

Scientific release
from the European
Federation of
Periodontology

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Study:



Coronally advanced flap with and without connective tissue graft for the treatment of multiple gingival recessions: a comparative short-and long-term controlled randomised clinical trial

Zucchelli G, Mounssif I, Mazzotti C, Stefanini M, Marzadori M, Petracci E, Montebugnoli L.
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Relevant background to study:

Surgical interventions to cover exposed roots in cases of gingival recession are commonly required due to aesthetic impairment. The “envelope” or

3-sided type of coronally advanced flap (CAF) represents a safe and predictable approach for multiple recession-type defects.

Study Aims:

The aim of this study was to compare short-and long-term (up to 5 years) root coverage and aesthetic outcomes of the CAF alone or in combination with a connective tissue graft (CTG)

for the treatment of multiple gingival recessions in patients undergoing a very strict supportive care programme.

Methods:

Fifty volunteers with aesthetic complaints and multiple Miller class I and II recession defects (≥ 2 mm) in the upper jaw, and presenting with at least 1-mm of keratinized tissue apical to the recession were enrolled and randomised. They presented good overall oral hygiene and low bleeding scores. Surgery involved the envelope-type of CAF, either alone or in combination with a CTG derived from

the de-epithelialization of a palatal free gingival graft. Patients were carefully monitored following surgery and were regularly recalled for prophylaxis throughout the follow-up period. Clinical parameters, as well as patients’ experiences with the surgical intervention and satisfaction with results were evaluated.

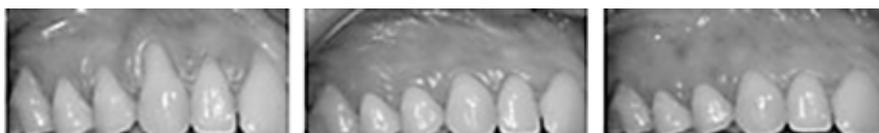
Results:

Up to one year of follow-up, no significant differences were detected between the two groups in terms of recession reduction and complete root coverage (cf. Fig. 1). In the longer term (5 years), however, the addition of a CTG yielded statistically significantly greater reductions in recession depth (RD), although the difference was clinically very small (RD from 3.15mm to 0.09mm vs. RD from 3.05mm to 0.3mm). Furthermore, the CTG demonstrated a more than three times greater

likelihood of complete root coverage, overall better contour scores, and promoted significantly greater keratinized tissue heights after 1 and 5 years. By contrast sites treated with CAF alone exhibited a better post-operative course (less patient pain/discomfort) and better colour matching with less keloid formation. Patients were generally highly satisfied with aesthetic outcomes, with no differences between groups.

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Control group (CAF).



Test group: CAF + CTG
(baseline, 1- and 5-year
outcome).

Impact:



What can we learn as practitioners?

- Both procedures presented successful overall long-term root coverage results in the treatment of multiple gingival recessions. CAF alone can be considered the first choice treatment, due to favourable periodontal improvements, lower post-operative patient discomfort and only minor long-term marginal soft tissue relapse. Conversely, the

addition of a CTG seemed to provide greater soft tissue stability and may therefore facilitate long-term patient maintenance. Recession sites that require more predictability in complete root coverage due to high aesthetic demands or dentine hypersensitivity may therefore be treated adjunctively with CTG.