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Free Gingival Graft – A Case Report

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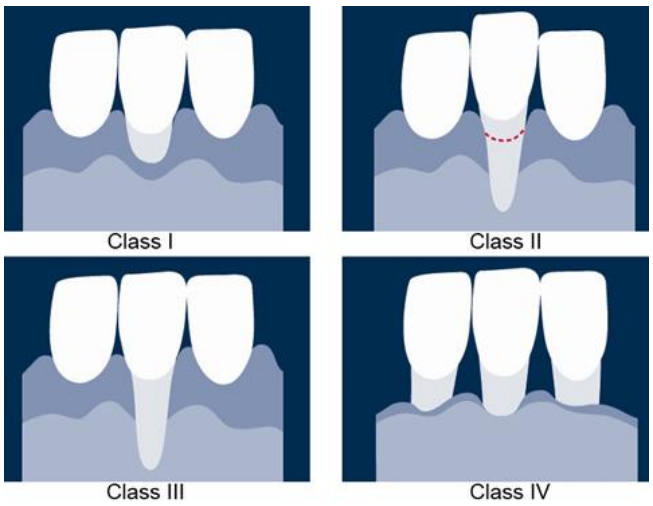
Abstract: ***Gingival recession is defined as "Displacement of soft tissue margin apical to the cemento-enamel junction". Gingival recessions require treatment for many reasons – impaired aesthetic appearance, root sensitivity, cervical caries or abrasion. Presence of gingival recession and gingival inflammation in areas with a lack or narrow band of attached gingiva is identified as a mucogingival problem. Periodontal plastic surgery procedures are performed to resolve these mucogingival problems. This case report presents a case report of a 30 year old female with class I gingival recession (Miller's Classification) successfully treated with complete root coverage by free gingival autograft.***

Keywords: Gingival recession, root sensitivity, root coverage, mucogingival surgery, free gingival autograft (FGG)

1. Introduction

Gingival recession Gingival recession is the exposure of the root surface due to an apical shift of the gingival margin.[1] Marginal etiological factors that can lead to gingival recession: a. Periodontal disease: In periodontal disease, the interaction between bacterial infection and immune response of the host causes matrix degradation, alveolar bone resorption, and apical migration of the epithelium, resulting in periodontal pockets, gingival recession, or a combination of both. [1]Miller presented an expanded classification, which is probably the most widely used today. Miller's system is as follows:[1, 2]



Different surgical techniques for root coverage. These procedures are as follows: [3]
1. Pedicle soft tissue grafts
2. Free soft tissue grafts

Envelope technique
Case report:- a 35 year old female patient presented with a complain of resending gums. On examination it was a miller class II defect was treated by free gingival graft

2. Technique

History of free gingival graft Bjorn in 1963, and Sullivan and Atkins in 1968, were the first to describe the free gingival graft.[10] The free gingival graft was initially used to increase the amount of attached gingiva and extend the vestibular depth. Later it was used to attempt coverage of exposed root surfaces. Simple and highly predictable when used to increase the amount of attached gingiva, it is also quite versatile: it can also be used over an extraction socket or osseous graft.[4,5)

INDICATIONS Free gingival grafts are used for:
- Increasing the amount of keratinized tissue (more specifically attached gingiva)
- Increasing the vestibular depth
- Increasing the volume of gingival tissues in edentulous spaces (preprosthetic procedures)
- Covering roots in areas of gingival recession. [4]

3. Procedure

Preparation of Recipient Site
After local anesthesia and intraoral disinfection with 0.2 % chlorhexidine mouthrinse , the exposed root surfaces were planed thoroughly with a Gracey 1-2 curette in both the cases.(6) The horizontal incision was made at the level of cemento-enamel junction extending from the line angle of adjacent teeth on either side of the recession deep into the papilla, creating a well defined butt joint. At the distal terminal of the horizontal incision, vertical incision was given extending well into the alveolar mucosa. A partial thickness flap was elevated and excised apically (Fig 1 2, 4 & 5) followed by root biomodification by tetracycline hydrochloride 50 mg/ml for 3 minutes.(7)

Preparation of Donor Tissue
The amount of donor tissue needed was accurately determined by using a foil template. The right side of palate between first and second premolar which had greater thickness was selected to harvest the donor tissue. The initial incision was outlined by the placement of tinfoil template with a number 15 scalpel blade. A bevel access incision was made to get an even thickness of the graft. The incision was made along the occlusal aspect of the palate with number 15 scalpel blade held parallel to the tissue, continued apically, lifting and separating the graft. Fig (3). The graft was placed on the recipient bed and sutured by means of interrupted sutures (4-0 Vicryl resorbable) at the coronal and apical borders (7)

