

SUBEPITHELIAL CONNECTIVE TISSUE GRAFT FOR ROOT COVERAGE - REPORT OF TWO CASES

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ABSTRACT

Esthetic concerns of the patient have become an essential part of dentistry, especially periodontics. Periodontal plastic surgery is a rapidly emerging field which helps us to meet this criterion. Root coverage can be achieved by various techniques namely pedicle grafts and free soft tissue grafts. This article highlights on case report in which subepithelial connective tissue has been used for root coverage.

KEY WORDS: Subepithelial connective tissue graft, Guided Tissue Regeneration, Acellular dermal matrix

INTRODUCTION

Marginal tissue recession as a clinical entity has been documented since the last century. The earlier concept of a defined width of attached gingiva necessary to maintain oral hygiene does not hold true now¹. It is essential to carry out root coverage surgery whenever concerns such as aesthetics, sensitivity, susceptibility to root caries, pulpal symptoms due to exposure of root, food lodgment and plaque deposition exist². Currently accepted procedures for root coverage include coronally advanced flap, free mucosal graft, sub epithelial connective tissue graft, guided tissue regeneration and acellular dermal matrix. The sub epithelial connective tissue grafts have shown the best predictability (95%) of root coverage in Millers class I and II cases³.

The sub-epithelial connective tissue grafting is a procedure that is designed to:

- Cover recession (when a lateral "pedicle" graft can't be done).
- Re-Construct areas of bone loss or bone resorption⁴.

Case report

A 25 year old male patient reported with the complaint of sensitivity in relation to lower anterior teeth. On examination there was Miller's Class II recession in relation to 31. The distance from CEJ to marginal gingiva was 2.5mm respectively (fig.1)

.The width of attached gingiva was found to be inadequate in the region of 31 since the tension test was positive. Tension test is elicited by pulling the lips outwards to make the frenum taut and presence of mobility of gingiva with frenal pull is considered as positive. Root coverage using palatal connective tissue graft was planned. Root planning was performed in 31, the root convexity reduced and the region of 31 was anesthetised. A sulcular incision through each recession area was given (fig.2) and the tissues were gently undermined, beyond the mucogingival junction so as to relax the flap sufficiently to allow placement of the connective tissue graft (fig.3). The connective tissue graft which was harvested from the palate using Liu's Class II b incision² was placed and stabilized utilizing this extended tunnel (fig.4). Pressure was applied for five minutes to control bleeding and an acrylic stent with periodontal pack was placed. Graft was placed at the site of the recession and sutured using a sling suture (fig.6 and 7). Mild compression with sterile gauze dampened with saline was applied for 5 minutes. Periodontal pack (Coe pack) was placed. The donor site appeared normal in colour and healthy after four weeks and the recipient site was healthy with excellent colour match with adjacent tissues. The tension test was negative. The postoperative vertical dimension of the recession in 31 was 0mm (fig.8). These results were stable and maintained at the end of five months. The mean root coverage achieved in this case was 90 %.³



Fig.1: Pre-operative



Fig.2: Incision placement



Fig.3: Flap elevation

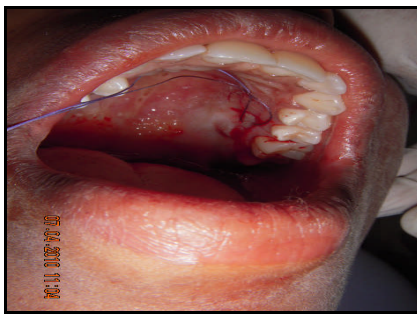


Fig.4: Graft harvestment



Fig.5: Graft harvested



Fig.6: Graft placement



Fig.7: Suturing



Fig.8: post-operative

Discussion

In this technique graft is sandwiched between the periosteum and the flap and gets a double blood supply. The increased blood supply is enough to revascularize the entire flap even though only half

to two-thirds are covered by the flap⁵. The connective tissue ensures good thickness and keratinization, and diminishes the chance of recurrence of recession. The donor site creates minimal discomfort and heals by primary intention.

There is no exposed window of connective tissue that needs to epithelize, requiring care and supervision post-operatively⁶. The technique for this procedure may be more exacting, but it offers more versatility and better results. In cases where both root coverage and gain in keratinized tissue are expected the use of sub epithelial connective tissue graft seems to be more adequate⁷.

CONCLUSION

The results of these cases showed that subepithelial connective tissue grafts provided significant root coverage, clinical attachment and keratinized tissue gain. Overall comparisons allow us to consider it as the 'gold standard' procedure in the treatment of recession-type defects.

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