IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 01 Ver. XI January. (2018), PP 38-40
www.iosrjournals.org

Repair of Gingival Defect Caused By Double Frenal Attachment In Mandibular Central Incisor – A Case Report

*[1]Dr. Shobana P, [2]Dr.Ramakrishnan T, [3]Dr.Vidhyasekhar, [4]Dr.Manisundar N, [5]Dr. Ebenezer M, [6]Dr.Nirmala J.I.

[1,6] III year Post Graduate, Department of Periodontics, Adhiparasakthi Dental College and Hospital, Melmaruvathur. TN, India.
[2] H.O.D, Department of Periodontics, APDCH, Melmaruvathur, TN, India.
[3, 4,5] Reader, Department of Periodontics, APDCH, Melmaruvathur, TN, India
Corresponding Author: Shobana. P

Abstract: *Gingival recession has been defined as the apical migration of the marginal gingiva that may be commonly associated with aberrant or high frenal attachment, improper brushing techniques and leads to exposure of root surface that might compromise the esthetic or cause dentin hypersensitivity. Various periodontal plastic surgeries have been introduced so far to treat such gingival defects, of which the two stage procedure that combines the elimination of the local contributing factors first, followed by management of gingival recession is found to be succesful.*

Keywords: *Gingival recession, Aberrant frenal attachment, Frenectomy, Lateral pedicle graft.*

Date of Submission: 05-01-2018 Date of acceptance: 26-01-2018

I. Introduction

Labial gingival defects in the area of the mandibular central incisors are often unilateral sometimes bilateral present a difficult problem. These defects are commonly associated with a high insertion of the lower labial frenulum.[1] A frenulum is a small frenum, which is usually found on the maxillary labial, mandibular labial and lower lingual aspect. The primary function of maxillary labial frenum, mandibular labial and lingual frenulum is to provide stability of the upper and lower lip and the tongue[2]. Various maxillary labial frenal attachments have been classified.[3],[4]Some frenal attachments may encroach on the gingival margin and distend the gingival sulcus, which fosters the accumulation of plaque that leads to increase in the rate of progression of periodontal recession, therefore causes recurrence after treatment[2]. Thus, presence of aberrant frenum can become a significant problem in managing localized gingival recession. Gingival recession and aberrant frenal attachments are routinely encountered in day to day practice; various surgical techniques are being performed to correct such deformities5. In order to achieve a better treatment result it is mandatory to eliminate the cause or offending factor. Complete root coverage can be achievable if frenectomy / frenotomy is done Prior to the periodontal esthetic surgery like root coverage procedures.Periodontal plastic surgery is a term first given by Miller 1988 " it is a surgical procedure performed to prevent or correct anatomical, developmental, traumatic or plaque induced defects of the gingiva, alveolar mucosa or bone[6]. (The American academy of periodontology 1996)The treatment protocol followed for these deformities are usually two stage procedures, frenectomy followed by root coverage procedures [5]. Frenectomy is defined as the complete remval of the frenum, including its attachment to the underlying bone, while frenotomy is the incision and relocation of the frenal attachment[7]. By definition gingival recession is defined as the displacement of gingival margin apical to cementoenamel junction. It results in attachment loss, root surface exposure which causes esthetic concerns and root dentin hypersenseitivity. In this present case report we attempted to manage a patient with an isolated gingival recession in mandibular central incisors which was found to be caused by an aberrant mandibular labial frenal attachment (double frenal attachment).The treatment plan included frenectomy followed by root coverage procedure using lateral pedicle flap.

1.1 Case Report:

A patient named Mrs. Indu 32 years old female reported to the Department of Periodontics APDCH College, Melmaruvathur, Tamil Nadu, with a chief complaint of sensitivity in lower front teeth region, which occurs occasionally when taking hot or cold food. On intra oral examination it reveals, presence of double frenal attachment with respect to right mandibular central incisors and Millers class II gingival recession. Apart from this the patient was apparently healthy with non-contributory medical history and she had a fair oral hygiene.

