

A SOFT BUT PERSISTENT CHALLENGE: TRAUMATIC FIBROMA – A CASE REPORT

¹*Dr. Janhavi Kulkarni, ²Dr. Yogesh Doshi, ³Dr. Rasika Painter

India.

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*Corresponding Author: Dr. Janhavi Kulkarni

India.



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ABSTRACT

Background: Traumatic fibroma, also known as irritation fibroma or focal fibrous hyperplasia, is one of the most common benign reactive lesions of the oral cavity. It develops secondary to chronic mechanical irritation and is frequently observed on the buccal mucosa, tongue, and lips. Although asymptomatic in most cases, these lesions may interfere with mastication, speech, or esthetics and therefore require surgical management. **Case Report:** A 55-year-old female presented to the Department of Periodontics with a painless nodular swelling on the lower labial mucosa that had gradually increased in size over six months. The lesion measured approximately 1.5 cm in diameter and was associated with chronic trauma from a removable partial denture. Based on history and clinical examination, a provisional diagnosis of traumatic fibroma was made. Complete surgical excision was performed under local anesthesia using electrocautery (Bonart, 1.5–1.7 MHz). Histopathological examination confirmed the diagnosis of traumatic fibroma. Healing was uneventful, with excellent tissue repair observed at one week and one month postoperatively. **Conclusion:** Early diagnosis, elimination of the source of irritation, complete surgical excision, and histopathological confirmation are essential for successful management of traumatic fibroma. Long-term recurrence is uncommon when the etiological factor is eliminated.

KEYWORDS: Traumatic fibroma, Irritation fibroma, Focal fibrous hyperplasia, Electrocautery, Oral lesion, Case report.

INTRODUCTION

Traumatic fibroma, also referred to as irritation fibroma or focal fibrous hyperplasia, is a benign reactive lesion of the oral mucosa resulting from chronic low-grade trauma or persistent irritation rather than a true neoplasm.^[1] The lesion develops due to excessive collagen deposition by fibroblasts in response to repeated mechanical stimulation, such as cheek biting, sharp tooth margins, ill-fitting dentures, fractured restorations, or other local irritants.^[2]

Traumatic fibromas account for approximately 1–2% of all oral lesions and are among the most frequently encountered benign soft tissue enlargements in dental practice.^[3] They occur most commonly during the fourth to sixth decades of life and show a slight female predominance.^[4] Clinically, these lesions present as well-circumscribed, sessile or pedunculated, smooth-surfaced nodules that are usually pink, firm, painless, and slow-growing.^[5] The buccal mucosa along the occlusal plane is the most common site, followed by the tongue, lips, and gingiva.^[6]

Although the diagnosis is primarily clinical, definitive confirmation requires histopathological examination to exclude other benign and malignant soft tissue lesions.^[7] Treatment involves complete surgical excision along with removal of the causative irritant to minimize recurrence.^[8] Various surgical modalities including scalpel excision, electrocautery, laser surgery, and radiosurgery have been successfully employed.^[9]

This report presents the successful management of a traumatic fibroma of the lower labial mucosa using electrocautery with favorable postoperative healing.

CASE REPORT

A 55-year-old female reported to the Department of Periodontics with the chief complaint of a painless swelling on the inner aspect of her lower lip. The patient first noticed the swelling approximately six months earlier, following the use of a removable partial denture. The lesion gradually increased in size but remained asymptomatic. No history of spontaneous bleeding, ulceration, or discharge was reported.

Clinical examination revealed a solitary, well-circumscribed, sessile nodular swelling measuring approximately 1.5 cm × 1.5 cm on the lower labial mucosa. The lesion appeared smooth, pink, and firm on palpation without tenderness. The surrounding mucosa appeared healthy, and no regional lymphadenopathy was detected.

Based on the patient's history of chronic irritation from a removable partial denture and the clinical findings, a

provisional diagnosis of traumatic fibroma was established. Differential diagnoses included pyogenic granuloma, peripheral giant cell granuloma, lipoma, mucocele, and minor salivary gland neoplasm.

After obtaining informed consent, the lesion was excised under local anesthesia using an electrocautery unit (Bonart, 1.5–1.7 MHz). Electrocautery was selected because it provides excellent hemostasis, improved visibility, reduced operative bleeding, decreased postoperative discomfort, and minimal tissue manipulation. The lesion was excised in toto with an adequate margin and immediately submitted for histopathological evaluation in 10% neutral buffered formalin.

