

Scientific release from the EFP
September 2017

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Study:



Clinical efficacy of coronally advanced flap with or without connective tissue graft for the treatment of multiple adjacent gingival recessions in the aesthetic area: a randomised controlled clinical trial

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Relevant background:

Gingival recession is a common problem, manifesting in either localised or multiple clinical forms. Patients commonly request the treatment of gingival recessions – especially in the anterior maxillary area – for aesthetic reasons. Different periodontal plastic-surgery techniques achieved variable degrees of root coverage in the treatment

of localised gingival recessions. Among these, coronally advanced flap (CAF) in combination with connective tissue graft (CTG) is associated with the highest probability of obtaining complete root coverage (CRC). On the other hand, relatively limited evidence is available regarding the treatment of multiple gingival recessions.

Aims:

To evaluate the clinical efficacy of CAF, with or without CTG placement, for the treatment of multiple adjacent gingival recessions (MAGR) in

the anterior area of the upper jaw (incisors, canine, first and second premolars, first molar).

Methods:

A total of 32 patients aged between 26-48, with at least two adjacent RT1 buccal recessions ≥ 2 mm were included in this parallel, randomised, single-centre clinical trial. All surgical procedures on a total of 74 gingival recessions were performed by the same operator. Patients received oral-hygiene instructions (roll technique) with a soft-bristled toothbrush to correct wrong habits related to the aetiology of the recession at least two months before surgery. Sixteen patients were treated with CAF+CTG as the test group,

while 16 patients were treated with CAF alone as the control. Outcome measures included CRC, recession reduction (RecRed), root-coverage aesthetic score (RES), keratinized tissue (KT) gain, increase in gingival thickness (GT). Clinical measurements were collected at baseline, three, six, and 12 months, and patient-satisfaction scores (post-operative pain, hypersensitivity, aesthetic satisfaction) were evaluated by a blinded examiner using the Visual Analogue Scale (VAS) at three, six, and 12 months after surgery.

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Results:

For the treatment of MAGR in the anterior aesthetic area with a thin periodontal biotype (thickness ≤ 0.8 mm), CAF+CTG was found to be more effective than CAF alone. CTG under CAF promoted the stability of the gingival margin, and also presented higher CRC, RecRed, KT gain, and GT increase than CAF alone. However, the use of CTG under CAF caused an extended operation time, and increased

patients' anti-inflammatory drug consumption and their post-operative discomfort and morbidity. Multilevel analysis revealed that CAF alone was as effective as CAF+CTG at sites with thick periodontal biotype (thickness ≥ 0.8 mm) and also revealed better final aesthetics. No significant differences were observed between the two groups in terms of patient satisfaction and RES values.

**Limitations,
conclusions
and impact:**



Limitations:

The distribution of tooth types in the groups may affect the duration, outcome, success, and ease of periodontal surgery, as only four incisors were included in the test group while there were 11 in the control. Regarding gingival thickness (GT), the mean values and standard deviation of defects treated were 0.76 ± 0.09 and 0.73 ± 0.08 for the two groups. It is not sufficiently clear how many defects with thicker biotypes – i.e. ≥ 0.8 mm initial thickness – were included to be able to draw conclusions about the relationship between GT and treatment outcomes.

Conclusions and impact:

CAF+CTG is a more effective approach than CAF alone in terms of CRC in the treatment of multiple gingival recessions with a thin baseline gingival biotype. In cases of thick baseline gingival biotype, CAF alone yielded similar clinical outcomes and better aesthetic outcomes than CAF+CTG.