

Treatment of Class III Buccal Recession Defect with Subepithelial Connective Tissue Graft- 14 Months Followup: A Golden Approach to Root Coverage

Rajashree Dasari^{1*} Hima Bindu Gireddy² Spandana Sripada³ Madhusudhan⁴

¹Senior Lecturer, Department of Periodontology, Panineeya Institute of Dental Sciences & Research Center, Hyderabad, India.

²Senior Lecturer, Department of Periodontology, Panineeya Institute of Dental Sciences & Research Center, Hyderabad, India.

³Post Graduate Student, Department of Periodontology, Panineeya Institute of Dental Sciences & Research Center, Hyderabad, India.

⁴Post Graduate Student, Department of Periodontology, Panineeya Institute of Dental Sciences & Research Center, Hyderabad, India.

ABSTRACT

Background: Gingival recession is one of the most common periodontal problem with a variety of etiological factors. Various methods for coverage of gingival recession have been tried and tested over many years and subepithelial connective tissue grafting has been established as the gold standard.

Aim: To treat a Millers class III gingival recession defect with subepithelial connective tissue graft and the results were assessed for over a year.

Method: A 26 year old male patient with the chief complaint of long tooth in #31 was examined to have a buccal class III recession defect. Subepithelial connective tissue graft procedure was done for recession coverage.

Conclusion: This case report demonstrates successful results with the use of subepithelial connective graft for the treatment of class III gingival recession defects with an excellent color match with the adjacent gingiva and improved aesthetics over a 14month follow up.

Keywords: Buccal recession, Connective tissue graft, Root coverage, Esthetics.

INTRODUCTION

Gingival recession can be defined as displacement of gingival margin apical to the cemento- enamel junction¹. Though gingival recession does not result in tooth loss, it may cause root caries, cervical abrasion, dentinal hypersensitivity and most of all may result in an unaesthetic appearance affecting the patient's confidence and self-esteem. Various methods for coverage of gingival recession have been tried and tested over many years including pedicle grafts, soft tissue grafts, GTR etc. Amongst these subepithelial connective tissue grafting has been established as the gold standard for treatment of Miller's class I

and II gingival recession. However, in class III recession defects, the success rate is unpredictable³. In this case report we have attempted to treat a Millers class III gingival recession defect with subepithelial connective tissue graft and the results were assessed for over a year.

CASE REPORT

A 26 year old male patient with the chief complaint of long tooth in #31 was examined to have a buccal class III recession defect. Subepithelial connective tissue graft procedure described by Bruno (1994)⁴ was decided to be used for recession coverage.

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*Correspondence Dr. Rajashree Dasari.

Department of Periodontology, Panineeya Institute of Dental Sciences & Research Center, Hyderabad, India.

Email: drrajashree@21gmail.com

Preparation of recipient site

The recipient site was prepared by administering 2% lignocaine HCL with 1:80,000 adrenaline. A Kirkland flap was elevated, after intercrevicular incision along the tooth curvature. A full thickness flap was raised beyond the mucogingival junction to ensure adequate space to adapt the graft and to avoid any tension during suturing. Thorough scaling and root planning was done and any tissue tags were removed.



Fig 1: Pre- operative photograph.



Fig 2: Placement of connective tissue graft.



Fig 3: 1 week post-operative – recipient site .



Fig 4: 1 week post-operative – donor site .



Fig 5: 1 month post – operative photograph.



Fig 6: 3 month follow up.



Fig 7: 6 month follow up.



Fig 8: 14 months follow up.

Harvesting the graft

The donor site was prepared by administering a greater palatine nerve block with 2% lignocaine HCL with 1:80,000 adrenaline. A trapezoidal flap was raised on the palatal vault, about 6-7mm from the gingival margin from the distal aspect of the first premolar to the mesial aspect of the first molar. The graft was obtained from the flap by carefully excising the connective tissue after firmly holding the flap with a tissue holding forcep. The epithelial layer left behind was sutured using absorbable vicryl 4-0 sutures. The obtained graft was trimmed to remove any tissue tags or excess fat.

The graft was placed on the recipient site, stabilized and sutured. The surgical site was covered with a periodontal dressing. Post-operative instructions were given to the patient along a 2% chlorhexidine gluconate mouthwash and medication. The tenth day follow up of the patient showed graft acceptance. Sutures were removed on the 20th day follow up when healing progressed considerably both on the recipient as well as the donor site. At the end of three months good root coverage and esthetic improvement was observed.

DISCUSSION

Gingival recession is a fairly common problem. Prevalence of gingival recession is as much as incidence varies from 8% in children to 100% after the age of 50 years¹⁴. Of the many etiologic factors for gingival recession are faulty tooth brushing, malpositioning of tooth, friction from soft tissue, gingival inflammation, high frenum attachment, trauma from occlusion, and orthodontic tooth movement^(12,13). Several methods have been

advocated for the treatment with varying degrees of success.

In 1985, Langer and Langer first described the technique of subepithelial connective tissue graft for root coverage in the treatment of recessions at single or multiple areas, which was later modified by Harris (1992), Allen (1994) and Bruno (1999). Different flap procedures further modified this technique resulting in a high success rate and predictability as shown in various longitudinal observations and case reports^[8-11]. The success of this technique it attributed the double blood supply for the graft's nutrition, originating from the connective tissue of both the periosteum and flap⁵. It combines the advantages of the pedicle flap procedure and guarantees a double blood supply from both the overlying pedicle flap and the underlying periosteum⁶. Several studies have been done since then using Connective tissue grafts in Millers class I and II recession defects. Miller stated that 100% coverage can be anticipated in Class I and II recessions, partial root coverage in Class III and no root coverage in Class IV². Less favorable treatment outcome has been reported at sites with wide (>3mm) and deep (>5mm) recession⁷.

CONCLUSION

A technique that minimizes patient discomfort and maximizes functional and aesthetic outcomes had to be chosen. This case report demonstrates successful results with the use of subepithelial connective graft for the treatment of class III gingival recession defects with an excellent color match with the adjacent gingiva and improved aesthetics over a 14month follow up.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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