

MANAGEMENT OF LOCALIZED GINGIVAL RECESSIONS CLASS II –A CASE REPORT

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ABSTRACT

Gingival recession is the exposure of root surfaces due to apical migration of the gingival tissue margins. Therefore this deformity should be treated at its earliest detection. Gingival recession is an esthetical problem lead to pain or hypersensitivity, retention of plaque hence inflamed gingiva, root caries, abrasion and fear of tooth loss. Gingival recession can be managed by surgical or non-surgical approaches. Nonsurgical approaches include - restorations, crowns, veneers and gingival masks whereas surgical management includes various techniques of increasing the width of keratinized tissue such as frenectomy in case of high frenal attachment & root coverage procedures. Lateral pedicle graft (LPG), is a technique where graft is elevated from donor site which remains attached at its base for nourishment and is transferred to adjacent site in isolated denuded root.

KEYWORDS : lateral pedicle graft, gingival recession, root coverage, dentine sensitivity

INTRODUCTION

Gingival recession is the exposure of root surface by an apical shift in the position of gingiva.¹ Root exposure, due to gingival recession may cause dentine hypersensitivity and consequently patient discomfort and/ or inadequate oral hygiene. A number of surgical procedures have been proposed to treat gingival recession. These can be divided into three main groups: pedicle soft tissue grafts, free soft tissue grafts and regenerative techniques.² 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 whereas soft tissue grafts include - connective tissue & free gingival grafts.^{3,13} Data from literature suggest^{3,5,6,13,14} in patients with aesthetic request where there is adequate keratinized tissue apical or lateral to the recession defect, pedicle flap surgical techniques (coronally advanced or laterally moved flaps) are recommended. Hence, in this case report I select Lateral Pedicle Graft technique for recessions coverage.

CASE REPORTS A 38 years old female came to the Department of Dental Surgery at Shaheed Hasan Khan medical college with chief complaint of sensitivity in upper right back tooth region, bleeding and receding gums and esthetic concerns for past 6- 7 months. On intraoral examination, none of the sites revealed more than 3 mm periodontal probing depth. There was Miller's Class III recession on 16 Intra Oral Peri Apical Radiograph showed interdental bone loss (Fig 1). Thorough Scaling and Root Planing was performed and patient was recalled after 4 weeks for evaluation. After departmental discussion and patient's consent, it was decided to surgically treat the case by Lateral Pedicle Graft Surgical Technique. Preparation of recipient site: The surgical site was properly isolated. It was anesthetized using 2% Xylocaine hydrochloride with adrenaline (1: 80000). A 'V' shaped incision was made along the soft tissue margin of the recipient site with an internal (reverse) bevel incision on the gingival margin adjacent to the donor site (i.e. margin close to 17) and an external bevel on the opposite margin (adjacent to 15) to remove the epithelium around the denuded root surface. The exposed connective tissue adjacent to distal margin of 16 was to be the recipient site for laterally displaced flap taken from site of 17. Preparation of flap: Periodontium of donor site had satisfactory width of attached gingiva and minimal loss of bone, without dehiscence or fenestration. With a #15 BP blade, vertical incision was done from gingival margin to outline a flap adjacent to the recipient site. Incision was given to the periosteum, and extended into the oral mucosa to the level of the base of the recipient site (Fig 2). Horizontal incision was also given to exclude the interproximal papilla between 17 and 15. The flap was sufficiently wider than the recipient site to cover the root and provide a broad margin for attachment to the connective tissue border around the root. The flap was reflected consisting of epithelium and a thin layer of connective tissue, leaving the

periosteum on the bone. A short oblique releasing incision into alveolar mucosa was made at the distal corner of flap, pointing towards recipient site (cut-back incision). Transfer of flap: Flap was slid laterally onto the adjacent root, making sure that it adapted properly and without excess tension (Fig 3). Flap was then secured with interrupted sutures (Fig 4). The patient was advised to come after 1 week for pack and suture removal. Postoperative Instructions: The patient was prescribed Chlorhexidine digluconate mouthwash 0.2% twice daily for four weeks and advised to avoid vigorous brushing on the surgical site. A course of antibiotics – Amoxicillin 500 mg thrice daily for 5 days and Analgesics (Ibuprofen-Paracetamol combination) were prescribed thrice daily for 3 days. The patient was recalled after 1 week for follow-up but she came only after 12 days. The sutures were removed, site irrigated with normal saline and Betadine. Patient did not complain of any discomfort and healing was found satisfactory (Fig 5).

