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TREATMENT OF MILLER'S CLASS I GINGIVAL RECESSION USING FREE GINGIVAL AUTOGRAFT TECHNIQUE FOR RECESSION COVERAGE

Dr. Tahira Ashraf*[1], Dr. Suhail Jan[2] and Dr. Roobal Behal[3]

[1]Private Practitioner in Srinagar J & K India.
[2]Professor and Hod Govt Dental College Srinagar J & K India.
[3]Associate Professor Govt Dental College Srinagar J & K India.

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***Corresponding author: Dr. Tahira Ashraf**

Private Practitioner in Srinagar J & K India.

ABSTRACT

Recession coverage is one of the most challenging procedures in periodontal mucogingival surgery. Various surgical techniques such as free gingival autograft (FGG), sub epithelial connective tissue graft, laterally sliding flap, coronally advanced flap, double papilla flap, guided tissue regeneration have been developed for the coverage of denuded root surfaces. FGG is a procedure with success rate ranging from 76-95.5% and shows high degree of predictability when used alone or combined with other technique. In this case report, a 25-year-old male patient with Miller's Class I gingival recession in lower right central incisor was treated with free gingival autograft technique with satisfactory post operative results.

KEYWORDS: Free gingival autograft technique, Miller's Class I gingival recession, mucogingival therapy.

INTRODUCTION

Gingival recession is defined as the apical migration of gingival margin from cementoenamel junction (CEJ).[1] Gingival recession results in a cosmetic as well as functional defect. As a result of recession the tooth surface may be exposed to varying degrees resulting in hypersensitivity and root caries. Miller has classified recession as:[2]

Class I: here recession does not extend to the mucogingival junction. No loss of Interdental bone or soft tissue is seen. Complete root coverage is a possibility.

Class II: here although recession does extend to the mucogingival junction. No loss of interdental bone or soft tissue is seen. Complete root coverage is a possibility.

Class III: here marginal tissue recession extends to or beyond the mucogingival junction. Loss of bone and soft tissue interdentally is also seen. Only partial root coverage can be done.

Class IV: marginal tissue recession extends to or beyond the mucogingival junction with severe loss of bone or soft tissue apical to the level of the recession defect .Here severe tooth malpositioning is also seen. No root coverage can be anticipated.

Etiologic factors for gingival recession include plaque induced periodontal inflammation, traumatic tooth brushing, tooth malposition, high frenal attachment, orthodontic tooth movement and oral jewellery. Importance of attached gingiva for a healthy functioning dentition is always a matter of controversy. According to Miyasato et al,[3] if proper oral hygiene is maintained even with almost no attached gingiva,excellent gingival health is found. However in individuals with less than optimal oral hygiene, presence of keratinised attached gingival is a must for optimum esthetics e.g in maxillary canine area in which aesthetics is of primary concern. Teeth serving as abutments for FPD's also require a wide band of attached gingiva.It has been shown that teeth with sub-gingival restorations and narrow zones of keratinised gingival have higher inflammatory scores.[4,5]

There are various surgical techniques to achieve the root coverage such as the use of free soft tissue grafts which includes i) free gingival graft –FGG ii) Subepithelial connective tissue graft. Pedicle soft tissue flaps which include i) laterally sliding flap ii) coronally advanced flap iii) double papilla flap and guided tissue regeneration. In this case report we are presenting the

technique of free gingival graft for Miller Class I gingival recession coverage in lower right central incisor in a 25 year old male patient.

CASE PRESENTATION

A 25-year-old male patient with Miller Class I gingival recession in lower right central incisor reported to the outpatient department of periodontology Govt Dental College and Hospital Srinagar J &k India. The main thing patient was concerned about was progressively increasing recession. Despite adequate home care, he was not able to provide efficient plaque control of the region. The patient had ineffective oral hygiene due to the limitations of the toothbrush placement in the area which has lead to poor control of the gingival inflammation. Pre-surgical therapy in form of scaling and root planning, polishing was performed. Patient was recalled after 15 days for further evaluation. A written consent was taken from the patient regarding surgical procedure in this area. Surgery was performed under local anaesthesia. The recipient site was prepared by making an initial stab incision with a no. 15 blade. After adequate preparation of the recipient site, tinfoil template was placed to establish the size of donor tissue. Tinfoil was placed at donor site at maxillary palate and outline was marked and the graft was dissected. To reduce underlying tissue irregularities fat or glandular tissue were removed by using of a sharp scalpel blade. After that graft was placed at recipient site and secured with sutures and a periodontal dressing was used over the surgical site. The donor site was covered with an acrylic template. Sutures were removed after 7days and wound healing was normal. Patient was put on recall system after every 15 days and at the end of 3rd month, normal height of gingival margin was attained.

Fig. 1: Millers class I recession in 41.

Fig. 2: Preparation of recipient site.

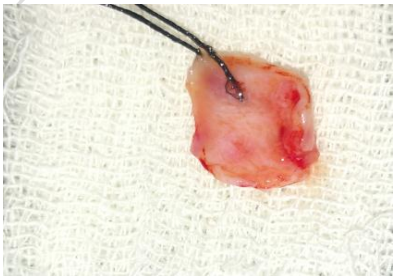

Fig. 3, 4: Procuring graft from donor site.

Fig. 5: securing graft at recipient site by sutures.

Fig. 6: Post op.view after 3 months.

DISCUSSION

Free gingival graft technique was its introduced by Bjorn in 1963.[6] Free gingival autografts have been employed as an alternative technique to various root coverage procedures where donor tissue is not available adjacent to the gingival recession. According to Rateitschak *et al*, free gingival autografts are more effective in preventing gingival recessions by increasing the width of attached gingiva rather than in obtaining root coverage.[7]

Gingival recession regions in the absence of a mucogingival problem, in which there is an esthetic or hypersensitivity consideration, can be also managed with free gingival graft (FGG).The technique is used for covering denuded root surfaces, to increase the width and thickness of attached gingival and for gingival coverage to overcome the problems of hypersensitivity. FGG is considered as the ideal technique, in the lower anterior teeth region with gingival recession and an inadequate amount of keratinized gingiva. The main advantages are high predictability and relative ease of technique. However, this technique has several inherent limitations such as esthetic mismatch and bulky appearance.[8] In present case the patient had miller Class I gingival recession. The main thing patient was concerned about was progressively increasing recession. Esthetics was not a concern as the area to be treated was lower right central incisor. Thus the goal of therapy in this patient was functional restoration of the periodontal attachment apparatus rather than esthetics. After scaling and root planning and proper oral hygiene instructions, surgical phase was performed. Patient was put on recall appointments every 15 days after suture removal. After 3 months along with a thick band of gingival covering the surgical site, a normal healthy gingival margin height was attained.

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