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Lateral Pedicle Graft for Recession Coverage: A Case Report

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ABSTRACT

Gingival recession is major concern because of root sensitivity, increased predisposition to caries and unaesthetic appearance. Various modalities are available for treatment of recession. Treatment of gingival recession utilizing lateral pedicle graft from edentulous area is presented in this case report.

INTRODUCTION

Gingival Recession is defined as location of marginal periodontal tissues apical to cemento-enamel junction[1]. The main indications for recession coverage are root sensitivity and aesthetic concerns. Changing marginal tissue topography to facilitate plaque control is also one of the indications. Root coverage can be accomplished using free gingival grafts and pedicle grafts. Depending on direction of transfer, pedicle graft procedures are of various types; rotational flap procedures and advanced flap procedures. Procedure for lateral pedicle flap, a type of rotational flap was described by Grupe and Warren in 1956[2].

Indications of Lateral Pedicle Graft:

- Presence of adequate amount of tissue at donor site.
- Sufficient underlying bone at donor site.
- Presence of adequate vestibular depth.

Contraindications of Lateral Pedicle Graft:

- Presence of thin bone at donor site.
- Presence of multiple tooth recession.

Modifications of Lateral Pedicle Graft:

The original procedure has been modified in several ways. Staffileno et al[3] and Pfiefer et al[4] utilized split thickness flap instead of full thickness flap to minimize development of dehiscence at donor site. In order to prevent recession at donor site, Grupe et al[5] suggested not to include marginal soft tissues at donor site in graft. An edentulous site can be also used as a donor area[6,7].

This case report presents lateral pedicle graft procedure utilizing edentulous area as a donor site for recession coverage.

CASE PRESENTATION

A 50 year old male reported to Department of Periodontics, PGIDS, Rohtak with chief complaint of receded gum and hypersensitivity in lower left tooth since 8-9 months. Patient had good general health and was non smoker.

Intra-Oral Examination:

Miller class III recession was present in relation to left mandibular premolar (#34). Edentulous area was present posterior to concerned tooth (because of missing #35, 36, 37). At this appointment, oral hygiene instructions were provided and correct method of tooth brushing was taught. Scaling and root planing was done. Patient was asked to report after 2-3 weeks.

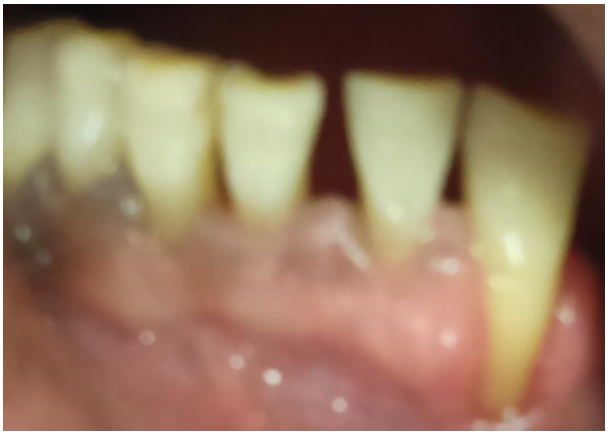

Fig. 1: Pre Operative Photograph

SURGICAL PROCEDURE

The patient was asked to rinse the mouth with 10mL of 0.2% chlorhexidine digluconate solution. The operative site was anaesthetized.

Preparation of recipient bed:

A reverse bevel incision was made all along the soft tissue margin of defect. After removal of pocket epithelium, exposed root surface was thoroughly curetted.

At approximately 3mm from wound edge at site opposite donor area, a superficial incision was made from gingival margin to 3mm apical to defect. Another superficial incision was placed horizontally from incision to opposite wound edge. Epithelium along with outer portion of connective tissue was removed within the area delineated by incision.

Preparation of donor tissue:

Graft was dissected in adjacent edentulous area. Donor tissue was prepared by extending flap vertically parallel to wound edge of recession at a distance that exceed the width of exposed root surface and recipient bed by 3mm. Flap was extended beyond muco-gingival junction and was terminated in lining mucosa with oblique releasing incision toward recession site. Horizontal incision was made on crest of ridge connecting vertical incision at donor site and around recession. Split thickness flap was prepared in areas delineated by incisions.

Placement of donor tissue over recipient bed:

The prepared flap was placed over recipient site and sutured. Pressure was applied for 2-3 minutes to ensure good adaptation between donor tissue and recipient site. Coe pak was applied to surgical site.

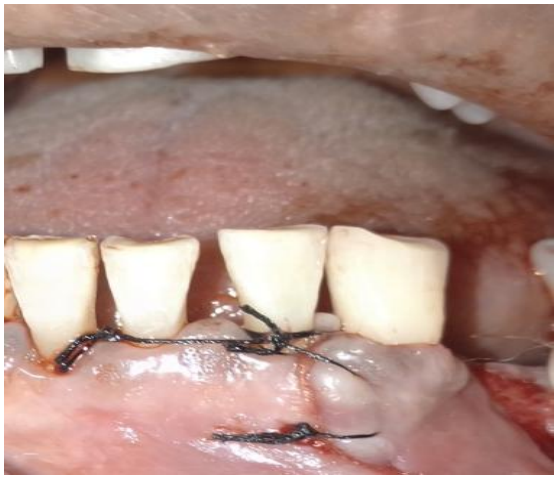

Fig. 2: Surgical Site with Sutures

POST SURGICAL INSTRUCTIONS

Patient was asked to avoid brushing at surgical site for 3-4 weeks. For plaque control at surgical site, patient was instructed to use chlorhexidine mouthwash (10 mL of 0.2% solution) twice daily. Patient was asked to report after 10 days for suture removal.

Post Operative Follow Up:

At 10th day, coe pak and sutures were removed. Debridement of plaque was done. At completion of 3-4 weeks after surgery, patient was instructed to brush using ultra soft tooth brush and method of brushing creating minimal apical trauma was recommended.

Follow Up At 2 Months:

There was optimum achievement of recession coverage after two months of surgery.

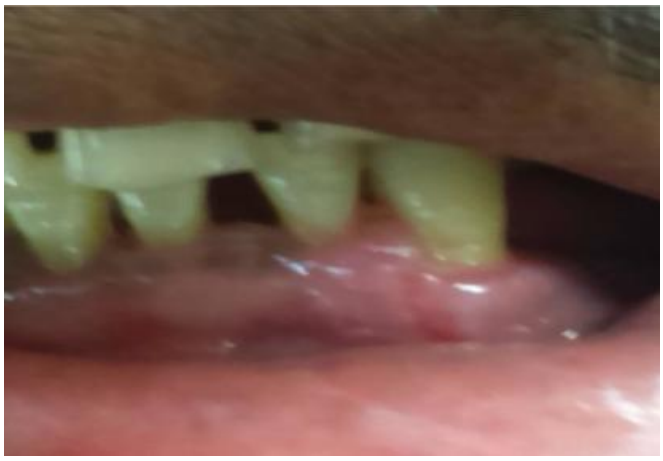

Fig. 3: PHOTOGRAPH AT FOLLOW UP

CONCLUSION

Lateral pedicle graft technique is a simple procedure, provides adequate blood supply to donor tissue. There is good color matching with recipient site. It is predictable for sites with narrow areas of root exposure.

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