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RESEARCH ARTICLE

FREE GINGIVAL GRAFT: CASE SERIES

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ABSTRACT

Free gingival grafts are widely used to treat gingival recession with inadequate attached gingiva in lower anterior teeth region. Although, it has got several disadvantages like poor colour match and donor site morbidity render it unsuitable for root coverage. Placement of free gingival graft continues to be the most anticipated method to increase the apico-coronal dimension of the keratinized mucosa. This article would highlight the efficacy and reliability of free gingival grafts in managing gingival recession in lower anterior teeth region.

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INTRODUCTION

Gingival recession is a frequent issue encountered in day to day clinical practice. Free gingival graft operation is an excellent and predictable surgical procedure to protect adequate keratinized tissue width.⁽¹⁾The presence of adequate keratinized gingiva serves as a barrier to physical trauma and future progression of recession. There is no universal consensus on amount of attached gingiva for periodontal health, but it is common opinion that area with less than 2 mm of keratinized gingiva is more prone for gingival recession.^(2,3) Free gingival graft is a versatile mode of treatment which can be used to cover denuded roots and to increase the width of attached gingiva. There are various surgical techniques available for root coverage like rotational flaps, coronally advanced flap, free gingival graft, guided tissue regeneration, connective tissue graft and combination of these.⁽⁴⁻⁶⁾ Despite of the advances in technique of correction of gingival recession, free gingival graft continues to be a reliable procedure for increasing the width of keratinized gingiva and stopping the progression of gingival recession. Various treatment modalities are possible and which procedure is to be chosen depends upon

local anatomic conditions, choice of operator and patient's comfort.⁽³⁻⁷⁾ At present, free gingival graft is lagging behind the connective tissue graft but it still holds an edge as far as simplicity and invasiveness of the procedure is concerned. This study would highlight the efficacy and reliability of free gingival graft in managing Miller's Class I and Class II gingival recession with inadequate keratinized gingiva in mandibular anterior teeth region where aesthetics are not a major concern with no other contributing factors like trauma from occlusion.

CASE REPORT 1

A female patient aged 40 years reported to the department with chief complaint of sensitivity of lower anterior teeth and her gum was getting down leading to exposure of tooth surface for last six months. On examination Miller's Class II gingival recession was noted on 31 of about 5mm in height (Fig.1a-1c). The width of the attached gingiva was found to be negligible on the affected site with localized accumulation of calculus with no radiographic evidence of bone loss. The patient was undergone Phase I therapy followed by free mucosal graft in 31, 32 region (Fig.1d)



Fig.1a. Pre-op



Fig.1b. Pre-op gingival recession of about 5 mm



Fig.1c: After oral prophylaxis (Phase I therapy)



Fig.1d. Graft placed and secured with suture



Fig.1e. Post-op six months

The patient was followed post operatively up-to six months (Fig.1e) with reduction in tooth sensitivity, gain in keratinized gingiva, and advocated for periodic check-ups.

CASE REPORT 2

A female patient aged 23 years reported to the department with the chief complaint of sensitivity of lower anterior teeth for last six months. Miller's Class I gingival recession was noted in 31 region with positive frenum pull test on the affected region (Fig.2a-2c).

The width of attached was found to be negligible on the affected region. Patient was undergone Phase I therapy followed by free mucosal graft in 31,32 region. (Fig.2d) There was about 2 mm gain in keratinized gingiva, vestibular depth is increased and hypersensitivity was also reduced one month following surgery (Fig.2e). Periodic follow-ups were advised.



