

# Management of Traumatic Fibroma in the Esthetic Zone: A Case Report.

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### **ABSTRACT**

**Background:** Traumatic/Irritational fibroma is an inflammatory hyperplastic reaction of the soft tissues to traumatic factors such as nail-biting, ill-fitting dentures, over-hanging restorations etc., and may present with esthetic, functional and psychological concerns.

**Case description:** A 28 year old male patient presented with a soft tissue overgrowth in relation to his mandibular anterior teeth (labial gingiva). The lesion was localized, well-circumscribed, firm in consistency with a smooth surface and painless. However, it was a major concern for the patient both esthetically and psychologically. Thus, the lesion was excised using the scalpel method and sent for histopathological assessment.

**Conclusion:** Traumatic fibroma are very common benign, intraoral, soft tissue lesions which arise due to chronic trauma/irritation. A detailed history taking and histopathological assessment is paramount in deducing the correct diagnosis and treatment plan.

**Clinical Significance:** Proper diagnosis and treatment in the form of excision of these soft tissue lesions are pivotal to ensure the patient’s functional, esthetic and psychological rehabilitation.

**Keywords:** Fibro-epithelial Hyperplasia, Traumatic Fibroma, Gingival overgrowth.

### **Introduction:**

One of the most commonly witnessed benign soft tissue growth in the oral cavity is a fibroma.<sup>1</sup> Its prevalence ranges between 1.2-1.5% in adults and it is most frequently seen in the interdental

papillary area of maxillary anterior teeth.<sup>2</sup> An inflammatory hyperplastic reaction due to local injury or inflammation due to foreign bodies, overhanging restoration etc. can give rise to an irritational or traumatic fibroma.<sup>3</sup> This lesion is not age or site specific and is generally composed of Type I and III collagen fibers. The most common sites in the oral cavity which have been documented with fibroma are gingiva, buccal mucosa and tongue. The lesion is generally localized, asymptomatic, sessile, round or ovoid in shape, with a lighter color when compared to its adjacent area due to diminished blood supply.<sup>4</sup> It is a slow growing lesion which can be managed with surgical excision using laser, electrocautery or scalpel.<sup>5</sup> The present case report describes the history, diagnosis and management of traumatic fibroma in the mandibular anterior teeth region.

### Case Report:

A 28 year old male patient reported to the Department of Periodontology, Manipal College of Dental Sciences, Mangalore, MAHE, India with the chief complaint of overgrowth in his lower front tooth region since past 2 weeks. On further probing, the patient revealed that he had a chronic nail biting habit and 6 months back, suffered an injury which led to mild pain and bleeding from the mandibular anterior gingiva. However, within a week the area healed and the patient did not visit any dental professional. After a month of this incident, the patient started witnessing a small growth in the same area which slowly increased in size. The patient did not report of any pain or bleeding from the area of concern and was systemically healthy. He did not report of any habit of tobacco consumption or allergies to any medication.

On intraoral examination, the lesion on the labial gingiva irt. 31, 32 was firm in consistency with a smooth surface, painless and well circumscribed, with dimensions of 1.9×1.0×0.2 cm. There was mild bleeding on probing irt. the 31(mesially) due to the presence of local factors (mild calculus). Radiograph in the form of IOPAR irt. 31, 32 was advised which revealed no pathological alterations. (Fig.1 A-D) After explaining the treatment protocol to the patient, patient's signature on the consent form was taken. Excisional biopsy with a No.15 blade was performed under local anesthesia (Fig.2) and the tissue was sent for histopathological examination (Fig.3). Full mouth supragingival scaling was performed (Fig.6) and the surgical area was covered with periodontal dressing.

The histopathological report revealed presence of atrophic to focally hyperplastic stratified squamous epithelium overlying a connective tissue stroma. The stroma was predominantly fibrous with dense collagen bundles, exhibiting with a few areas of endothelial cell proliferation along with moderate chronic inflammatory cell infiltrate (predominantly comprising of lymphocytes). (Fig. 4 and 5) These features were suggestive of fibro-epithelial hyperplasia/irritational inflammatory fibroma irt. 31, 32 on the labial gingiva.

