Sierra Nevada
Periodontics & Implant Dentistry

How do we choose the best approach to treat recession?

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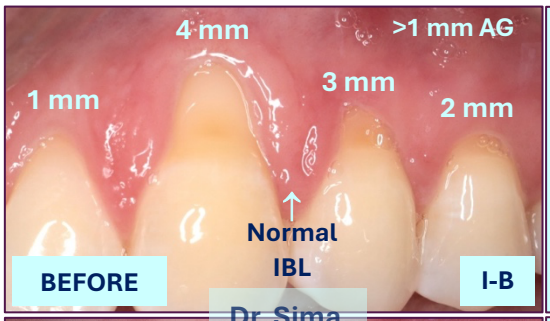
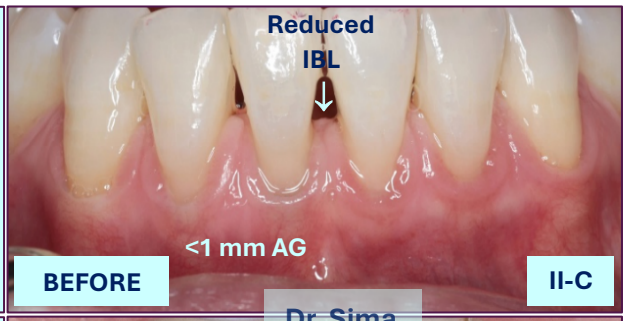
In the era of personalized medicine where we strive to precisely deliver the optimal treatment for a particular patient, one may wonder how we choose the most appropriate type of soft tissue graft and technique to achieve that goal when addressing gingival recession defects (**GRD**).



GRD



CTG vs FGG

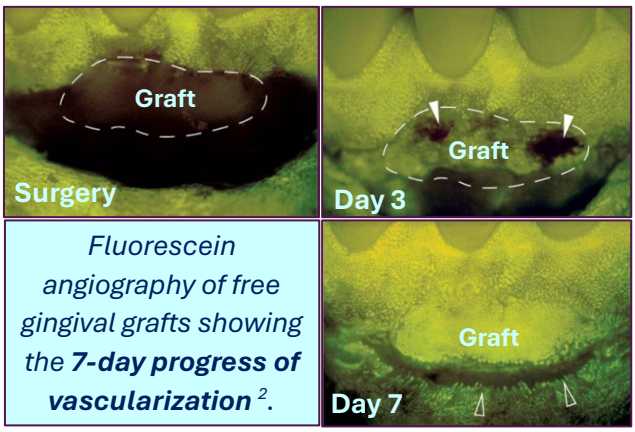
AIM

CTG+CAF *(connective tissue graft + coronally advanced flap). With pedicled flaps alone (e.g. CAF) or in combination with CTGs we aim to* ***cover exposed roots*** *with adequately thick and keratinized gingiva (1+ mm).*

FGG *(free gingival graft). With FGGs we aim to* ***increase the width of attached gingiva (AG)*** *(2+ mm), and often the* ***vestibular depth****.*

The most critical factors influencing graft success are adequate ***vascularization*** and ***mechanical stability*** (lack of movement) during healing [1,2].

Autogenous grafts are the gold standard to treat GRD as they provide host cells and blood vessels for anastomosis in the recipient bed and hence provide better long-term stability in thickness and keratinization compared to allografts and xenografts [3,4].



