European Journal of Molecular & Clinical Medicine
ISSN 2515-8260 Volume 07, Issue 08, 2020

Frenectomy – A Case Review

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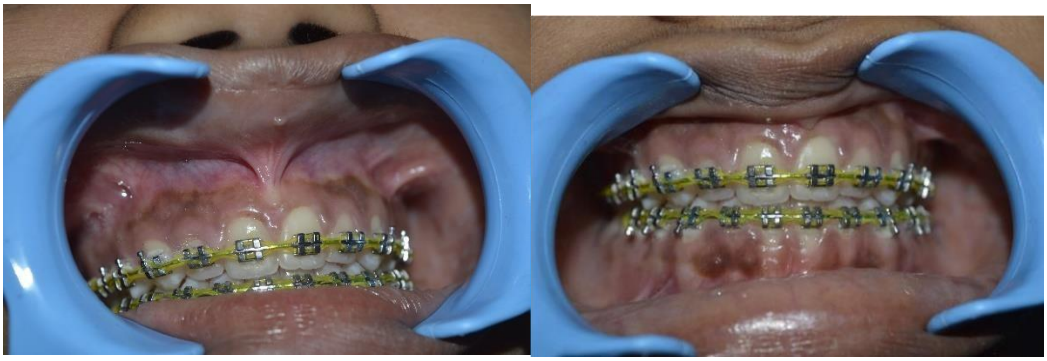
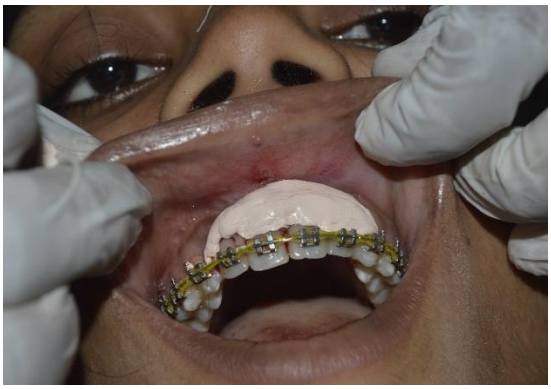
Abstract Introduction:
Frena are mucosal folds that attach the lips or the cheeks to the alveolar mucosa, gingiva, or underlying periosteum. Ectopic frena can cause complications such as gingival recession, decreased vestibular depth, decreased range of lip movement, and involvement of interdental papilla; they also may interfere with oral hygiene. A frenal attachment can be diagnosed by pulling on the patient's upper lip. If the attachment is abnormal, pulling on the lip will result in movement of the tip of the papilla or blanching of tissue due to ischemia at the site. Frenectomy is indicated in the following situations: when an ectopic frenum results in a midline diastema, when the close vicinity of the frenum to the gingival margin results in gingival recession and impairs oral hygiene, or when an ectopic frenum is associated with inadequate attached gingiva and a shallow vestibule.

MATERIAL AND METHODS:
There are several possible approaches to frenectomy: classic frenectomy, Z-plasty, V-Y plasty, electro surgery, and use of carbon dioxide laser. The material needed are scalpel, knife, haemostat and sutures.
A 15-year-old girl, named Divya with no relevant medical history presented with a chief complaint of excess gingiva between her maxillary central incisors. Extra oral and intraoral examinations were carried out. Gingival sulcus depth was measured at 6 points around each of the maxillary central and lateral incisors. The maximum depth was found to be 2 mm.
Infiltration anaesthesia was induced at the lateral sides of the labial frenum as well as the Procedure- After profound anaesthesia of the area, the frenum was engaged with an artery incisopalatal area. A microsurgical blade was used to make the primary incisions.



haemostat till the depth of the vestibule. The incision was made on the upper and the lower borders of the haemostat extending up to its tip. The triangular shaped excision tissue was removed and a rhomboid shaped cut in the surgical area was seen. Through this cut blunt dissections were made in the muscle attachments to the bone, separating the fibres. The surgical site was then irrigated with normal saline and adequate haemostasis was achieved. Interrupted sutures were given and the area was covered by periodontal dressing.

Post-operativeinstructions: Patient was advised not to consume hard food substances from the anterior region and to avoid hot and spicy food. Patient was given proper oral hygiene instructions. Post-operative medications included antibiotics, analgesics and mouth rinse. At 2 weeks follow up, healing of the mucosal tissues were significant and no post-operative pain or oedema was present. Sutures were removed with topical anaesthesia and the surgical site was irrigated with beta dine. Patient was recalled after 1 month for follow up.

II. Discussion

Conventional frenectomy with scalpel is the first and the oldest technique introduced for this procedure. Various other techniques have been introduced thereafter such as the Millers' lateral pedicle graft technique, 4 V-Y plasty5 and Z palsty.6 surgical excision of the frenum has few drawbacks such as patient anxiety and intra operative bleeding. Currently there are many other techniques that have been introduced for frenectomy such as frenectomy using lasers such as Nd: YAG laser 7, diode, 8, and 9 diode in conjunction with Er: Yag10 and electrocautery.11 though these advanced techniques have certain limitations such as1. Expensive procedure. 2. Postoperative pain and oedema. 3. Technique sensitive procedures such as the V –Y plasty and Z plasty procedures are difficult to perform with lasers as there is a need for a clean and sharp incision for proper approximation of the tissues post-surgery.

III. CONCLUSION

Closure of the maxillary midline diastema with a prominent frenum is more predictable with frenectomy and concomitant orthodontic treatment than with frenectomy alone. This study demonstrates the importance of an interdisciplinary approach to treat maxillary midline diastemas, including general practitioners, periodontists, and orthodontists.

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