



Management of Isolated Gingival Recession Using Double Papilla Repositioned Flap: A Case Report

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Abstract

Gingival recession is a common periodontal condition associated with esthetic concerns and dentinal hypersensitivity. Various mucogingival procedures have been proposed for root coverage, among which the double papilla repositioned flap is considered effective for isolated recession defects with adequate interdental papilla. This case report describes the management of an isolated Miller Class II gingival recession using the double papilla repositioned flap technique. Following phase I therapy, adjacent papillary flaps were repositioned over the exposed root surface and stabilized with sutures. Postoperative healing was satisfactory with significant root coverage and improvement in esthetics during follow-up. The double papilla repositioned flap can be considered a predictable treatment option for isolated gingival recession defects.

Keywords: Double papilla flap, Gingival recession, Root coverage, Periodontal plastic surgery, Miller Class II recession

Introduction

Gingival recession is characterized by the apical displacement of the gingival margin leading to exposure of the root surface. It is a frequently encountered mucogingival condition associated with esthetic impairment, dentinal hypersensitivity, root caries, and plaque retention, thereby affecting the patient's oral hygiene maintenance and overall comfort. The etiology of gingival recession is multifactorial and includes traumatic tooth brushing, periodontal inflammation, thin gingival biotype, tooth malposition, and aberrant frenal attachment.

Over the years, several periodontal plastic surgical procedures have been proposed for the treatment of gingival recession defects, including free gingival grafts, connective tissue grafts, coronally advanced flaps, laterally positioned flaps, and guided tissue regeneration techniques. Although connective tissue grafts are considered the gold standard for root

coverage procedures, they require a second surgical donor site which may increase postoperative morbidity and patient discomfort.

The double papilla repositioned flap technique, originally introduced by Cohen and Ross, is a predictable and effective treatment modality for isolated gingival recession defects where adequate interdental papillary tissue is present adjacent to the involved tooth. The technique utilizes the mesial and distal papillae to provide root coverage while maintaining good vascularity and excellent tissue color blending. In addition, the procedure eliminates the need for a second donor site and provides favorable esthetic outcomes.

The present case report describes the successful management of an isolated Miller Class II gingival recession defect using the double papilla repositioned

flap technique with satisfactory clinical and esthetic results.

Materials And Methods

A 30-year-old male patient reported to the Department of Periodontology with the chief complaint of receding gums associated with sensitivity in relation to the lower anterior region for the past 6 months. The patient was systemically healthy with no contributory medical history and had no history of smoking or deleterious oral habits. On detailed clinical examination, isolated gingival recession was observed in relation to the affected tooth. The recession was associated with faulty tooth brushing technique, while no interdental soft tissue loss, tooth malposition, mobility, or interproximal bone loss was evident clinically and radiographically. The defect was diagnosed as Miller's Class II gingival recession [Figure 1].

Traumatic occlusion was ruled out.

Phase I periodontal therapy consisting of scaling and root planing was carried out using ultrasonic scalers and Gracey curettes. Oral hygiene instructions and modified brushing technique were demonstrated to the patient. Following reevaluation after one week, surgical root coverage using the double papilla repositioned flap technique was planned due to the presence of adequate interdental papillary tissue adjacent to the recession defect

Surgical Procedure

After obtaining informed consent, local anesthesia was administered using 2% lignocaine.

Horizontal incisions were placed on either side of the recession defect parallel to the cemento-enamel junction using a No. 15 surgical blade.

Vertical releasing incisions were then placed at the line angles adjacent to the involved tooth.

A partial thickness pedicle flap was carefully elevated from the mesial and distal interdental papillae by means of internal bevel incisions [Figure 5].

The exposed root surface was thoroughly planed and prepared. The mesial and distal papillary flaps were gently mobilized and repositioned over the denuded root surface ensuring complete root coverage [Figure 6].

The flaps were stabilized using interrupted 4-0 vicryl sutures [Figure 7].

Gentle pressure was applied using sterile saline-moistened gauze to achieve adaptation of the flap to the recipient site.

Suturing Technique

Both the papillary flaps were gently rotated towards the center of the exposed root surface and approximated after ensuring complete coverage of the denuded root area.

Interrupted 4-0 vicryl sutures were placed to secure and stabilize the flaps in their new position [Figure 7].

Gentle pressure was applied over the surgical site for 2–3 minutes using sterile saline-moistened gauze to ensure close adaptation of the flap to the recipient bed. A periodontal dressing was subsequently placed to protect the surgical area and prevent flap displacement during the initial healing phase [Figure 8].

Postoperative instructions were provided, and the patient was advised to avoid brushing the treated area for 4 weeks. A 0.2% chlorhexidine mouth rinse was prescribed twice daily for 4 weeks along with analgesics as required. The periodontal dressing was removed after 7 days.

