

## Treatment of Oral Fibroma Using Diode Laser: A Case Report

Kamal Sagar\*, Shruti Tandon\*\*, Arundeep Kaur Lamba\*\*\*, Farrukh Farraz\*\*\*\*

### Abstract

Traumatic or irritation fibroma is a common benign exophytic oral lesion that develops secondary to tissue injury. It is the most common benign reactive oral lesion, and the treatment of choice is surgical excision. The use of laser in different dental procedures has become very common in the last few years. In periodontal surgeries, its use is usually associated with no or little pain and better post-operative results. This report describes a case of 24-year-old male with oral fibroma in the lower left labial mucosa. This lesion was removed by using diode laser. The healing was uneventful and no suture, periodontal pack or analgesics were required. The histopathological report confirmed the pre-surgical diagnosis. The follow-up didn't demonstrate any relapse of the growth.

**Keywords:** Diode laser; Traumatic fibroma; Oral fibroma; Irritational fibroma; Periodontal surgery.

### Introduction

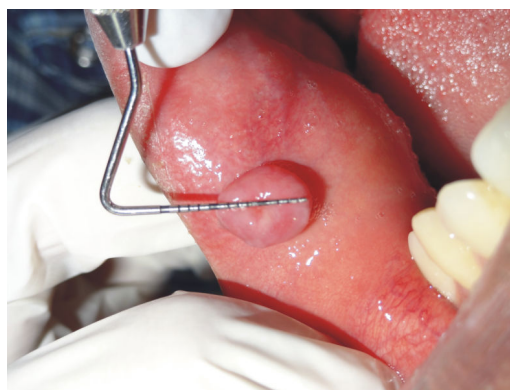
Traumatic fibroma, also known as irritation fibroma, is the most common fibrous tumor-like growth of the oral cavity.[1,2] It affects both males and females equally with an incidence rate of 7.6% of all oral soft tissue lesions.[3] It can occur anywhere in the oral cavity but is most commonly seen on buccal mucosa along the plane of occlusion of the maxillary and mandibular teeth. It is round to ovoid, asymptomatic, smooth-surfaced, firm, and sessile or pedunculated mass.[4] The surface may be hyperkeratotic or ulcerated owing to repeated trauma with a diameter of 1-2 mm.[5]

This case report describes a case where oral fibroma was treated with diode laser. Diode laser has been reported to be effective for excision of intraoral soft tissue lesions and mucogingival surgeries.[6]

### Case Report

A male patient of 24 years old age reported to our outpatient department with a chief complaint of small, painless growth in the lower left lip region since 6 months which was causing constant irritation to him. On intraoral examination, there was a smooth, pinkish-red color, approximately 9-10 mm in diameter, exophytic soft tissue pedunculated mass in the lower left labial region covering almost 2/3rd inner surface of the corner of the mouth.[Fig 1] No oral anomalies other than a sharp cusp on the canines region adjacent to the lesion were observed. Physical examination revealed no other abnormalities like cervical lymphadenopathy and facial asymmetry. The

**Figure 1: Pre-operative**



**Author's Affiliation:** \*BDS (PGIMS Rohtak Haryana), MDS (Final Year Student), \*\*Associate prof., \*\*\*Prof & head, \*\*\*\*Associate prof., Dept Of Periodontics, Maulana Azad Institute Of Dental Sciences, New Delhi, India.

**Reprints Requests:** Dr.Kamal Sagar,BDS,Maulana Azad Institute Of Dental Sciences, New Delhi, India.

E-mail: dr.kamalsagar@gmail.com.

**Figure 2: Intraoperative****Figure 4: Excised Tissue**

haemogram of the patient was within the normal limit. The patient was subjected to Phase I periodontal therapy 1week before the surgical excision.

