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Split-mouth comparison of coronally advanced flap with connective tissue graft or collagen matrix for treatment of isolated gingival recessions

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ABSTRACT

In order to solve gingival recessions cases, different surgical techniques have been described and the bilaminar technique with a coronally advanced flap (CAF) associated to a connective tissue graft (CTG) is considered to be the gold standard. As the use of a tissue graft is associated with various disadvantages, animal-origin collagen matrices (CMs) have been proposed as alternatives to CTGS. Among these, the Authors selected a porcine-origin collagen matrix (OsteoBiol® *Derma*, Tecnoss®, Italy) with the aim to compare in a single-blinded split-mouth randomized controlled clinical study the clinical outcomes after treatment of isolated Miller Class I and IIa recession defects affecting both maxillary canines of patients with CM (OsteoBiol® *Derma*) or CTG in conjunction with coronally advanced flap. 10 patients (8 women and 2 men) between 21 and 52 years of age were included, and each patient was treated on one side (test site) with CAF plus CM (OsteoBiol® *Derma*) and on the other side (control site) with CAF and de-epithelialized CTG of palatal mucosa. The clinical parameters evaluated were percentage of root coverage (%RC), complete root coverage (CRC), recession depth (RD), keratinized tissue height (KTH), gingival thickness (GT), and esthetic outcome. Postoperative healing at all GR sites was uneventful for all patients and both usages of CTG and CM significantly improved gingival conditions at sites with isolated GR defects. After 12 months, CM and CTG showed complete correction in 7/10 and 10/10 of sites, respectively, and the percentage of root coverage was 85% ± 24% and 100%, respectively. As CTG performed better in terms of %RC and increasing the thickness and height of keratinized gingival tissue, it should be considered as the most suitable treatment in the most demanding recession defects.

CONCLUSIONS

Within the limits of the present clinical study, it can be concluded that OsteoBiol® *Derma*, in conjunction with CAF, is a viable alternative to CTG in the treatment of most clinical cases of Miller Class I or IIa isolated recession defects. When CTG cannot be easily harvested and the consequent risk of morbidity is higher, OsteoBiol® *Derma* may be successfully used.

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