Post-operative instructions (Tab LYSER-D bid was given for 3 days and 10ml of 0.2% Chlorhexidine mouthwash was prescribed bid for 7 days) were given to the patient. Patient reported to the department after 7 days and after pack removal, initial healing was satisfactory.

The patient did not report of any pain or hemorrhage in the treated site and was kept under maintenance. (Fig.7)

### **Discussion:**

Occurrence of localized fibrous soft tissue lesions are very common in the oral cavity. Irritational fibroma is generally found in intraoral areas prone to chronic irritation or trauma. Intraoral soft tissue enlargements can present due to numerous pathological processes, resulting in difficulty to diagnose the lesion precisely. A classification system for reactive gingival lesions proposed by Kfir et al. consists of various conditions such as peripheral fibroma, pyogenic granuloma, peripheral giant cell granuloma and fibrous hyperplasia.<sup>6</sup> Further, Barker and Lucas suggested varied patterns of collagen arrangement, in a fibroma, based on the site and degree of irritation. These patterns were divided into two types: radiating (present in sites which are immobile, e.g. palate, with higher traumatic factors) and circular (present in sites which are mobile and subjected to lesser traumatic factors).<sup>7</sup> In a study by Bouqot and Gundlach, 35.8% of 791 benign soft tissue lesions were diagnosed as irritation fibroma, accounting for 12 lesions/1000 subjects.<sup>8</sup> In another study by Domingo et al., more than 53.2% of the 300 benign tumors examined accounted for fibroma.<sup>9</sup> Even though there are various methods used for excision of soft tissue lesions, the scalpel technique is easy to use, economical, accurate and leads to minimal damage to the adjacent structures. In the present case scenario, the soft tissue lesion was present on the labial gingiva. Therefore, to avoid any irreparable damage to periodontal hard tissues and salvage enough soft tissue for biopsy, the scalpel method was adopted for excision. A comprehensive treatment of irritation fibroma consists of aggressive surgical excision, elimination of etiological agent, supragingival scaling and regular maintenance visits. Maintenance visits plays a pivotal role in management of such lesions as the recurrence rate of an incompletely excised lesion ranges between 8-20%.<sup>10</sup>

### **Conclusion:**

The present case report discusses the importance of documenting a detailed history from the patients, in order to formulate a correct diagnosis and treatment protocol, leading to functional, esthetic and psychological rehabilitation of the patients.

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Fig 1. A



Fig 1. B



Fig 1. C



Fig 1. D

Fig 1. A-D: Clinical and Radiographic examination of the soft tissue lesion irt. 31, 32.



Fig 2. After administration of local anesthesia, excision of the soft tissue performed with No. 15 blade.



Fig 3. Excised soft tissue to be sent for histopathological examination.



Fig 4. 10x view showing hyperplastic nature of the epithelium.

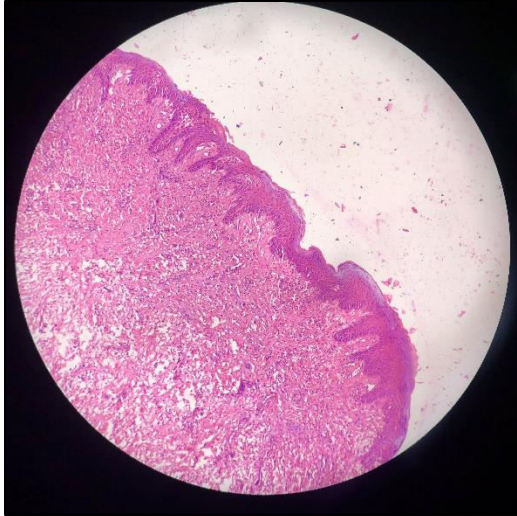


Fig 5. 40x view showing hyperchromatic basal cells overlying connective tissue stroma with few areas of endothelial cell proliferation along with moderate chronic inflammatory cell infiltrate.



Fig 6: Immediate post-op picture.



Fig 7: Post-op picture after 90 days.