The patient received routine postoperative instructions and was prescribed appropriate analgesics and chlorhexidine mouth rinse. At the one-week follow-up, satisfactory wound healing with healthy granulation tissue was observed without signs of infection or dehiscence. At the one-month follow-up, complete epithelialization and excellent mucosal healing were evident with no evidence of recurrence.

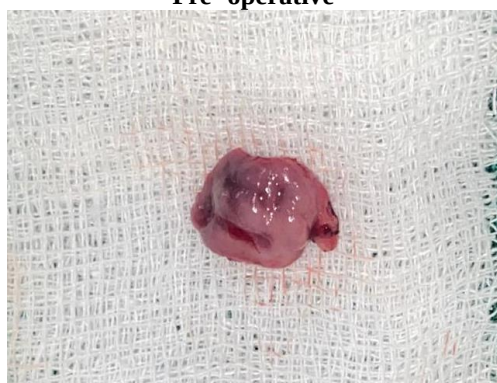
Histopathological examination demonstrated hyperparakeratinized stratified squamous epithelium overlying dense collagenized connective tissue composed of numerous fibroblasts, collagen bundles, sparse chronic inflammatory cell infiltrate, and blood vessels. These findings confirmed the diagnosis of traumatic fibroma.



Pre- operative



Post – operative



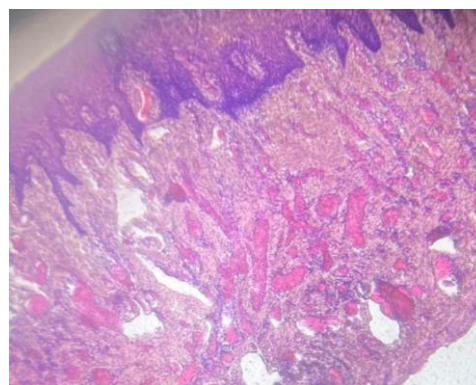
Excised fibroma



One week follow up



One month follow up



Histopathological analysis

DISCUSSION

Traumatic fibroma represents a reactive hyperplastic lesion rather than a true benign tumor. The lesion develops as a consequence of repeated mechanical irritation, leading to chronic inflammation and progressive collagen deposition by fibroblasts.^[10]

In the present case, chronic trauma from a removable partial denture was identified as the principal etiological factor. Ill-fitting prostheses are well-recognized causes of traumatic fibromas because repetitive friction stimulates fibroblast proliferation and extracellular matrix deposition.^[11] Removal of the etiological factor is therefore essential to prevent recurrence.

Clinically, traumatic fibromas are usually slow-growing, painless, and well-defined nodules. Their color generally resembles the adjacent mucosa unless secondary trauma results in ulceration. The lesion in the present case exhibited these classical clinical characteristics. Similar findings have been reported by Barker and Lucas, who described traumatic fibroma as one of the commonest reactive oral lesions associated with chronic irritation.^[12]

Histopathologically, traumatic fibromas are characterized by dense bundles of collagen fibers covered by stratified squamous epithelium, with varying degrees of hyperkeratosis and chronic inflammatory infiltrate. The absence of cellular atypia confirms the reactive nature of the lesion.^[13] The microscopic findings in this case were consistent with previously published descriptions.

Surgical excision remains the treatment of choice. Conventional scalpel excision has long been regarded as the standard approach; however, electrocautery offers several clinical advantages. These include simultaneous cutting and coagulation, excellent hemorrhage control, reduced surgical time, better visualization of the operative field, decreased bacterial contamination, and reduced postoperative pain and edema.^[14] These advantages were clearly evident in the present case, where minimal intraoperative bleeding and satisfactory postoperative healing were observed.

Alternative treatment modalities include diode laser, CO₂ laser, Er:YAG laser, and radiosurgery. Laser surgery

offers excellent patient comfort and rapid healing but is associated with higher equipment costs.^[15] Electrocautery therefore remains a practical, economical, and effective option in routine clinical practice.

Recurrence of traumatic fibroma is uncommon and usually occurs only when the underlying source of irritation persists.^[5] Consequently, patient education and correction of local traumatic factors—including adjustment or replacement of ill-fitting prostheses—are essential components of long-term management.

CONCLUSION

Traumatic fibroma is a common benign reactive lesion resulting from chronic mechanical irritation. Careful history taking, thorough clinical examination, elimination of the etiological factor, complete surgical excision, and histopathological confirmation are fundamental for successful treatment. Electrocautery provides a safe, effective, and minimally invasive method of excision with excellent hemostasis and favorable postoperative healing. Regular follow-up is important to ensure complete healing and to detect any recurrence at an early stage.

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