

Recession Coverage with Coronally Advanced Flap Procedure

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ABSTRACT

Gingival Recession is defined as location of marginal periodontal tissues apical to cemento-enamel junction. The main indications for recession coverage are root sensitivity and aesthetic concerns. Coronally advanced flap (CAF) procedure is one of the method used to cover tooth recession in maxillary anterior region. CAF has advantage of better aesthetics and provides minimal trauma to patient as only one surgical site is involved. This case report presents the CAF procedure in maxillary anterior tooth and demonstrates achievement of recession coverage using this technique.

Keywords: Gingival recession; Root coverage; Coronally advanced flap

INTRODUCTION

The selection of the surgical technique to cover a root recession depends mainly on the local anatomical characteristics. Local characteristics such as dimensions of root exposure, number of teeth with recession, keratinized tissues apical and lateral to the root exposure, depth of the vestibule and presence of muscle insertions are to be considered in deciding surgical technique. Coronally advanced flap (CAF) is recommended in patients with a residual amount of keratinized tissue apical to the recession defect. The CAF was first introduced by Norberg in 1926¹. CAF procedure is indicated in maxillary anterior teeth with Miller's class I recession defects and in the presence of residual keratinized tissue apical to recession².

CASE REPORT

A 30 year old male reported with chief complaint of receded gum in upper left anterior tooth. On clinical examination, patient had Miller class I recession in relation to tooth #23. Sulcus depth was 1-2 mm. Overall oral hygiene was good. Scaling and root planing was done. Patient was asked to report after 1-2 weeks. As keratinized tissue was present apical to recession, CAF procedure was planned.



Fig. 1: Pre Operative Photograph

Surgical procedure:

Scaling and root planing was done in involved teeth. Two horizontal bevelled incisions (3 mm in length) were placed mesial and distal to the recession defect located at a distance equal to the depth of the recession plus 1 mm from tip of the anatomical papillae. Two oblique, slightly divergent incisions were carried at end of two horizontal incisions and extended to alveolar mucosa. The resulting trapezoidal-shaped flap was elevated with a split–full–split approach in the coronal–apical direction. Surgical papillae between horizontal incision and probeable sulcular area apical to the root exposure were elevated using split thickness by keeping blade parallel to the root. Soft tissue apical to root exposure was elevated full thickness by inserting a small periostium elevator into probeable sulcus. Full thickness flap is raised 3–4mm apical to bone dehiscence in order to include periostium in central portion of the flap. The releasing vertical incisions were elevated split thickness. Apical to bone exposure, flap elevation continued split thickness and continued till it was possible to move flap passively in coronal direction. All muscle insertions present in thickness of the flap were eliminated. The inter-dental papillae coronal to the horizontal incisions were de-epithelized. Flap was then passively placed coronal to CEJ Flap and then sutured to connective tissue beds created.



Fig. 2: Photograph At Time Of Surgery

Patient was asked to report after 10 days for suture removal. At 10th day, sutures were removed. Plaque was debrided. At completion of 3-4 weeks after surgery, patient was instructed to brush using ultra soft tooth brush and method of brushing creating minimal trauma to tissues was recommended. Root coverage was achieved after surgery.

DISCUSSION

In coronally advanced flap, surgical incisions could impair blood supply to flap and coronal displacement of flap and sutures could stretch residual vessels. To minimize these conditions, Mormann and Ciancio suggested that flap should be broad at base with length to width ratio not exceeding 2:1 and minimal tension should be produced by sutures³. Optimum root coverage, good colour blending and absence of secondary surgical sites are some of advantages of CAF.

CONCLUSION

In this case report, predictable results were obtained when CAF procedure was used for recession coverage of maxillary anterior tooth.



REFERENCES

- [1]. Norberg, O. Ar en utlakning utan vovnadsfortust otankbar vid kirurgisk behandling av. S. K. Alveolarpyorrhoe? Svensk Tandlaekare Tidskrift 1926;19,171.
- [2]. Allen, E. P. & Miller, P. D. Coronal positioning of existing gingiva: short term results in the treatment of shallow marginal tissue recession. Journal of Periodontology 1989;60:316–319.
- [3]. 3.Mörmann W, Ciancio SG. Blood supply of human gingiva following periodontal surgery. A fluorescein angiographic study. J Periodontol 1977;48:681-692.