



Healing of gingival recessions using a collagen membrane with a demineralized xenograft: a randomized controlled clinical trial

ABSTRACT

Gingival recessions commonly associated with compromised esthetics, root hypersensitivity, higher incidence of root caries, and compromised plaque control and their treatment is performed via so-called mucogingival therapy. In order to promote the root coverage, it is possible to adopt the principles of guided tissue regeneration (GTR). As a variety of non-resorbable and absorbable barrier membranes has been used with clinical outcomes similar to those achieved by traditional procedures, the aim of this study was to compare the efficacy of two surgical techniques: coronally advanced flap (CAF) alone or in combination with the use of an absorbable membrane plus a demineralized xenograft (GTRF) for the treatment of gingival recession in a prospective randomized controlled clinical trial.

16 nonsmokers with 20 Miller Class I or Class II buccal gingival recessions at canines or premolars were included in the study. 10 defects were randomly assigned by coin toss to be treated by a CAF only (control sites), and the remaining 10 defects were treated by the GTRF method (test sites). The barrier device used was a collagen membrane (OsteoBiol® Evolution, Tecnos®, Giaveno, Italy) and the bone substitute used was a demineralized xenograft (OsteoBiol® Gel 40, Tecnos®).

The results following both procedures appeared equivalent, providing good root coverage, gain in clinical attachment levels, healthy nonbleeding sulcus and increase of keratinized tissue.

CONCLUSIONS

Even if both treatments resulted in a significant reduction of recession and gain in clinical attachment level, the Authors found that the increase in keratinized tissue from baseline to 6 months was slightly greater for the GTRF group than for the CAF group and the test group experienced a statistically significant increase in gingival thickness ($+0,71 \pm 0,21$ mm) from baseline to the 6-month evaluation. Consequently, the Authors concluded that *“both procedures offer a predictable, simple, and convenient means of root coverage in Miller Class I and II recession defects, but the GTRF-supported procedure resulted in more keratinized tissue and a significant increase in gingival thickness than the CAF-only approach”*.

PERIODONTAL REGENERATION

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