig 3: Immediate post-operative clinical view after excision



Fig 4: H&E stained section of the lesion under scanner view

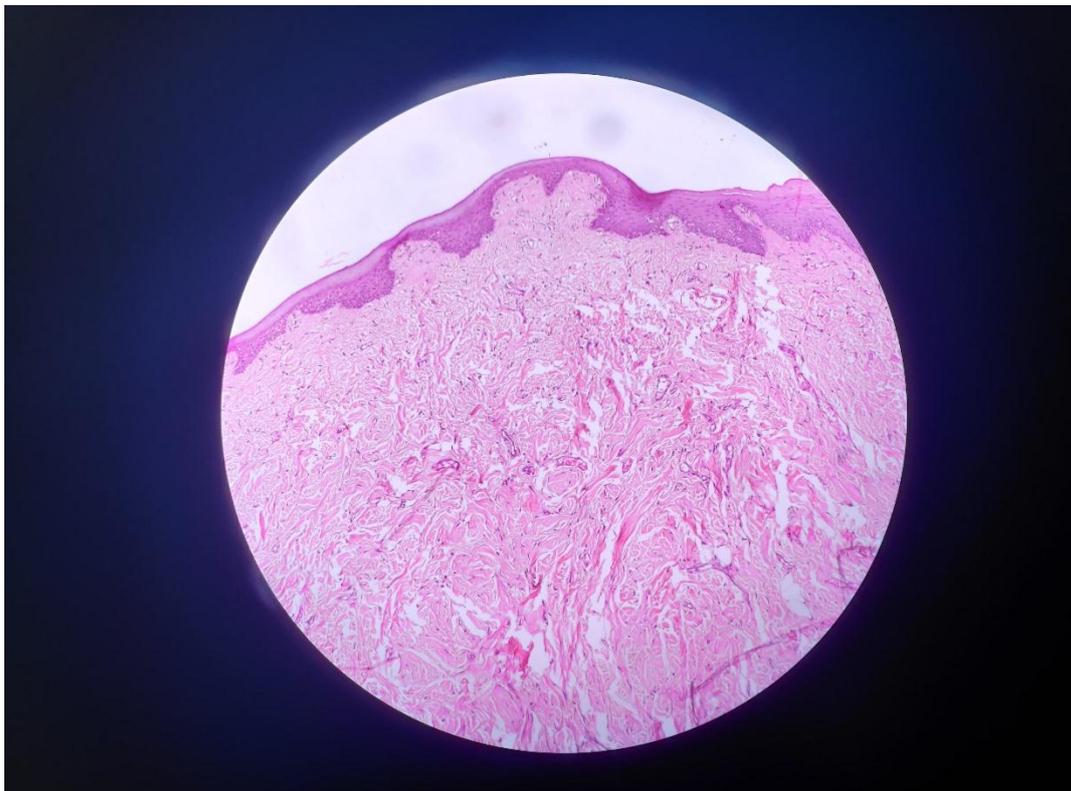


Fig 5: H&E view under low power

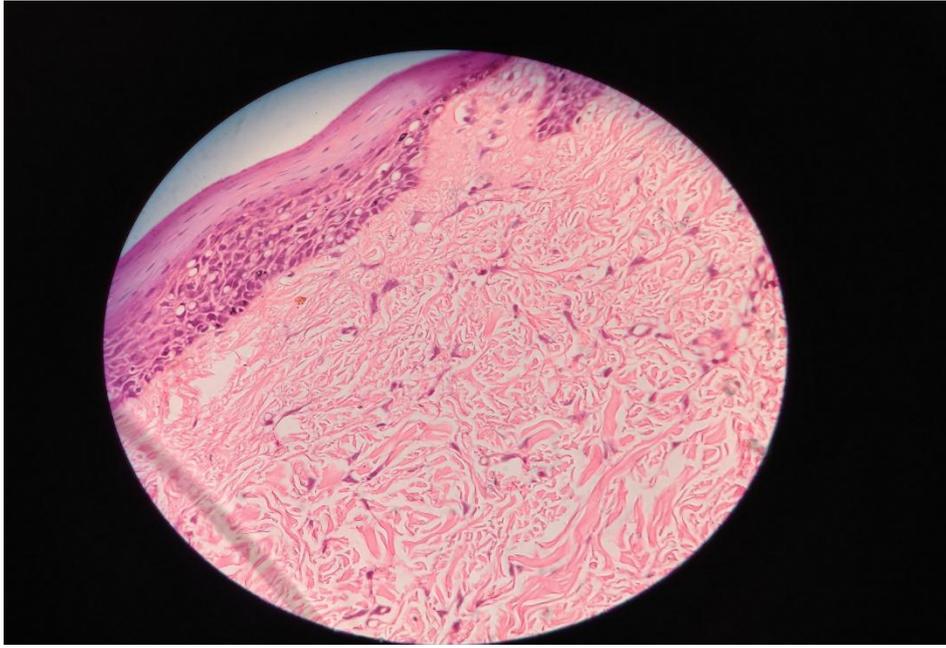


Fig 6: H & E under high power.