Fig.2a.:Pre-op view



Fig.2b. Pre-op gingival recession of about 2 mm

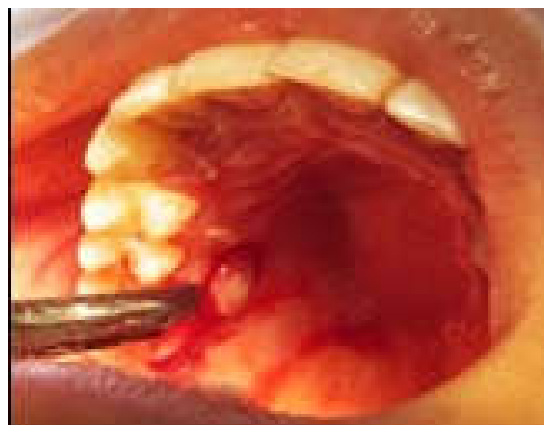


Fig.2c. Free gingival graft harvested from palate



Fig.2d. Free gingival graft placed over the defect area



Fig.2e. Post-op view of three month

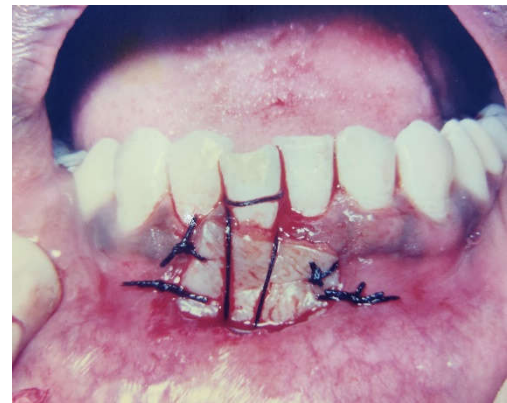


Fig. 3c. Free gingival graft placed over the affected area



Fig. 3d. Post-operative view after three months

CASE REPORT 3

A male patient aged 43 years reported to the department with the chief complaint of sensitivity of lower anterior teeth and lowering of gum margin for last five months. On examination Miller's class II gingival recession were noted on 31, 41 region (Fig.3a-Fig.3c). After thorough Phase I therapy (oral prophylaxis), free mucosal graft was done on the affected region (Fig.3d). There was about 2 mm gain in keratinized gingiva, vestibular depth is increased with reduction of hypersensitivity (Fig.3e). Periodic follow-ups were advised.



Fig.3a. Pre-operative view



Fig.3b. After oral prophylaxis(Phase I therapy)

DISCUSSION

Free gingival grafts have been used in periodontal procedures to augment attached gingiva and cover denuded root surfaces. (1,2)Gingival recession is a very frequent condition encountered both by the clinician and the patient. It can be defined as apical displacement of gingival margin from the cemento-enamel junction leading to exposure of root surface. (2-5)Gingival recession may lead to compromised esthetics, root sensitivity, root caries, and/or pulp hyperemia. Several techniques for the management of gingival recession exist, that is, free grafts (free gingival grafts (FGGs), sub epithelial connective tissue graft); pedicled grafts (lateral and coronal), etc. (2) FGGs were initially described by Bjorn, in 1963. (3)The term FGG was first suggested by Nabers. (4)Free gingival autograft is one of the most common techniques used for a gingival recession in areas of inadequate attached gingiva in the mandibular anterior region. The advantages of using a free gingival grafts are high predictability and relative ease of technique. Several studies have reported coverage of 40-70% using FGG in class I and II recessions. (7) Main disadvantage of free gingival graft is lack of predictability in terms of aesthetics. Mandibular teeth face more challenge and difficult to treat because of certain anatomical factors like thin gingival biotype, shallow vestibular depth and aberrant frenal attachment. Keeping in mind these anatomical factors free gingival graft could be a procedure of choice in treatment of recession defects. In this study free gingival grafts are used to treat Miller's Class I and Class II gingival recession in lower anterior teeth region with no other contributing factors like trauma from occlusion. All the cases reported here with were shown satisfactory root coverage, increase in width of keratinized gingiva, reduction in tooth sensitivity, increased vestibular depth. Although in all the

cases aesthetic mismatch was a concern but recent modification of the surgical techniques like partially epithelized free gingival unit graft, epithelized sub epithelial connective tissue graft may overcome these limitations. Proper case selection and careful tissue management are the key of success in utilising free gingival grafts in management of Miller's class I and II gingival recession in lower anterior teeth with minimal amount of attached gingiva.

CONCLUSION

Free gingival grafts have been used in periodontal procedures to augment attached gingiva and cover denuded root surfaces. Although several modifications and newer techniques are available now-a-days, free gingival auto graft is one of the most common techniques used for the surgical management gingival recession in areas of inadequate attached gingiva in the mandibular anterior teeth region.

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