CASE REPORT

ROOT COVERAGE PROCEDURE OF CLASS III GINGIVAL RECESSION BY CONNECTIVE TISSUE GRAFT : A CASE REPORT

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ABSTRACT

Introduction: Periodontal plastic surgery aims to restore the lost gingival tissue along with esthetics and function. Coronally displaced flap along with connective tissue graft has been a very promising technique for recession coverage. In this case because of the use of connective tissue, along with recession coverage there is also increase in the thickness of the keratinized gingiva.

Case presentation: The patient complained of tooth hypersensitivity with respect to 43 tooth with 9mm class III gingival recession. The coronally repositioned flap with connective tissue graft was done and followed up for 3 months. After 3 months, fifty percent of gingival recession was covered and tooth hypersensitivity also reduced significantly.

Conclusion: The use of this technique thus allows to successfully cover single and multiple recessions along with maintaining the thickness of keratinized gingiva.

KEY WORDS

Gingival Recession, Root Coverage procedures, Attached gingiva, Connective Tissue Graft

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INTRODUCTION

Gingival recession is one of the most common mucogingival deformities characterized by apical migration of the gingival margin. The prevalence is quite common especially among the people of age. The main causes of gingival recession are inadequate attached gingiva, faulty tooth brushing technique, aberrant frenal attachment, periodontal disease or due to orthodontic treatment.

Over the years several procedures have been adapted for treatment of gingival recession for e.g., coronally advanced flap, semilunar coronally repositioned flap, pedicle graft, free gingival graft and connective tissue graft. Amongst all the procedures, connective tissue graft is said to be the gold standard for soft tissue correction and augmentation.

Connective tissue graft was first described by Edel1 in 1974 and further modified by Langer and Langer[2] in 1985. While it was originally used to increase the width of attached gingiva, currently it is the method of choice for treating gingival recession due to its high predictability. Connective tissue graft not only covers the root surface in the treatment of gingival recession but it also helps in improving the gingival biotype (Azzi et al, 2002)[3].

CASE REPORT

A 50 year old male patient reported in the Department of Periodontology, Kusum Devi Sunderlal Dugar Jain Dental College and Hospital with hypersensitive lower right side front tooth. Though the patient was complaining about generalized hypersensitivity but patient was able to locate the tooth. On examination class III gingival recession was found in 43 tooth with generalized attrition. Detailed case history along with systemic history was taken. There was no tooth mobility and tender on percussion. We planned to treat the gingival recession of 43 tooth (Fig.1) with connective tissue graft. The procedure and the prognosis was explained to the patient. Scaling and root planing was done. On next appointment, under local anesthesia recipient site prepared (Fig.2) by reflecting partial thickness flap after giving

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Fig. 1: Pre-operative

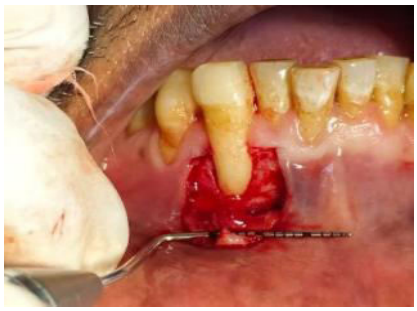

Fig. 2: Recipient Site

Fig. 3: Connective Tissue Graft

Fig. 4: Coronally Advanced flap

Fig. 5: Donor Site- Sutured

Fig. 6: Periodontal Pack

Fig. 7: Post-operative - After 5 Days

Fig. 8 : Post-operative: After 2 weeks-Recipient Site

Fig. 9 : Post-operative: After 2 weeks-Donor Site

Fig. 10 : Post-operative: After 3months-Recepient Site

Fig. 11 : Post-operative: After 3 months-Donor Site

horizontal and vertical incisions mesially and distally by No 15 BP Blade. After obtaining connective tissue graft (Fig.3) from the palate, it was placed in recipient bed. The reflected flap was coronally positioned (Fig. 4) and was sutured with 4-0 non resorbable suture. The donor site was also sutured with the same (Fig.5). Coe-pack was placed in the recipient site (Fig.6). The post-operative instructions and medications were given. The patient was followed up after 5 days (Fig.7), after 2 weeks (Fig.8, Fig.9) and after 3 months (Fig.10, Fig. 11).

RESULT

Periodontal measurements were taken at the buccal side of the operate tooth using UNC probe. After 3 months follow up 50% root coverage was obtained and the gingival margin completely healed. Gingival recession reduced to 4.5mm from its baseline 9mm.

Overall there was increase in the amount of keratinized tissue remained stable. There was no evidence of presence of root hypersensitivity.

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Correct oral hygiene instructions and stringent maintenance protocol contributed to the success of the case. Within the limits of this single case, clinical condition of the case showed optimal esthetic result and significant resolution of baseline defect.

DISCUSSION

The success of gingival recession treatment depends on several factors such as width and depth of recession (GRW, GRD), remaining amount of keratinized gingiva (KG), adequate blood supply of the harvested graft, interproximal bone height etc. In 1985, Langer and Langer[2] described a technique of sub epithelial connective tissue graft (CTG) for root coverage in single or multiple gingival recession cases. The recent literature4 indicates the bilaminar technique which incorporates CTG with coronally advanced flap provides most predictable root coverage. In 2005, Pini Prato et al[7] reported that post-surgical gingival margin is an important factor for achieving better root coverage According to Matter, 5the progressive coronal improvement of gingival margin and increased percentage of sites with complete root coverage observed at 5years in the site treated with coronally advanced flap with CTG were explained with creeping attachment. According to Wennstrom & Pini Prato[6], 63-86% root coverage is anticipated after placing connective tissue graft. According to P.D. Miller, root coverage for class III gingival recession can be expected partially, which we also got in our present case.

This case report shows that CTG is effective for root coverage procedure along with clinical attachment gain (CAL) and increase height and thickness of keratinized gingiva (KG). Nowadays some alternative materials are also used in root coverage instead of CTG to overcome the most common disadvantage i.e. second surgical site involvementbut still CTG is considered as gold standard material for root coverage.

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