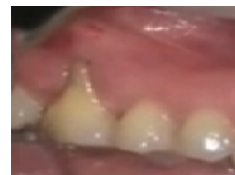


Fig 1: Gingival recession in maxillary first molar



Fig 2: incision given



Fig 3: Flap in place covering the defect



Fig 4: suture was placed covering the defect



Fig 5: Three months Post op showing complete epithelization

DISCUSSION:

The anterior gingival recession treatment is a frequent demand in patients with high standards of oral hygiene for aesthetics or root sensitivity.¹⁵ Several root coverage procedures have been tested to move the position of the gingival margin coronally including pedicle flaps, free soft tissue grafts, combination of pedicle flaps

plus grafts or barrier membranes^{10,12,13,16} have thoroughly documented that gingival recession can be successfully treated using several surgical procedures, irrespective of the utilized technique, provided the biologic conditions for accomplishing root coverage are satisfied: no loss of interdental soft and hard tissues height.⁹ The very first lateral root coverage procedure was described by Grupe and Warren in 1956 which was called "sliding flap operation". Later on, other reports were published on gingival grafting by Bjorn (1963), King and Pennel (1964), Cowan (1965), Nabers (1966) and Haggerty (1966). Corn also (1964) advocated the use of pedicle grafts to correct mucogingival defects adjacent to edentulous area whereas Harvey et al (1965) introduced advanced flap techniques. Gargiulo & Arrocha (1967) used gingivectomy tissue as donor tissue and Cohen and Ross (1968) introduced double papilla repositioned flap. Irrespective of the surgical approach, the ultimate goal of a root coverage procedure is the complete coverage of the recession defect and an optimal integration of the covering tissue with the adjacent soft tissue. Localized gingival recessions have been successfully treated with the LPG.¹⁷⁻¹⁹ Improvements in clinical outcomes have been reported by sliding adjacent flap to cover root denudation. This approach is associated with a greater probability of obtaining root coverage.²⁰ Patient's eventual outcome of treatment is also dependent on various prognostic factors that can be broadly divided into 3 categories: patient-related factors, tooth/site-related factors and technique related factors²¹. Despite various surgical treatment modalities available for isolated gingival recessions, LPG remains choice of surgery. For over 25 years lateral pedicle graft was the only surgical procedure available that could predictably produce root coverage.⁹ The success of lateral or horizontally placed grafts depends on various factors. Its limitations that may contraindicate its use⁹ such as: An insufficient amount of gingiva available for positioning A shallow vestibule Secondary frenal attachment(s) at the donor site: and Multiple adjacent recessions The selection of one surgical technique over another depends on several factors, some of which are related to the defect (the size of the recession defect, the presence or absence of keratinized tissue adjacent to the defect, the width and height of the interdental soft tissue, the depth of the vestibulum or the presence of frenuli while others are related to the patient.²² This technique was utilized because in this surgical approach, the soft tissue utilized to cover root exposure is similar to that originally present at the buccal aspect of the tooth with the recession defect and thus the esthetic result is satisfactory and as various literature^{4,6,7,9,10,14,16,19} suggest that the use of LPG to cover the graft improves the root coverage predictability & esthetic result. Coverage of exposed root surface with sliding flap technique is reported to be 60% (Gargiulo & Arrocha 1967), 61% and 72% (Rateitschak et al 1985) though inconsistent result. In donor site there is uneventful repair and restoration of gingival health and contours with some loss of radicular bone (0.5mm) and recession (1.5mm) reported with full thickness. It is also less invasive procedure with easy oral hygiene maintenances, addresses chief complaint of patient with less future disadvantages. The results of our cases demonstrate that proposed approach of lateral pedicle graft for root coverage is very effective procedure for treatment of isolated gingival recessions in patients with esthetic demands as it resulted in optimum soft tissue root coverage in 2 weeks and 3 months follow up.

CONCLUSION:

The gingival recession can often lead to esthetic and functional challenge for clinician and patient. It is important to provide optimum functional and aesthetic solution for the missing gingival tissue and simultaneously to preserve periodontal health. Marked esthetic and functional results can be obtained with lateral pedicle grafts for replacing lost tissue where a large amount of tissue is missing.

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