After 0.2% CHX mouth wash rinse for 45-60 seconds, a local infiltration of 2% lignocaine with epinephrine (1:100,000) was administered perilesionally. The patient and all operating staff wore a special laser protection eye glasses. The lesion was treated by using Diode laser manufactured by Picasso (wavelength-890 nm) with 1.5W power in continuous mode [Fig 2]. Once the lesion had been removed, the surgical field was wiped with sterile gauze soaked in 1% normal saline solution [Fig 3]. The patient was advised to avoid smoking, alcohol and spicy food till the operated site heal. [Fig 4] No analgesic was prescribed. The patient was followed up for a

period of 6-8 months but no recurrence reported. [Fig 5]

The excised mass was sent for histopathological analysis which showed areas of keratinized stratified squamous epithelium and abundant fibrous CT or stroma with moderate vascularity and cellularity. Presurgical diagnosis of irritational fibroma was confirmed on the basis of these histopathological findings.

### Discussion

The terminology oral fibroma implies a benign neoplasm but most of these lesions represent reactive focal fibrous hyperplasia due to trauma, local irritation or habits like

**Figure 3: Immediate Post Operative****Figure 5: Post Operative after 6 Weeks**

lip biting, dental malposition or dental abnormalities.[7] The clinical differential diagnosis of a fibroma includes giant cell fibroma, neurofibroma, peripheral giant cell granuloma and mucocele.

The definitive treatment of irritation fibroma is surgical excision[8] by conventional scalpels, electrocautery, radiosurgery, or lasers. Although radiosurgery and electrocautery have the ability to control bleeding, ensure greater visibility, and are less invasive than an incision, their use results in low tactile sensitivity for cutting, unavoidable burning-flesh odor, and poor postoperative healing.[9,10]

The advantages of lasers for the treatment of facial pigmentation, vascular lesions, and fibroma excision include a relatively bloodless surgical and post-surgical course, minimal swelling and scarring, minimal or no suturing, reduction in surgical time, and minimal or no post-surgical pain.[11] Another benefit is the possible avoidance of needle infiltrated anesthesia, which is desired by many patients

## Conclusion

It can be concluded that the excision of traumatic fibroma with diode laser is safe and quick procedure as compared with other treatment modalities.

## References

1. Neville B, Damm DD, Allen CM, Bouquot J. Oral and Maxillofacial Pathology, 3rd ed. Oxford, UK: Saunders Elsevier; 2009, 507.
2. Toida M, Murakami T, Kato K, *et al*. Irritation fibroma of the oral mucosa: A clinicopathological study of 129 lesions in 124 cases. *Oral Med Pathol*. 2001; 6: 91-94.
3. Bouquot JE, Gundlach KK. Oral exophytic lesions in 23,616 white Americans over 35 years of age. *Oral Surg Oral Med Oral Pathol*. 1986; 62: 284-291.
4. Daley TD, Wysocki GP, Wysocki PD, Wysocki DM. The major epulides: Clinicopathological correlations. *J Can Dent Assoc*. 1990; 56: 627-630.
5. Sapp JP, Eversole LR, Wysocki GP. Connective tissue lesions. In: Sapp JP, Eversole LR, Wysocki GP, eds. Contemporary Oral and Maxillofacial Pathology, 2nd ed. Philadelphia: Mosby; 2004, 287-329.
6. Desiate A, Cantore S, Tullo D, Profeta G, Grassi FR, Ballini A. 980 nm diode lasers in oral and facial practice: Current state of the science and art. *Int J Med Sci*. 2009; 6: 358-64.
7. Barberi´a E, Lucavechi T, Ca´rdenas D, Maroto M. An atypical lingual lesion resulting from the unhealthy habit of sucking the lower lip: Clinical case study. *J Clin Pediatr Dent*. 2006; 30: 280-282.
8. Niccoli-Filho W, Cantarelli Morosolli AR, Bianchi M. CO2 laser surgery of obstructive fibroma in the oropharyngeal cavity. *J Oral Laser Appl*. 2005; 5: 103-105.
9. Shafer WG, Hine MK, Levy BM. A Textbook of Oral Pathology, 6th ed. Philadelphia: Saunders; 2009, 126-127.
10. Miller CS, Leonelli FM, Latham E. Selective interference with pacemaker activity by electrical dental devices. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 1998; 85: 33-36.
11. Desiate A, Cantore S, Tullo D, Profeta G, Grassi FR, Ballini A. 980 nm diode lasers in oral and facial practice: Current state of the science and art. *Int J Med Sci*. 2009; 6: 358-364.