Fluorescein angiography of free gingival grafts showing the ***7-day progress of vascularization*** *[2].*

The latest classification of GRD takes into account the ***interproximal bone level (IBL)***, ***presence of AG*** and ***gingival thickness*** (*gingival phenotype*) to choose the appropriate grafting procedure and predict outcomes [5,6]. This evidence-based system consists of two components: (1) **GRD type** established based on the midbuccal/midlingual (axial) attachment level

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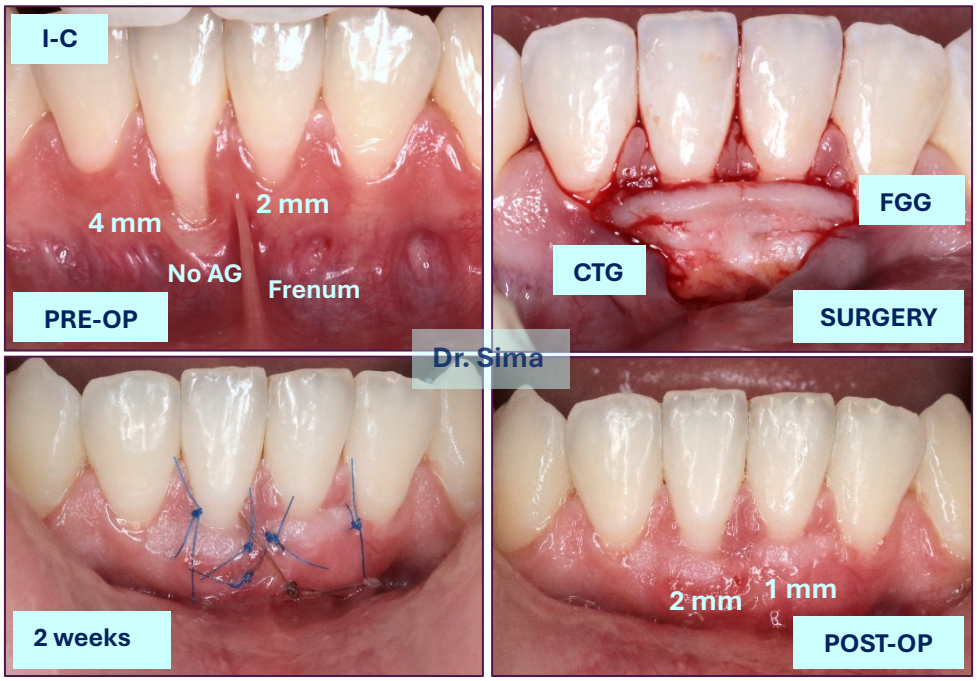
(AL) respective to the IBL, and (2) **GRD subtype** established based on gingival phenotype taking into account the width of AG and gingival thickness. GRD Type I (normal IBL) subtype A (≥ 1 mm thick & wide i.e. *thick phenotype*) can get 100% root coverage with CAF or other pedicled flap alone; GRD IB (normal IBL, ≥1 mm wide but < 1mm thick i.e. *thin phenotype*) can get 100% root coverage with CTG+CAF; GRDII (IBL above axial AL) can get partial root coverage with CAF/pedicle alone (GRDIIA) or CTG+CAF (GRDIIB). GRDIII (IBL bellow axial AL) cannot get any root coverage. ***Regardless of type, for subtype C (<1mm AG), FGG or combined FGG-CTG can achieve partial coverage based on BL, the primary goal being to achieve at least 2 mm of AG (root coverage is secondary).***



Combined CTG-FGG grafts *are typically positioned to achieve* ***partial root coverage, increase the width of AG*** *(2+ mm) and* ***thickness of keratinized tissue*** *(1+ mm), as symmetrical as possible for esthetics.*

In certain instances when there is a *lack of AG* (in particular asymmetric i.e unilateral anterior recession), *frenum pull*, *shallow vestibular depth* and *very thin and non-keratinized gingiva* not suitable for a CAF in a patient with *high esthetic expectations*, we may choose a **combined graft (CTG-FGG)** with an ~2 mm epithelial collar in the coronal part of a CTG.

Creeping attachment leading to ~ 1 mm additional root coverage can occur 12 months after soft tissue grafting [7]. If full coverage is desired and not achieved at 12 months, and interproximal bone levels are adequate for 100% coverage, an additional CAF can be done to reduce root exposure.

References:

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