



Alternative Approach for Gingival Augmentation– A Buccal Free Gingival Graft.

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ABSTRACT

TITLE: Alternative approach for gingival augmentation– A buccal free gingival graft.

INTRODUCTION: Gingival augmentation procedures are considered in patients who experiences discomfort during tooth brushing and/or chewing .An epithelialized autogenous free gingival graft from hard palate is preferred site for donar tissue to increase the width of keratinized gingiva. In the current case report buccal gingivahas been suggested as a alternative donor site for augmmentation of gingiva.

METHODOLOGY: Following Scaling and root planning,a recipient bed free of all muscle attachment was created. Buccal free gingival graft of 5 mm × 10 mm was obtained from left maxillary second premolar area (#25) and sutured at the recipient bed.). Both sites were covered with periodontal coe-pack.

RESULT: 1 month post operatively, healing was uneventful with no patient reported discomfort at surgical sites. 1 mm gingival recession coverage was achieved along with no tension at gingival margin in relation to mandibular central incisors.

CONCLUSION: Based on the current case report, buccal gingiva can be considered as a useful alternative to palatal graft for the purpose of augmenting keratinized gingiva.

I. INTRODUCTION

For many years it was believed that insufficient width of attached gingiva was unable to protect the periodontium from the frictional forces of mastication and could not dissipate the pull created by muscles of alveolar mucosa on the gingival margin. Most clinicians believed that “inadequate” width of attached gingiva favours subgingival plaque formation, attachment loss and soft tissue recession.^{1,2}Currently, it is a well acceptedfact that healthy marginal tissues can be maintained with daily mechanical plaque control measures even in areas with <1 mm of attached gingiva.³

However, gingival augmentation procedures are considered in patients who experiences discomfort during tooth brushing

and/or chewing due to interference created by lining mucosa at teeth or implant.An epithelialized autogenous free gingival graft from the masticatory mucosa of hard palate is preferred site for procurement of donar tissue to increase the width of keratinized gingiva.⁴The major drawback of this procedure is that it leads to a “patch-like area”resulting in compromised esthetics. This case report describes the potential role of buccal gingiva as a donor tissue for augmmentation of gingiva.

II. CASE REPORT

A 25 years old, systemically healthy female patient reported with a chief complaint of difficulty in tooth brushing and receding gums since few months. Clinical examination revealed Miller's Class I gingival recession, a high frenumattachement and a positive frenum tension test in relation to mandibular central incisors (#31,#41) (Figure 1A). Clinical parameters were recorded both pre and post operatively including recession depth, keratinized tissue width, width of attached gingiva and amount of clinical attachment loss. UNC-15 periodontal probe was used to access all the periodontal parameters. Recession depth of 3 mm was recorded in relation to #31 and #41. Scaling and root planing was performed and oral hygiene instructions were given as a part of phase I periodontal therapy. Since the patient was unable to maintain acceptable oral hygiene in the mandibular anterior region, after obtaining written and informed consent, gingival augmentation procedure was planned. Maxillary buccal gingiva wasused as the donor site due to the presence of a shallow palatal vault. Under local anesthesia,using no. 15 blade frenectomy was performed and a recipient bed free of all muscle attachment was prepared using horizontal incision apical to the available keratinized tissue (Figure 1B).

In area ofleft maxillary second premolar (#25), donar tissue was obtained after marking the boundaries of the graft using a periodontal probe(Figure 1C). A Graft measuring 5 mm × 10 mm of adequate thickness was obtained. (Figure 1D) It was sutured at the recipient bed using 5-0 polygalctine suture (Figure 1E). Both sites were



covered with periodontal coe-pack. Patient was then instructed not to brush and chew in the areas of surgery for 2 weeks. Chlorhexidine rinse (0.12%) was prescribed twice daily for a period of 2 weeks. Periodontal dressing and sutures were removed after 10 days. Post-surgery, patient was recalled after 2 weeks for evaluation. Healing was uneventful. Follow up after 1 and 3 months showed no sign of recurrence.

III. RESULT

At 1 month post-surgery, at recipient site the graft was blended well with the adjacent tissue without any thick, patchy appearance. (Figure 1F) Gingiva at donor site showed signs of complete healing. 1 mm of attached gingiva and 1 mm gingival recession coverage was achieved along with no tension at gingival margin in relation to mandibular central incisors.

IV. DISCUSSION

Thin periodontal phenotype, absence of attached gingiva and malaligned tooth in the arch are some of the predisposing factors associated with development of gingival recession and malaligned tooth in the arch.⁵⁻⁷ Palatal free gingival graft heals resulting in a tire-patch appearance at recipient site. In the present case report buccal Fgg has been suggested as an alternative approach. Better esthetics were observed at recipient site. Moreover, patient reported no postoperative discomfort at both recipient and donor sites.

V. CONCLUSION

Based on the clinical outcomes observed in this case, it may be concluded that buccal gingiva may provide a useful alternative to palatal graft for the purpose of augmenting keratinized gingiva.

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