



## Labial Frenectomy: A Case Report

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### Abstract

The maxillary labial frenum develops as a post-eruptive remnant of the ectolabial bands which connect the tubercle of the upper lip to the palatine papilla. The frenulum is considered pathogenic and is considered for removal if there is an aberrant frenal attachment causing a

midline diastema. The present case report involves the conventional/scalpel technique through excision of the frenum by using a scalpel.

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### Introduction

Frenum is an anatomic structure formed by a fold of mucous membrane and connective tissue fibers that attach the lip and cheeks to the alveolar mucosa and/or gingiva and the underlying periosteum.<sup>1</sup> It consists of highly vascularised connective tissue covered with epithelium. It contains a variable amount of collagenous fibrous tissue. Its size is different for every individual.<sup>2</sup>The maxillary labial frenum develops as a post-eruptive remnant of the ectolabial bands which connect the tubercle of the upper lip to the palatine papilla. No bone is deposited inferior to the frenum when the two central incisors erupt widely separated. A V-shaped bony cleft between the two central incisors and an abnormal frenum attachment results.<sup>3</sup>

The frenulum is considered pathogenic and is considered for removal under following conditions:

- (i) An aberrant frenal attachment causing a midline diastema;
- (ii) A flattened interdental papilla in which frenulum is closely attached to the gingival margin. It leads to gingival recession and interferes with the maintenance of oral hygiene;
- (iii) An inadequately attached gingival and/or a shallow vestibule is present.<sup>4</sup>

A very common aesthetic complaint of patient is maxillary anterior spacing or diastema. Factors that cause diastema are labial frenulum, microdontia, mesiodens, peg-shaped lateral incisors, lateral incisor agenesis, cysts in the midline region. Oral habits such as finger sucking, tongue thrusting, and/or lip sucking also causes midline diastema.

The abnormal frenum can be treated by frenectomy. Frenectomy is defined as the complete removal of the frenum, including its attachment to the underlying bone. Various methods to accomplish frenectomy are

- (i) routine scalpel technique,
- (ii) electrosurgery or
- (iii) lasers.

The conventional/scalpel technique involves excision of the frenum by using a scalpel. However, risks of surgery such as bleeding and patient compliance are present.<sup>3</sup>

### Case report:

A 17 year-old patient reported to my private clinic with the chief complaint of spacing in the upper front tooth region. No systemic disease was revealed in patient's medical history. Intraoral examination revealed Ellis' class I fracture in relation to 11 and Ellis' class III fracture in relation to 21 [ Figure 1]. Patient was not willing for treatment of these.

A blanching test was performed for an abnormal high frenum. This test is done by observing the location of the alveolar attachment when intermittent pressure was exerted on the frenum. The development of the anterior occlusion is not influenced by the frenum if a heavy band of tissue with a broad, fanlike base is attached to the palatine papillae and produces blanching of the papilla. Informed written consent was obtained from the patient.

Frenectomy was carried out under local infiltration by using 2% lignocaine with 1:80000 adrenaline. Incision was given using No. 11 Bard Parker blade. In this case, on either side of the frenum lateral incisions were made to the depth of the underlying bone. The free marginal tissues on the mesial side of the central incisors were not disturbed. The wedge of tissue was picked up with tissue forceps and excised with Bard blade. This incision is given at the area close to the origin of the frenum [Figure 2,3]. Sutures were placed to identify the free tissue a margin on either side of the removed tissue [Figure 4]. The patient was advised to return after a week for suture removal and periodical follow-up. The patient did not return for follow up.

#### **Discussion:**

Most common etiological factor for the presence of a midline diastema is an aberrant frenum. Because of above stated reason the focus on the frenum has become essential. The aberrant frenum can be treated by frenectomy or by frenotomy procedures.<sup>1</sup> It aims to eliminate excessive interdental tissue. It also reduces the tension of marginal gingiva tissues. Benefits of frenectomy includes (i) avoiding diastema relapse, (ii) reestablishes the anatomy of the area. It improves the esthetic, and helps to prevent periodontal problems.<sup>6</sup>

With use of laser, the area around the incision is damaged. It is due to the unwanted lateral heat produced causing area of coagulation necrosis. Electrocautery may cause burns. There is risk of an explosion if combustible gases are used. It also interferes with pacemakers and produces surgical smoke. Patient treated with electrocautery had prolonged healing period and takes more time for epithelization.<sup>7</sup>

The healing of conventional technique takes place by primary intention which leads to minimal scar formation.<sup>8</sup> There is also scar formation which prevents the closure of midline diastema during orthodontic treatment. Hence, the scar formation contraindicates the conventional frenectomy procedure prior to orthodontic treatment.<sup>9</sup> When this technique done postoperatively, on healing, there is a continuous collagenous band of gingiva across the midline, that gives a bracing effect than the “scar” tissue, thus preventing an orthodontic relapse. The transseptal fibres are not disrupted surgically and so, there is no loss of the interdental papilla.<sup>3</sup>

Thus case selection for particular technique of frenectomy should be done carefully.

#### **Conclusion:**

Despite the various modifications in performing frenectomy the conventional scalpel technique is still commonly practiced.

**References:**

1. Patel R M, Varma S, Suragimath G, Abbayya K, Zope S A, Kale V. Comparison of labial frenectomy procedure with conventional surgical technique and diode laser. *J Dent Lasers* 2015;9:94-99.
2. Upadhyay S, Ghimire N. Attachment of Maxillary Labial Frenum in Nepalese Children. *Orthod J Nepal* . 2012 Jun ;2(1):38-1.
3. Devishree SK, Shubhashini PV. Frenectomy: a review with the reports of surgical techniques. *Journal of clinical and diagnostic research: JCDR*. 2012 Nov;6(9):1587.
4. Sæthre T, Berg E, Bunæs DF, Leknes KN. Complication following frenectomy: A case report. *Clinical Case Reports*. 2021 Oct;9(10):e04888.
5. Korkut B, Yanikoglu F, Tagtekin D. Direct midline diastema closure with composite layering technique: a one-year follow-up. *Case reports in dentistry*. 2016 Jan 6;2016.
6. Júnior RM, Gueiros LA, Silva IH, de Albuquerque Carvalho A, Leão JC. Labial frenectomy with Nd: YAG laser and conventional surgery: a comparative study. *Lasers in medical science*. 2015 Feb;30(2):851-6.
7. Gandhi D, Gandhi P. Comparison of Healing Period after Frenectomy Using Scalpel, Electrocautery & Diode Laser. *JAMMR* 2017;21(12):1-9.
8. Ghosh SO, Nair VI, ARORA R. Frenectomy using scalpel in the classical technique-a case report. *Journal of Case Reports in Medical Science*. 2021 Jun 17:1-7.
9. Coletton SH. The mucogingival surgical procedures which were employed in reestablishing the integrity of the gingival unit (III). The frenectomy and the free mucosal graft. *Quintessence Int*. 1977;8(7): 53-61.

**Figures:**



**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4**