

Double papilla flap for the treatment of single recession on canine – A case report

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Abstract: Marginal tissue recession is a common esthetic problem that is usually accompanied by dentin sensitivity, and patients frequently report a fear of dental loss. Several studies state that root coverage using connective tissue grafts have high success rates but have disadvantages like creation of second surgical site and post-operative color harmony is less. Although Cohen and Ross reported more than 85% success in covering denuded roots, the degree of success varies among other clinicians. The double papillae pedicle graft is most appropriate in those cases where esthetics demand a close tissue color match and where the papillae are large and have shallow gingival grooves.

1. Introduction :

Marginal tissue recessions are multifactorial and are caused by traumatic tooth-brushing techniques and periodontal disease, occlusal trauma, the presence of partially removable prosthesis clamps, improper restorations, frenal pull, tooth malposition, extraction, or inadequate incision that can act individually or in combination to initiate the problem[1]. Cohen and Ross introduced the method in which bilateral interdental papillae are used as donor tissue for localized root coverage. In this technique, there is less chance of flap necrosis and suturing is easy because interdental papillae are thicker and wider than labial gingiva on single root surface. Single surgical site, excellent post-operative color harmony, requirement of small amount of donor tissue, less damage to interdental bone is the advantages of the double papillae technique[2]. The double papillae pedicle graft is most appropriate in those cases where esthetics demand a close tissue color match and where the papillae are large and have shallow gingival grooves.

Case Report :

A 21-year-old man reported to the Periodontics Clinic of School of Dentistry at Damascus University with a chief complaint of recession of gum on canine. The patient, previously, had a failed surgical procedure (connective tissue graft with coronally positioned flap) and also had bruxism. This canine was buccally repositioned.

According to Miller's classification, the defect was classified as Class-I gingival recession.

Surgical procedure:



Fig. 1 – Pre-op photo showing massive recession depth

A curette was used to root plane the exposed root surface. A no. 15 blade was used to make a V-shaped incision on the recipient site

A horizontal incision was made on the mesial and distal interdental papilla coronally (Fig. 2). Two vertical incisions reaching the alveolar mucosa were made on the line angle area of the adjacent teeth.



Fig. 2 – Picture showing incisions.

A partial-thickness pedicle flap that included sufficient interdental papilla bilaterally was prepared. A partial-thickness flap was reflected from the crest of the osseous dehiscence area till the alveolar mucosa in the apical for easy flap migration. After removal of the marginal tissue, (Fig. 3).



Fig. 3 – Flap reflection.

Interrupted and sling sutures were used to stabilize the mesial and distal papillae using a 6-0 silk suture (Fig. 4). A periodontal dressing was placed.



Fig. 4 – Sutures placed.



Discussion:

This case report presents double papillae pedicle graft surgical technique for the treatment of single tooth marginal tissue recession with a patient with bruxism habit. Double papillae pedicle graft has shown excellent root coverage if the indications of this technique is followed. This technique has been used as replacement to free gingival autografts where second surgical site is not necessary. Sometimes with free gingival autografts, blood supply and graft stability may be jeopardized unlike pedicle grafts [3]. The double papillae graft involved a V-shaped incision outlining the area of recession. This incision allows the removal of a wedge of marginal tissue. It also provides a fresh wound surface for tissue approximation. Vertical incisions were given from line angles to extend beyond the mucogingival junction. Sharp dissection was then done to reflect partial thickness flaps and was then sutured together. Although Cohen and Ross reported more than 85% success in covering denuded roots, the degree of successes varies among other clinicians. Partial thickness double papillae pedicle graft along with connective tissue surgical technique is proposed as an alter-native for better functional and aesthetic outcome [4]. However, disadvantage of this technique is again two surgical sites. In this case, the root coverage using double papillae pedicle graft is predictable and the second surgical intervention is avoided.

References:

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