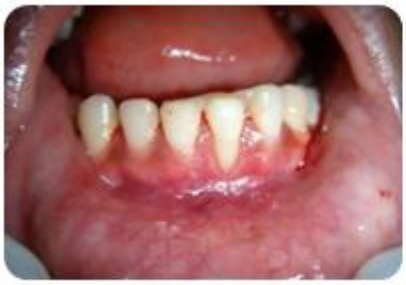


Figure 1: Pre- operative

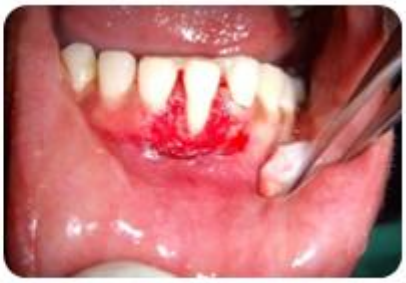


Figure 2: Recipient Site

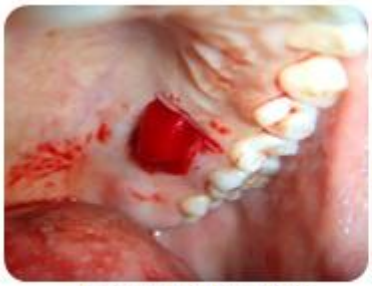


Figure 3: Donor Site

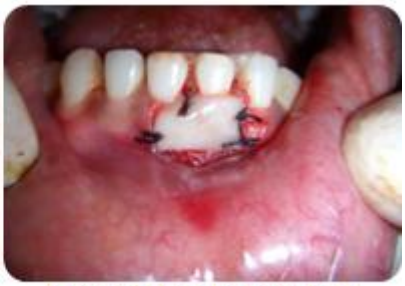


Figure 4: Free gingival graft and suture placed

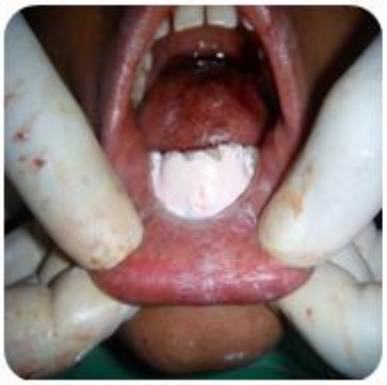


Figure 5: Periodontal pack

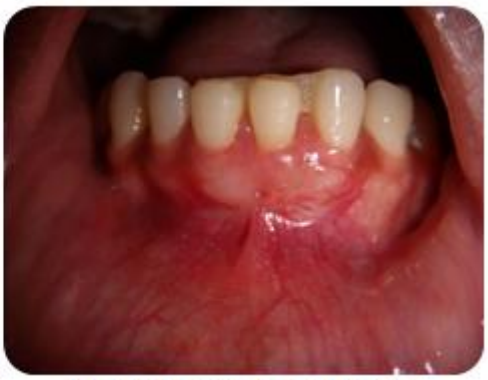


Figure 6: Month Post Operative

4. Discussion

Root coverage by placing free graft was described by Sullivan and Atkins and they reported that free gingival graft offers best results in cases of shallow and narrow recession. [8]

According to Sullivan and Atkins when graft is placed over recession, some amount of bridging can be expected because a portion of grafted tissue which is covering the root will survive by receiving circulation from the vascular portion of the recipient site.

In addition to bridging, creeping attachment can result in a post operative coronal migration of free gingival margin.

Factors which favor creeping attachment are narrowness of the recession, the presence of bone positioned inter-proximally at a coronal level on the facial surface, absence of gross tooth malpositioning, and adequate plaque control.(8)

Later Miller (1987) described a useful classification of recession defects taking into consideration the anticipated root coverage that is possible to obtain. [7]

Miller's criteria for successful root coverage include: the soft tissue margin must be at the cemento-enamel junction, clinical attachment to the root, with sulcus depth of 2mm, and no bleeding on probing. [9] Full coverage was achieved in this case report

References

[1] Goldstein M, Brayer L, Schwartz Z. A critical evaluation of methods for root coverage. Crit Rev Oral Biol Med 1996;7:87-98.
[2] Camargo PM, Melnick PR, Kenney EB. The use of free gingival grafts for aesthetic purposes. Periodontol 2000 2001;27:72-96.
[3] Bouchard P, Malet J, Borghetti A. Decision-making in aesthetics: Root coverage revisited. Periodontol 2000 2001;27:97-120.
[4] Dibart S, Karima M. Free gingival autograft. In: Serge Dibart, editor. Practical plastic periodontal surgery. Oxford: Blackwell Munksgaard; 2006. p. 23.
[5] Agudio G, Nieri M, Rotundo R, Cortellini P, Pini Prato G. Free gingival grafts to increase keratinized tissue: A retrospective
[6] Bird W Dorfman H, Kennedy J. Longitudinal evaluation of free autogenous gingival grafts. Journal of Clinical Periodontology. 2005; 7(4): 316 - 24.

[7] Miller JP. Root coverage with the free gingival graft. Factors associated with incomplete coverage. Journal of Periodontology. 1987; 5(10): 60
[8] Sullivan H, Atkins J. Free autogenous gingival grafts. Utilization of grafts in the treatment of gingival recession. Periodontics1968; 6(4):152
[9] Bernimoulin J P, Luscher Band, Muhlemann H R Coronally repositioned periodontal flap. Clinical evaluation after one year. Journal of Clinical Periodontology 1975, 2, 1–13