

ESTHETIC REHABILITATION OF MIDLINE DIASTEMA - A CASE SERIES

Authors:

Dr. Lydia Almeida¹

Dr. Adi Deepika Mani²

Dr. Jayasheela M³

Dr. Triveni M G⁴

Post Graduate Student¹
Department of Periodontics
Bapuji Dental College and Hospital
Davangere, Karnataka

Post Graduate Student²
Department of Periodontics
Bapuji Dental College and Hospital
Davangere, Karnataka

Professor³
Department of Periodontics
Bapuji Dental College and Hospital
Davangere, Karnataka

Professor and Head⁴
Department of Periodontics
Bapuji Dental College and Hospital
Davangere, Karnataka

Address for correspondence

Dr. Lydia Almeida
Post Graduate Student
Department of Periodontics
Bapuji Dental College and Hospital
Davangere, Karnataka
E mail: lydiaalmeida0@rediffmail.com

ABSTRACT

Teeth plays a major role when ones confidence is concerned and periodontist is at-most important in balancing the white and pink ratio. Combined role of Periodontists and esthetic dentist played a major role in managing the white pink ratio in the present case series. The authors present three cases in which high frenal attachment was taken care along with unequal gingival margin and diastema closure. This article concludes that frenectomy, crown lengthening and veneering can be used to restore tooth form and esthetics.

Key words: High frenal attachment, Frenectomy, Diastema, Veneers.

J Ind Dent Assoc Kochi 2020;2(3):43-46.

INTRODUCTION

The shape size and colour of the gums and teeth play an important role when esthetics is considered. Feeling of happiness, love, kindness and courtesy are better expressed through the simple act of smiling.¹ Thus it is no surprise that we encounter more frequently individuals reporting to the dental office seeking an ideal smile.² Midline diastema caused due to an aberrant frenum raises esthetic concerns.³ Similar esthetic concerns are dealt with individuals having a gummy smile with excessive gingival display.¹ Mosby's Dental Dictionary defines esthetic dentistry as, "the skills and techniques used to improve the art and symmetry of the teeth and face to enhance the appearance as well as the function of the teeth, oral cavity, and face." Any dentist who wants to become an esthetic dental practitioner needs to learn and apply his/her artistic skills simultaneously with technical knowledge.⁴ A well done naturally looking restoration too will fall short to meet the esthetic demands of the patients if the gingival contour is not in harmony with it. Thus when a patient is to be treated with the aim to fulfill his/her esthetic demand a correctly done treatment planning with a multidisciplinary approach is a must.⁵

Here we describe 3 cases which were done by the mutual coordination between the

Periodontics and the endodontist to carry out procedures like frenectomy, crown lengthening and veneering which would bring out a more harmonious smile and enhance function.

Case Report 1

A 26 year old Male patient reported with a chief complaint of discolored teeth in upper anterior region. On intraoral examination there was a high frenal attachment present in relation to 11 and 21 (gingival type), the tension test was positive and frenectomy was decided as the choice of treatment followed by crown lengthening for 21.

The patient was evaluated and found to be systemically healthy and his verbal and written consent was taken and phase I therapy was carried out with satisfactory maintenance. For the surgery, the area was anaesthetized and Chu's aesthetic gauge was used as a guide to establish a correct dimension of clinical crowns (figure1). External bevel incision was given using 15c blade. The frenectomy was carried with the conventional technique.² Sutures were placed using 4-0 silk sutures. Postoperative instructions were given to the patient and analgesics were prescribed whenever required. The



1a. Pre Operative measurement



1b. Gingivectomy incision



1c. Conventional frenectomy



1d. Post treatment

patient was recalled after 1 week for suture removal and kept under maintenance and veneers were planned accordingly.

frenectomy was planned and the case was managed as described above.

Case report 2

A female patient aged 29 years reported with the chief complaint of spacing in 11 and 21 region. On intra oral examination, the patient had midline diastema with high frenal attachment (papillary type) and tension test was positive (figure 2). The conventional type of

Case report 3

A 30 year old female patient presented with the chief complaint of spacing between 11 and 21. On Intraoral examination there was a presence of high frenal attachment (papilla penetrating type) and tension test was positive and V-Y type of frenectomy was planned. (figure 3)



2a. Pre Operative



2b. Frenectomy



2a. Suturing



2b. Post-treatment results



3a. Pre Operative



3b. Incision



3c. V Incision given



3d. Frenum tissue reloaded



3e. Post treatment results

DISCUSSION

A frenum is a fold of mucous membrane, usually with enclosed muscle fibers, that attaches the lips and cheeks to the alveolar mucosa or gingiva and underlying periosteum, An aberrant frenum can cause periodontal pocket formation, gingival recession and midline diastema.⁶ Frenectomy is a procedure where complete excision of the frenum along with it attached fibers were removed. It can be performed by various techniques like V-plasty, V-Y pasty, Z-plasty or the classical technique described by Archer.² The selection of technique is based on the type of the frenal attachment which is classified by Placek et al (1974) as mucosal, gingival, papillary and papillary penetrating type. Not only the recent advances like electro-surgery and Laser minimize the complications and fasten the wound healing, but also the traditional method maintains its gold standard in its management.⁷ The presented case series achieved proper relocation of the frenum with stable outcome.

Waal and Castellucci explained the importance of the periodontal biological width around the tooth. It is calculated to be around 2.04mm.⁸ In our cases also excessive gingival display was seen which was managed through gingivectomy using Chu's gauge. Chu's aesthetic gauges are series of gauges that help to methodologically approach aesthetic crown lengthening procedure. Moreover the procedures like crown lengthening enables us to fabricate restorations like veneers to improve function and keep the integrity of the surrounding hard and soft tissues. This also ensures that the restorative margins do not violate the biological width.⁹ Veneers which are used to correct discoloured teeth, abnormal tooth forms, and minor tooth malpositioning have long stood the test of time in patients unwilling for prolonged and complex orthodontic treatment.¹⁰ Complete diastema closure was achieved in our cases and the patients were well satisfied with the treatment.

Hence this article concludes that frenectomy, crown lengthening and veneering can be used to restore tooth form and esthetics. Meticulous treatment planning helps in achieving the pink and white esthetic form.

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