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Case Report

ROOT COVERAGE WITH LATERAL PEDICLE FLAP: A CASE REPORT

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A R T I C L E I N F O

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A B S T R A C T

Both localized and generalized form of gingival recession are unwanted condition which results in root exposure, causing root hypersensitivity, shallow root caries, and cervical abrasions. Complete root coverage is basically indicated for esthetic and cosmetic demands of the patient. A case of gingival recession is presented that was managed using LPF technique as this technique shows advantages such as – single surgical area, preservation of blood supply of flap, the post operative color being in harmony with surrounding tissue.

INTRODUCTION

Gingival recession can be defined as the exposure of root surface by an apical shift in the position of gingiva[1]. The various consequences are clinical crown leng thening[2], esthetic problem, hypersensitivity, root caries, abrasion and fear of tooth loss. The presence of gingival recessions at the anterior teeth may represent anesthetic problem for the patient who complains about the excessive length of some of his/her teeth. This dish armony may be apparent in the patient's smile or even at a function al level (phonics, chewing). More seldom, root exposure, due to gingival recession may causedentinehy per sensitivity and consequently patient discomfort and/or inadequate oral hygiene. Several predisposing factors such as thin periodontal phenotype, as well as lack of attached gingiva, can contribute to gingival recession. Areas of thin labial bone plate and thin gingiva were commonly correlated with the canine eminences, the mesial roots of maxillary first molars, and mandibular incisors.[3]

A number of surgical procedures like pedicle soft tissue grafts, free soft tissue grafts and regenerative techniques[4] have been recommended. In pedicle grafts, there are rotation flaps – laterally/horizontally repositioned flaps, double papilla flaps and oblique rotational flaps and the advanced flaps include coronally advanced flaps and semilunar flaps where as soft tissue grafts include-connective tissue & freegingival grafts[5-14].

Data from literature suggest[4,6,7,15], inpatients with aesthetic request where there is adequate keratinized tissue a picalor lateral to the recession effect, pedicle flap surgical techniques (coronally advanced or late rally moved flaps)are recommended (Grupe & Warren1956).

The objective of this case report is to assess the success rate of managing localized gingival recession in patients with the chief complain of hypersensitivity of teeth.

CASE REPORT

A 34-year old healthy male reported to the out-patient department with the chief complain of excessive sensitivity in the upper right back teeth region since 6-months. Also gives the history of bad breath along with bleeding gums, difficulty in mastication. On clinical examination, there were local factors present and it was observed that patient had faulty tooth brushing practice. An isolated Miller's Class III recession defect was observed in relation to the mesial root of 16 [Figure 1]. Tooth 15 was missing but was replaced with a removable partial denture. Patient was systemically healthy without any deleterious habits.

Pre-Surgical Protocol

Patient was motivated and educated and oral hygiene instructions were given to the patient. Phase 1 therapy consisting of oral prophylaxis and root planing was performed. Oral hygiene practice was corrected and the patient was recalled after a month. Patient maintained a good oral hygiene. LPF was planned for the root coverage and was explained to the patient and an informed consent was obtained.

The gingival recession was in relation to the mesial root of 16 and was measured. The dimensions were 4 mm wide and 8 mm deep. Donor site was adjacent edentulous area in relation to 15. There was sufficient width, length and thickness of keratinized tissue present. Oral hygiene and patient maintenance was satisfactory.

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Surgical Technique

Number 15 blade was used to make a crestal incision on the adjacent edentulous area in relation to 15 and was extended to make a crevicular incision that crossed the apical area around the gingival recession. Vertical releasing incisions were performed on both sides, one distal to the mesial root of 16 and the other distal to 14. The pedicle flap size was 1.5 times wider than the area of the recession. Vertical incisions were extended to the alveolar mucosa so that the pedicle flap could be reflected sufficiently to enable the lateral displacement without tension. A full thickness flap was then reflected sufficiently from the donor site and displaced without tension at the recipient site. Suturing was done using 4-0 non resorbable silk suture [Figure 2-3]. Cap Amoxicillin 500 mg tid, tablet flexon tid and chlorhexidine mouth wash thrice daily for 5 days were prescribed. Patient was advised to have a soft diet and avoid brushing in the area of surgery and was also advised to do warm saline rinse 6-8 times a day after 14 hours of surgery. Sutures were removed after 10 days. Healing was satisfactory.

