

Entire Papilla Preservation Technique: A Novel Surgical Approach for Regenerative Treatment of Deep and Wide Intra-bony Defects

ABSTRACT

In case of deep and wide intra-bony defects, guided tissue regeneration, with both resorbable and non resorbable barrier membranes used in combination with a bone substitute, demonstrated to be a predictable treatment. However, the surgical elevation of the interdental papilla can lead to an impairment of the papillary blood supply, with a consequent difficult early healing. In order to preserve the interdental papillary structure during the early and late phases of wound healing, minimally invasive techniques have been proposed. Anyway, the incision of the defect-associated interdental papilla can jeopardize the volume and integrity of interdental tissues. In this clinical report, the Authors describe a novel tunnel-like surgical approach: the entire papilla preservation technique, featuring a tunnel-like approach to the defect-associated interdental papilla, meant to stabilize the blood clot and improve the wound healing process. In three patients affected by periodontal disease full access to the defect was provided with one buccal vertical releasing incision and the elevation of a short flap on the buccal side of the defect-associated tooth. The exposed root surface was then rinsed with sterile saline, and EMD (Emdogain, Straumann) was applied on the exposed root surface. Subsequently, a deproteinized porcine-derived bone substitute (OsteoBiol® Gen-Os®, TecnoSS®, Giaveno, Italy) was placed into the intra-bony defect. The clinical monitoring of the periodontal parameters resulted in an uneventful postsurgical period and a substantial defect filling over the 8-month follow-up.

CONCLUSIONS

The entire papilla preservation technique well maintains the original papillary structure and provides adequate mechanical access to interproximal deep and wide intra-bony defects, with an excellent and uneventful postoperative healing phase. The application of this technique supports the use of amelogens and grafting materials. Anyway, as the application of this technique has some limitations related to the papilla morphology and the defect configuration, the Authors conclude that *"further research with evidence is required to evaluate and clarify the advantages and disadvantages of this technique"*.

PERIODONTAL REGENERATION

210

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