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An Isolated Miller Class-II Recession Defect Treated Using Lateral Pedicle Graft- A Case Report

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ABSTRACT

Gingival recession is a common condition and its extent and prevalence increase with age. The exposed root surface can lead to dentinal hypersensitivity and loss of aesthetics. Many factors including trauma and periodontal disease have a key role in its aetiology. Lateral pedicle graft is the best procedure to treat the isolated gingival recession i.e., Miller class-I and Class-II recession defects, when an adequate attached gingiva is present at the adjacent tooth.

Keywords: Gingival Recession, Lateral pedicle graft, hypersensitivity, aesthetics.

INTRODUCTION

Gingival recession is defined as the exposure of the root surface by an apical shift in position of the marginal gingiva.[1] The most significant factors causing gingival recession are considered to be periodontal disease and improper oral hygiene measures; along with some predisposing factors such as thin gingiva, a prominent root surface, bony dehiscence, abnormal tooth position, frenal pull, mechanical trauma caused by tooth brushing, and iatrogenic factors such as faulty restorations or uncontrolled orthodontic movement of teeth.[2]

Susceptibility to recession is influenced by numerous reasons such as the position of teeth in the arch,[3] the root-bone angle and the mesio-distal curvature of the tooth surface. It also leads to root surface exposure which causes major functional and aesthetic problem and has been related clinically to higher incidence of attachment loss, hypersensitivity, and also root caries.[4]

A wide range of Periodontal Plastic Surgeries have been introduced over a period of time for the treatment of recession, out of which Laterally positioned flap has been known to be a successful treatment modality in case of Miller Class-I and Class-II recession defects, but the use of this flap to cover Miller class-III recession defects has not been reported much in the literature. The goal of the present study was to evaluate the effectiveness of the laterally positioned flap to cover a Miller class-II recession defect in mandibular anterior region. The technique of Lateral Pedicle Graft as root coverage procedure for isolated recession defects was proposed by Grupe and Warren et al.[2]

CASE REPORT

A 28-year-old male reported to the Department of Periodontology, Subharti Dental College & Hospital, Meerut, Uttar-Pradesh with the chief complaint of sensitivity in his lower front tooth region since 1 year. On clinical examination Miller Class-II recession defect was seen in respect to 31 (FIG.1). The dimensions of the defect were measured to be 5mm in length, 2mm

wide and the width of keratinised gingiva was 3mm. Patient was reported to be systemically healthy.

An informed consent was signed by the patient before starting with the procedure. Following pre-surgical mouth rinse with 2% Chlorhexidine, area was anesthetized with local anaesthesia containing (Adrenaline-1:80000 & 2% lignocaine). With a no. 15 blade 2 vertical incisions were given distal to 31 and a horizontal incision was given below the marginal gingiva of 32. A partial thickness flap was reflected from the donor site and displaced to the recipient site 1mm above the cemento-enamel junction without any tension being created (FIG.2). Finally, the lateral pedicle flap was sutured on the recipient site with the help of 5-0 vicrycle suture (FIG.3).

Post-operatively patient was given Amoxycillin + clavulanate 625mg t.d.s., Serratiopeptidase BD, Anti-inflammatory BD, Probiotic BD, Antacid OD and a Povidone-iodine mouth rinse. Patient was then recalled for follow up at the interval of 1month (FIG.4) where it was clinically appreciated that the recession defect was completely covered without any displacement of gingiva at the donor site, and then after 3 months (FIG.5).

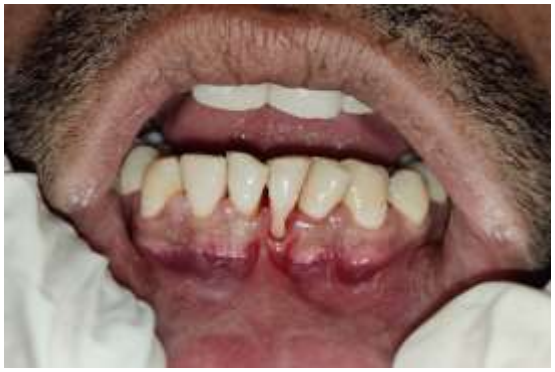

FIG.1- Pre-operative view

FIG.2- Lateral pedicle flap reflected

FIG.3- Sutures placed

FIG.4- 1-month post-operative view

FIG.5- 3-months post-operative view

DISCUSSION

The main goal of Periodontal Plastic Surgery is to correct the traumatic or plaque induced mucogingival diseases.[5] Recession is one of the most common defects which can be caused by either of the above 2 reasons. Various recession coverage techniques have been introduced in the past few decades including 1-Laterally sliding flap, 2-Double papillae flap, 3- Coronally repositioned flap, 4- Epithelial gingival graft, 5- Subepithelial connective tissue graft & 6- Guided tissue regeneration. In this case report we have used Lateral pedicle graft technique described by Staffileno et al because adequate gingival keratinization along with good periodontal condition and normal bone level of the adjacent tooth.[6]

According to Saleem et al[7] the main advantage of using lateral pedicle graft over other techniques is the it does not require a second surgical site and provides an excellent colour matching of the graft tissue with the surrounding tissues of the recipient site. But the disadvantage associated with this technique is the possibility of recession or bone loss at the donor site.[8] In an article by Guinard and Caffesse an average of 1mm post-operative gingival recession is seen at the donor site.[9]

CONCLUSION

In the present case report a successful result was achieved for the recession coverage by Lateral Pedicle Graft in Miller Class-II defect. This technique has been proved to be quite effective in the treatment of Miller Class-I and Miller Class-II defects. However, a careful selection of the cases has to made for this treatment modality to provide adequate result.

Declaration by Authors

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