Follow-Up Observations

After completion of the procedure, approximately 8 mm of recession attained clinical attachment gain and adequate width of attached gingiva was appreciated [**Figure 4**].

DISCUSSION

The current case deals with the complete rehabilitation of periodontium and masticatory function of the patient. The success of any muco-gingival surgical procedure depends on various factors like elimination and/or control of etiological factors, predisposing factors like trauma from occlusion, evaluation of inter-dental bone, correction of brushing habits and most importantly the choice of most appropriate surgical technique, which are inherent to each clinical situation and region to be treated.[16, 17, 18]

A systematic review and meta-analysis of long-term outcomes of untreated buccal gingival recessions has reported a high probability of progression even in individuals with good oral hygiene.[19] A gudio *et al*[20] have compared periodontal conditions of 47 patients with gingival augmentation sites versus untreated homologous contra lateral sites, with a mean follow-up period of 23.6±3.9 years. A t the end of the follow-up period, 83% of the 64 treated sites showed recession reduction while 48% of the 64 untreated sites experienced an increase in recession.

Laterally positioned flaps are based on the simple concept of moving donor tissue laterally to cover an adjacent defect and provides sufficient esthetic result.[5] The advantages of laterally repositioned flap over other flap procedure are the presence of its own blood supply after the transfer of the graft and high survival rate on the roots. Long-term success of three years has been shown with 69% of root coverage with LPF by Caffesse and Guinard.[8] Predictable and highly esthetic results may be obtained with this simple technique with proper case selection. McFall[21] reported success in 25 out of 27 cases with LPF. Zucchelli[22] in 120 isolated gingival recession with modified surgical approach reported 97% of the root surface was covered with soft tissue and 80% defects showed complete root coverage after 1 year.

Figure 1 Pre-Operative View

Figure 2 Incision And Flap

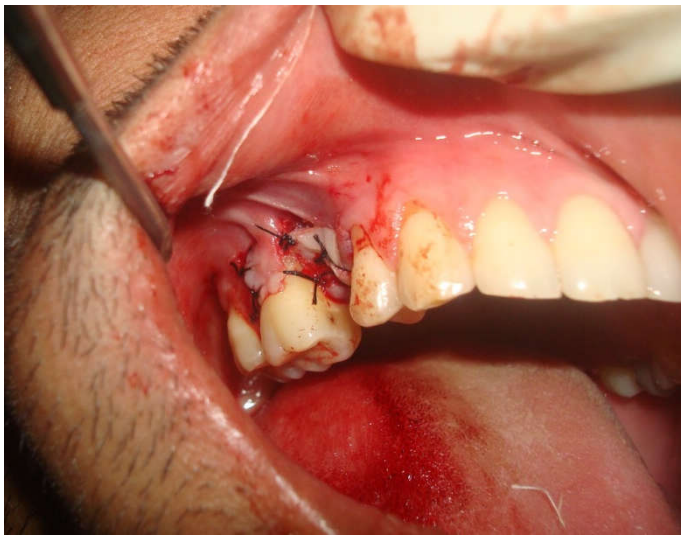

Figure 3 Suturing

Figure 4 Follow-Up

CONCLUSION

In this report, LPF was used to cover Miller Class III recession defect in the right lower mandible posterior molar. The technique is highly reliable for root coverage and for increasing the width of attached gingiva. However, case selection and surgical technique are imperative for a predictable outcome.

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