

# Gingival Augmentation Procedure with Free Gingival Graft

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## ABSTRACT

Gingival augmentation is indicated when there is discomfort experienced during brushing or chewing due to interference from lining mucosa. Gingival augmentation can be achieved with free gingival grafts, pedicle grafts and apically displaced flap. Free gingival graft procedure had predictable outcome for gingival augmentation. A case report of 20 year old male with gingival recession and inadequate vestibular depth is presented. Gingival augmentation was achieved with the free gingival graft.

**Key Words:** Gingival augmentation; Free gingival graft; Gingival recession

## INTRODUCTION

Adequate width of gingiva was considered to be important for maintaining gingival health and preventing soft tissue recession<sup>1, 2</sup>. However, scientific evidence suggest that presence of minimum width of attached gingiva is not of importance in maintaining gingival health<sup>3, 4</sup>. Therefore, presence of narrow zone of gingiva does not rationalize surgical intervention<sup>5</sup>. However gingival augmentation is to be considered in situation where patient experiences discomfort during tooth brushing and/or chewing due to interference from lining mucosa of tooth. Gingival augmentation is accomplished with free gingival grafts, pedicle grafts, apically displaced flaps. Free gingival grafts were initially described by Bjorn in 1963<sup>6</sup>. The term FGG was first suggested by Nabers<sup>7</sup>. Stable results are reported for increased width of attached gingiva obtained using FGG<sup>8, 9, 10</sup>.

## CASE REPORT

A 20 year old male reported with chief complaint of receding gums and inability to brush in lower anterior teeth. On clinical examination, patient had Miller class III recession in relation to tooth #41 and Miller class IV recession in relation to tooth #31. Sulcus depth was 1-2mm in relation to teeth #31, #41. Prominence of roots and thin labial bone contributes to recession. Shallow vestibule was present. Overall oral hygiene was good except teeth with recession. Oral hygiene instructions were given and correct method of tooth brushing was demonstrated. Scaling and root planing was done. Patient was asked to report after 1-2 weeks. As root coverage was not predictable in this case, gingival augmentation using free gingival graft was planned to facilitate plaque control and to halt progression of recession.



**Fig. 1: Pre Operative Photograph**

### Surgical procedure:

The patient was asked to rinse the mouth with 10mL of 0.2% chlorhexidine digluconate solution. The operative site was anaesthetized. Root planing was done in relation to #31, #41 and recipient bed was prepared from gingival margin till alveolar mucosa. Muscle attachments in alveolar mucosa were relieved so as to facilitate graft placement and to deepen vestibule. Tin foil template of recipient site was prepared. As patient has shallow palate, donor tissue was harvested from attached gingiva of right molar area (#16, #17). Template was placed at donor site and partial thickness tissue (epithelium and connective tissue) was obtained.

Graft was placed on prepared recipient bed. Graft was sutured at recipient site using periosteal suture and pressure was applied for 3-4 minutes. Surgical site was protected with coe pak. Patient was asked to avoid brushing at surgical site for 3-4 weeks. For plaque control at surgical site, patient was instructed to use chlorhexidine mouthwash (10 mL of 0.2% solution) twice daily. Patient was asked to report after 10 days for periodontal pack and suture removal. At 10<sup>th</sup> day, periodontal pack and sutures were removed. Plaque was debrided. At completion of 3-4 weeks after surgery, patient was instructed to brush using ultra soft tooth brush and method of brushing creating minimal trauma to tissues was recommended.



**Fig. 2: Photograph at Suture Removal**

Gain in attached gingiva and vestibular depth were achieved after surgery. Some amount of recession coverage was also obtained.



**Fig. 3: Photograph At Follow Up**

## DISCUSSION

Free gingival grafts are used for recession coverage and augmenting the width of attached gingiva. Free gingival grafts can be used at sites with multiple recessions. The free gingival graft has disadvantage of esthetic alterations due to disparity in colour of recipient site (gingiva) and donor site (palate). Free gingival graft has another disadvantage of depending on recipient site for vascular supply thereby limiting its predictability for recession coverage. However stable results are obtained for gingival augmentation using free gingival graft.

## CONCLUSION

This case report demonstrated successful augmentation of gingiva with free gingival graft.

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