The patient was evaluated postoperatively at 15 days, 1 month and 3 months to assess healing and clinical outcomes [Figure 9], [Figure 10] [Figure 11]. Significant improvement in root coverage and gingival esthetics was observed during follow-up.

Significant improvement in clinical parameters was observed postoperatively with satisfactory root coverage and gain in attached gingiva when compared to baseline measurements [Table 1].

Table 1: Comparison of recession depth at different follow-up periods

Time Period	Recession Depth
Baseline	4 mm
1 months	2 mm
3 months	2 mm

Discussion

The present case report describes the successful management of isolated gingival recession with the double papilla repositioned flap technique. This technique has been shown to provide satisfactory root coverage in isolated recession defects when adequate interdental papillary tissue is present adjacent to the involved tooth.

The double papilla flap technique was originally introduced by Cohen and Ross for the treatment of localized gingival recession defects. The procedure utilizes the adjacent interdental papillae to cover the denuded root surface and provides good vascularity to the surgical site. Later, Rubelman modified the technique by introducing overlapping flap margins and continuous locking sutures to improve flap stability and healing.

Various mucogingival procedures such as free gingival grafts, connective tissue grafts, coronally advanced flaps, and guided tissue regeneration have been proposed for root coverage procedures. Although connective tissue grafts are considered the gold standard for root coverage, they require a second surgical donor site which may increase patient discomfort and postoperative morbidity. In contrast, the double papilla repositioned flap eliminates the

need for an additional donor site and provides satisfactory esthetic results with good tissue blending.

In the present case, satisfactory root coverage and improvement in gingival esthetics were observed during the follow-up period. The success of this technique may be attributed to adequate interdental papillary tissue, proper case selection, sufficient blood supply, and maintenance of good oral hygiene by the patient.

The double papilla repositioned flap technique is technique-sensitive and is mainly indicated in isolated recession defects with thick interdental papilla and healthy adjacent periodontal tissues. However, the procedure may not be suitable in cases with multiple adjacent recession defects or inadequate interdental tissue.

Conclusion

Various periodontal plastic surgical procedures have been proposed for the treatment of gingival recession defects. The selection of an appropriate technique depends on the type of recession defect, clinician experience, and availability of adjacent soft tissue. The present case report demonstrates that the double papilla repositioned flap is a predictable and effective treatment modality for the management of isolated Miller Class II gingival recession defects with satisfactory esthetic and clinical outcomes.

Figure 1



PRE-OPERATIVE VIEW SHOWING MILLER'S CLASS II GINGIVAL RECESSON WITH RESPECT TO 33.

Figure 2



PRE-OPERATIVE MEASURMENTS

Figure 3



INCISIONS WERE PLACED ON RECESSION DEFECT USING A NO. 15 SURGICAL BLADE.

Figure 4



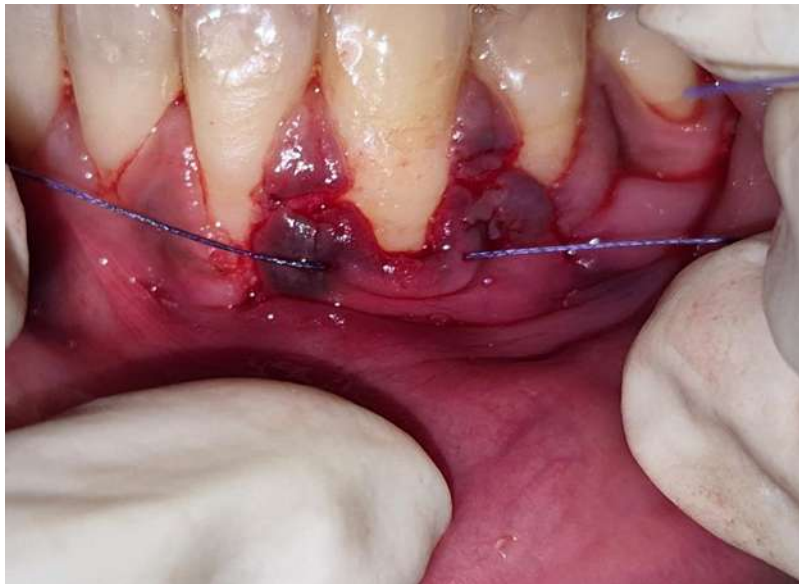
INCISION DESIGN FOR DOUBLE PAPILLA REPOSITIONED FLAP.

Figure 5



PARTIAL THICKNESS FLAP ELEVATION.

Figure 6



PLACEMENT OF INTERRUPTED 4-0 VICRYL SUTURES

Figure 7



INTERRUPTED 4-0 VICRYL SUTURES WERE PLACED TO SECURE AND STABILIZE THE FLAPS IN THEIR NEW POSITION

Figure 8



A PERIODONTAL DRESSING PLACED

Figure 9



15 DAYS POSTOPERATIVE

Figure 10



1 MONTH RE EVALUATION

Figure 11



3 MONTH RE EVALUATION