Patient's gingival biotype was found to be thick with adequate width of keratinized gingiva. Vestibular depth was adequate except the presence of aberrant frenum in relation to 41. (FIG 1)Two stage surgical treatment procedures were planned. After explaining the procedure a written informed consent was obtained from the patient. Patient was advised for oral prophylaxis and root planing prior to the surgical procedure (FIG 2). After a week patient was advised for frenectomy with respect to 41 and 31. Under LA 2% lignocaine, frenectomy was done using No.15 blade (FIG 3). After achieving Hemostasis coe pack was given. After 2 weeks patient was advised to report to the department for review. Healing was satisfactory (FIG 4). Now second stage surgery with lateral pedicle graft was recommended to cover the gingival defect, under LA recipient site was prepared, de-epithelialization was done, and lateral pedicle graft was harvested from labial aspect of 31. The graft positioned laterally over the denuded root surface with respect to 41 in the labial aspect. Suturing was done using 5-0 ethicon (FIG 5). Gentle compression was given to eliminate the dead space. Tin foil placed over which coe-pack was given (FIG 6). Post-operative instructions were given. Analgesics prescribed. Patient asked to report after 1 week. After a week suture removal was done (FIG 7). At the end of 1st and 3rd month healing was satisfactory with complete root coverage (FIG 8). Patient was taught with self-hygiene instructions along with proper brushing techniques.

II. Discussion

Based on the number and type of recession various techniques have been used in literature, the etiologic factors like aberrant frenal attachment, local factors such as plaque and calculus were first to be eliminated so that the treatment performed will be successful. Currently the mucoperiosteal conditions can be treated by two approaches. The single stage approach and two stage approach in which the first technique that involves is frenectomy and coverage of recession defect by different techniques as second stage procedure [5.] Successful periodontal root coverage is based on the use of clinically predictable procedures and laterally-positioned mucoperiosteal pedicle graft was consistently found to be one.[8] Laterally positioned flap to cover the area with isolated recession was introduced by Grupe and Warren (1956), the use of barrier membrane in conjunction with pedicle soft tissue graft procedures was introduced by Pini Prato *et al* 1992. In this present case only the lateral sliding flap technique was followed.

III. Conclusion

Within the limitations of this present case report the two stage procedure of combining frenectomy and lateral pedicle graft procedure to correct the labial gingival defect of a single tooth resulted in a complete coverage and the healing occurred uneventfully without any complications. The success of any periodontal plastic surgery depends primarily on the elimination of the local contributing factors like plaque, calculus, aberrant frenal attachment and vigorous brushing techniques, in this case the etiology of gingival recession was mainly caused by the dual frenal attachment in the labial aspect of lower incisors, so the elimination of the abnormal frenal attachment prior to the root coverage procedure successfully resulted in complete coverage. Yet there is a need of a long term follow up with more number of cases in order to evaluate the success of root coverage procedures preceeded with Frenectomy.

FIG 1: Before Scaling

FIG 2: After scaling

FIG 3: Frenectomy done

FIG 4: 1 week after frenectomy

FIG 5: Lateral pedicle graft (root coverage done)

FIG 6: Coe-pack given

FIG 7: One week post op

FIG 8: One month post operative

References

[1]. Grupe HE, Warren Jr RF. Repair of gingival defects by a sliding flap operation. Journal of Periodontology. 1956 Apr;27(2):92-5.

[2]. Priyanka M, Sruthi R, Ramakrishnan T, Emmadi P, Ambalavanan N. An overview of frenal attachments. Journal of Indian Society of Periodontology. 2013 Jan;17(1):12.

[3]. Mohan R, Soni PK, Krishna MK, Gundappa M. Proposed classification of medial maxillary labial frenum based on morphology. Dental hypotheses. 2014 Jan 1;5(1):16.

[4]. Kakodkar PV, Patel TN, Patel SV, Patel SH. Clinical assessment of diverse frenum morphology in permanent dentition. Internet J Dent Sci. 2009;7(2).

[5]. Deshmukh J, Khatri R, Fernandes B, Kulkarni VK, Singh S. Frenectomy with semilunar coronally repositioned flap: A single stage approach-simple solution for complex problem. Journal of Indian Society of Periodontology. 2015 Jul;19(4):454.

[6]. Agudio G, Cortellini P, Buti J, Prato GP, John V, Langer L, Rasperini G, Kim DM, Neiva R, Greenwell H, Dibart S. Consensus Report Mucogingival Therapy. Annals of Periodontology. 1996 Nov;1(1):702-6.

[7]. Dibart S, Karima M. Labial frenectomy alone or in combination with a free gingival autograft. Practical Periodontal Plastic Surgery. 2006:73-5.

[8]. Smukler H. Laterally positioned mucoperiosteal pedicle grafts in the treatment of denuded roots: a clinical and statistical study. Journal of periodontology. 1976 Oct;47(10):590-5.

shobi sweeti" Repair of Gingival Defect Caused By Double Frenal Attachment In Mandibular Central Incisor – A Case Report." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 1, 2018, pp. 38-40