

CASE REPORT

Utilisation of gingival overgrowth: A novel technique of gingival recession coverage for achieving perioesthetics

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ABSTRACT

Periodontal diseases are frequently characterized by gingival recession and gingival enlargement. Patients find it more difficult to practice good dental hygiene when they have gingival tissue overgrowth. Gingivectomy or excision of gingiva is the most common method for gingival overgrowth reduction. Also, the removed tissue is frequently discarded. In the present case, gingival overgrowth was present adjacent to the area of isolated gingival recession, which was excised and used as a source of connective tissue graft along with lateral pedicle graft for attempting recession coverage in concerned tooth.

Keywords: Gingival overgrowth, gingival recession, lateral pedicle graft, connective tissue graft, recession coverage

Introduction

Gingival enlargement and gingival recession are common features of gingival disease which can be caused by gingival inflammation, fibrous overgrowth, attachment loss. Gingival recession is the apical migration of the gingival margin in relation to the cemento-enamel junction of tooth.^[1] Various treatment modalities, including lateral pedicle flaps, free soft tissue autografts (FSTA), subepithelial connective tissue graft (SCTG), coronally advanced flaps (CAF), SCTG plus CAF and guided tissue regeneration (GTR), have been presented to improve patients' looks, quality of life, and dental health by providing root coverage. Miller's class I and II gingival recession can be effectively treated with subepithelial connective tissue grafting, which is highly predictable.^[2-4]

Case History

A 23-year-old female patient reported to the Department of Periodontology, K.D.C.R.C, Moradabad with a chief complaint of unesthetic appearance of gums in lower front region for 1 year. Contributing factors like plaque and calculus were present locally. The gingiva seemed to be slightly enlarged in 31,32,33. The enlarged gingiva was found to be reddish pink and oedematous, position was apical to CEJ in lower right and left central incisors with localised gingival bleeding on probing (Figure 1). There was no associated drug and systemic history. A provisional diagnosis of localised inflammatory gingival enlargement and Miller's Class III Gingival recession was made with respect to lower right and left central incisors (31,41).



Figure 1: Preoperative photograph

The width of attached gingiva was adequate with respect to 31,41

Radiographic evaluation showed marginal bone loss in interproximal area of lower incisors (Figure 2)



Figure 2: Radiographic view

Surgical Procedure

After proper isolation of the surgical field, the operative sites were anesthetized using 2% xylocaine hydrochloride with adrenaline (1:200000).

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De-epithelization of the gingival margin surrounding the exposed root and interdental tissue between 32 and 33 was done with the use of a No. 15 blade (Figure-3). The granulation tissue that was present along the incisal edge is completely removed by curetting the root surface. Two vertical incisions were made using a no. 15 blade: one at a distal line angle of 41 and the other at a mesial line angle of 42. To allow the flap to move, two vertical and two horizontal incisions were made, and the flap was subsequently extended apically to the mucosal tissue. Next, split thickness flap was raised (Figure-4).



Figure 3: Preparation of recipient and donor site



Figure 4: Flap preparation



Figure 5: Excision of de-epithelised enlarged tissue



Figure 6: Excised tissue

Excision of enlarged interdental gingiva in between 32 and 33 by external bevel incision with 15 no. blade and area was curetted with universal curette. (Figure 5,6)

The flap was relocated laterally to the neighbouring denuded root (Figure 7), with sub epithelial connective tissue graft obtained from excised gingival tissue. In order to prevent slippage apically, the flap was fastened with interrupted and sling sutures (Figure 8).



Figure 7: Transfer of flap with sub epithelial connective tissue graft from excised gingival tissue



Figure 8: Flap sutured in position



Figure 9: Periodontal pack placed

Placement of periodontal pack: The surgical site was covered with a periodontal pack (Coe-Pak) (Figure-9) Patients were given antibiotics to prevent infective issues following surgery. After one week, the pack and sutures were removed, healing was adequate. Recall was scheduled after three months. (Figure-10).



Figure 10: Postoperative view after 3 months

Discussion

In the present case, we attempted lateral pedicle graft as there were isolated areas of recession, with adequate attached gingiva and the patient was keen for esthetics.

We also utilized the connective tissue from the enlarged fibrotic gingival tissue adjacent to the recession site as it is considered rich in growth factors.

It is interesting to know that cytokines and growth factors are found at elevated levels in human gingival overgrowth include interleukin-6 (IL-6), IL-1 β , platelet-derived growth factor-B (PDGF-B), fibroblast growth factor-2 (FGF-2), transforming growth factor- β (TGF- β), and connective tissue growth factor.^[5-7]

Since the lateral pedicle graft continues to receive blood flow from the base, it provides sufficient root coverage and endures over the avascular root surface. After three months, the surgical approach produced good outcomes with satisfactory root coverage.

Hence, instead of wasting the excised enlarged gingiva, it can be used as a source of connective tissue graft in cases where there is simultaneous gingival recession along with enlargement. To the best of our knowledge, no similar case has been reported in literature.

Conclusion

The results of this particular case showed that the enlarged gingiva adjacent to the gingival recession area can be used as a source of connective tissue graft in conjunction with lateral or other pedicle grafts. This technique appears to be a predictable method for treating isolated gingival recession in mandibular incisors that are positioned well within the bone envelope and have sufficient vestibule depth and adequate attached gingiva.

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