



## Coronally Advanced Flap In The Treatment Of Gingival Recession-A Case Report

### Dental Science

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### ABSTRACT

Treatment of gingival recession is being the most challenging task for dentist over the years as clinician is not only required to treat the disease and improve the function but also cope with the ever demanding esthetics of the patients. For achieving this goal, number of techniques have been used in the past including pedicle grafting, free connective and epithelial tissue grafts, PRF, GTR etc. Among these techniques used, coronally advanced flap is widely used successfully to cover Millers class-I and II defects as it is relatively easy and less time consuming with excellent aesthetic results and most importantly no second surgical site is involved as in case of FGG/FCG. This article describes a case report in which coronally advanced flap was used to treat gingival recession successfully.

### KEYWORDS:

Gingival Recession, Coronally advanced flap(CAF), Cementoenamel junction

#### Introduction

Gingival recession is defined as the apical migration of the marginal tissue to the cemento-enamel junction consequently exposing the root surface to the oral environment. The most common causes of recession are alveolar bone dehiscence, frenal pull, high muscle attachment, faulty tooth brushing, abnormal habits, orthodontic movements and periodontal disease.<sup>2</sup> More than 50% of the world population has one or more sites involved with gingival recession  $\geq 1\text{mm}$ .<sup>3</sup> It results in root hypersensitivity, attachment loss and root caries.

Miller in 1998 proposed the term “**Periodontal Plastic Surgery (PPS)**”, defined as surgical procedures performed to prevent or correct anatomical, developmental, traumatic or plaque induced defects of the gingival, alveolar mucosa, or bone (American Academy Of Periodontology 1996)<sup>4</sup>

Various periodontal plastic surgical procedures are offered to treat gingival recession including free gingival graft, subepithelial connective tissue graft, pedicle flaps and coronally positioned flap. In FCG/FGG second surgical site is needed and risk of bleeding is always there.<sup>5</sup> Coronally advanced flap was introduced by **Norberg** in 1926.<sup>6</sup> This technique has many advantages like it is less technique sensitive, also eliminates the need to harvest donor tissue and minimize the morbidity of donor areas.

#### Case report

A 25 years old healthy male patient reported to the Outdoor patient department (OPD) of Aesthetic Smiles Dental Clinic & Facial Rejuvenation, Khar West Mumbai, India with a chief complaint of “an elongated tooth & sensitivity” in the left upper jaw region. On examination there was Millers Class-II gingival recession in the upper left canine region with recession depth of 4mm and clinical attachment level of 3mm [Fig-1 & 2]. Trauma from occlusion and tooth malposition with respect to the offending were ruled out clinically.

#### Pre-surgical Preparations

Patient was motivated and educated towards oral hygiene measures. Oral hygiene instruction were also advised prior to the surgery. Thorough scaling and root planning was done 2 weeks before the procedure.

#### Surgical Technique

After mouth rinse with 0.2% chlorhexidine gluconate for 20 seconds, 2% lignocaine HCL with 1:80,000 adrenaline was infiltrated locally to anesthetize the treatment site. The exposed surface was again thoroughly scaled and root planned by using gracey curettes to remove plaque, accretions and any surface irregularities which may affect the treatment outcome. A no.11 scalpel blade was used to make

two vertical releasing incisions from line angles till mucogingival junction mesial and distal to the tooth respectively [Fig-3]. Flap was raised and undermined to ensure that it is free enough to cover the exposed root without any tension. Before advancing the flap coronally it was again carefully examined for any surface irregularities and plaque. [Fig-4]. The flap was coronally advanced and positioned 1mm coronally to cement-enamel junction of tooth 23 and sutured by 3-0 silk sutures. The area was covered with Coe-Pak [Fig-5]

Patient was advised to take analgesics and antibiotics for 5 days along with post operative instructions. He was also instructed not to brush on the surgical area and use of mouthwash 0.2% CHX gluconate twice daily. Sutures were removed after 10 days of surgery. On examination surgical site showed complete root coverage with excellent color matching. Oral hygiene instructions were reinforced and patient was instructed to come for regular check-ups. [Fig-6]

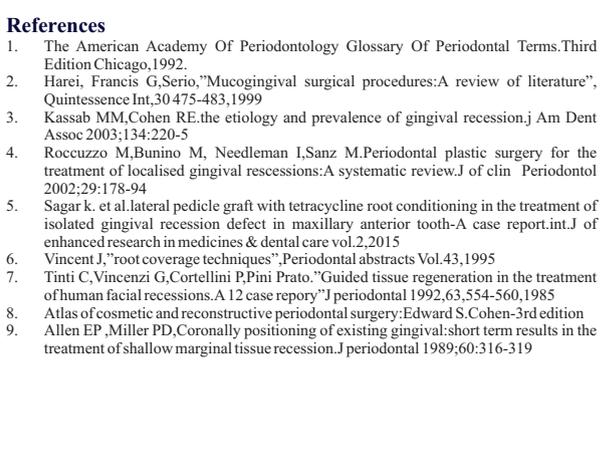
#### Discussion

Root coverage of the severe gingival recession has become an important treatment modality these days because of the increased demand of cosmetic and functional treatment. **Bernimoulin et al** was first to report coronally positioned flap in 1975. This was a two stage procedure that time which was modified by Tarnow, Allen and Miller into one stage procedure. The aim of the present paper was describing the treatment of **Millers Class I** recession of 3-4mm in height with coronally advanced flap suggested by **Nuberg** because of its reliability over other mucogingival procedures. It has many advantages over other surgical procedures as it doesn't require second surgical site to obtain graft, better color match and esthetics, good adaptability and moreover it is not technique sensitive. The true benefits for the patient are improved esthetics and stability of the results over the time.<sup>8</sup> It also facilitates guaranteed anchorage and blood supply to the surgical papilla in the interproximal areas between the root exposure<sup>9</sup>

Indications for coronally advanced flap are sufficient width, length, thickness of keratinized gingiva, coverage limited to 3-4mm sufficient depth of vestibule. Contraindications are dehiscence/ fenestration, inflammation extremely protruded teeth, deep pockets, loss of interdental bone and narrow oral vestibule and soft tissue quality. It may be used with collagen and platelet rich fibrin (PRF) membrane for better results.

#### Conclusion

The results of the present case demonstrated that this new approach to coronally advanced flap technique was very effective and easy for the treatment of gingival recession. Although long term clinical studies with more sample size are required for better analyses of this technique.



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