



FRENECTOMY BY SURGICAL TECHNIQUE WITH FREE GINGIVAL AUTO GRAFT – A CASE REPORT

Dr.Parveen Ranga*

Senior Resident, Department of Dentistry Shaheed Hasan Khan Govt. Medical College Nuh, Haryana, India *Corresponding Author

Dr. Amita Sharma

Head of the Department, Department of Dentistry Shaheed Hasan Khan Govt. Medical College Nuh, Haryana, India

ABSTRACT

One of the essential surgical procedure is the frenectomy. The labial frenum is an anatomical landmark that joins the lips and cheeks to the alveolar processes of maxillary and mandibular bones. This fold contains vascular structures with thin peripheral nervous ramifications that is covered by stratified layered epithelium and their high attachment may involve orthodontic, prosthodontics and prosthodontics discrepancies as well as speech inability. An abnormal frenum is termed as a hypertrophic, fibrotic, ample, fan-shaped or bifid-ending structure. Scalpel surgical technique has verified to be successful with soft-tissue incision and also led to a considerable satisfactory results.

KEYWORDS : Frenum, Frenectomy, Diastama

INTRODUCTION

A frenectomy is a simple surgical procedure that can be performed separately (that is, for orthodontic reasons) or in conjunction with a free gingival graft (that is, to treat a gingival recession, increase the amount of attached gingival, or deepen the vestibule).^{1,2} Frena, which are triangle-shaped folds found in the maxillary and mandibular alveolar mucosa, are located between the central incisors and canine premolar area.³ Frena may be long and thin, or short and broad. Labial frenum attachments have been described as mucosal, gingival, papillary, and papilla penetrating.^{4,5} Insertion points of the frena may become a problem when the gingival margin is involved.¹ This may be the result of an unusually high insertion of the frenum or marginal recession of the gingiva. High frenal insertion can distend and pull the marginal gingiva or papilla away from the tooth when the lip is stretched. This condition may be conducive to plaque accumulation and inhibit proper oral hygiene. Aberrant frena can be treated by frenectomy or frenotomy procedures. The terms frenectomy and frenotomy signify operations that differ in degree of surgical approach. Frenectomy is a complete removal of the frenum, including its attachment to the underlying bone, and may be required for correction of abnormal diastema between maxillary central incisors.³ Frenotomy is the incision and relocation of the frenal attachment. Abnormal frenal attachments occur most often on the facial surface between the maxillary and mandibular central incisors and in the canine and premolar areas. High frenal attachments on the lingual surface are less common.⁶ Orthodontic closure of diastema without excision of the associated frena are clinically associated with relapse separation of the teeth.⁷

Case - A 22 year old female patient with complaint of gapping between lower front teeth reported to Department of Dentistry at shaheed hasan khan govt. medical college Nalhar Nuh dist. Haryana state, India On clinical examination pull test revealed a papillary penetrating type of Maxillary Labial Frenectomy using various techniques of maxillary labial frenum attachment (Figure 1a). Medical history was not significant. After obtaining informed consent, labial frenectomy was planned. Procedure performed was classical scalpel technique

Armamentarium –

This includes the basic kit plus a mosquito hemostat.

Technique

Surgical steps for frenum removal Grasp the frenum (Fig. 1) with a slightly curved hemostat inserted into the depth of the vestibule. Incise along the upper surface of the hemostat, extending beyond the tip. Make a similar incision along the undersurface of the hemostat until the hemostat is free. Remove the triangular resected

portion of the frenum with the hemostat. This exposes the underlying brushlike fibrous attachment to the bone. Use the curved scissor to remove any dense fibers from the wound. Extend the lip and determine whether there is still pull on the periosteum and recipient bed for free gingival graft were prepared (Fig. 2). Clean the field of operation and pack it with wet gauze until bleeding subsides.

Suturing technique

Free gingival autograft were placed on the operated side and than suture the edges of the diamond-shaped wound together by using 5-0 silk in simple interrupted fashion (Fig .3,4). Place three sutures across the wound margin to reduce postoperative discomfort and promote healing. Then apply the periodontal dressing to protect the surgical field. Medicine augmentine 625 mg, ibuprofene 400mg and cap. Omega 20mg were prescribed to the pt. for 5 days and Pt. recalled after 6 months. After 6 months results were satisfactory (Fig .5).

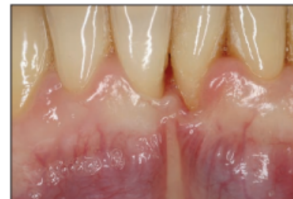


Fig.1 High frenum attachment



Fig.2.Recipient bed for free gingival graft



Fig.3 Free gingival graft were placed



Fig.4 Free gingival graft were sutured



Fig.5 Results after 6 months

DISCUSSION

Frenectomy can be done by various advanced technique which have been proposed for the widely followed procedure but most accepted technique is classical technique. The classical technique⁸ leaves a longitudinal surgical incision and scarring, which may lead to periodontal problems and an unaesthetic appearance, thereby necessitating other modifications.

Among all the approaches for frenectomy which were employed, the electrocautery procedure offered the advantage of minimal time consumption and a bloodless field during the surgical procedure, with no requirement of sutures. The techniques like simple excision and a modification of V-rhomboplasty fail to provide satisfactory aesthetic results in the case of a broad, thick hypertrophied frenum. This may be due to the inability to achieve a primary closure at the centre, consequently leading to a secondary intention healing at the wide exposed wound. It may become a matter of concern in the case of a high smile line exposing anterior gingiva. The Z-plasty technique was found to be ideal for a broad, thick hypertrophic frenum with a low insertion, which was associated with an inter-incisor diastema and a short vestibule. It achieved both the removal of the fibrous band and the vertical lengthening of the vestibule.⁹

In the present case we had done frenectomy by simple classical surgical technique with free gingival graft which gives satisfactory result.

CONCLUSION

Hence, an aberrant frenum can be removed by any of the modification techniques that have been proposed, a functional and an aesthetic outcome can be achieved by a proper technique selection, based on the type of the frenal attachment. Though the approaches to the problem of not using the traditional scalpel, like electro surgery and lasers have merits, further improvements can still be attempted.

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