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Reconstruction of the receded interdental papilla, bridging literature and clinical practice

Background

Interdental papilla (IDP) deficiency is a major concern for patients and dentists, as it is associated with the patient's smile, causes phonetic problems, plaque accumulation, and root caries. Several surgical and non-surgical treatments were proposed to restore the lost papilla. Unfortunately, surgical techniques remain a challenge and deemed unpredictable. Connective tissue graft (CTG) based surgical approaches are commonly used for this purpose; and recently, platelet-rich fibrin (PRF) has been investigated as an alternative to CTG.

Objectives

This study compared A-PRF to CTG using Han & Takei's approach, in IDP reconstruction. Methods: Defective papillae were randomly allocated to either the control group (CTG) or to the experimental group (A-PRF). Papilla height (PH) and percent change in the gingival black triangle (GBT) area were recorded at 1, 3, 6, 9, and 12 months.

Results

Thirty-two deficient IDPs with an initial papilla presence index of 2 or 3 were included. At 12 months, the papilla-fill significantly increased in both groups ($p < 0.001$) without a significant difference between the study groups ($p = 0.637$). A mean gain in IDP height of 2.25 mm (± 0.97) in the CTG group and 1.86 mm (± 0.7) in the A-PRF group were recorded with a nonsignificant difference. GBT fill showed a 57.98% fill in the CTG and 54.65% fill in the A-PRF group, with no statistically significant difference between the groups ($p=0.956$).

Conclusion

Both CTG and A-PRF were equally effective in increasing deficient IDP height with no significant difference. Clinical significance: Multilayered A-PRF membrane seems to be a viable alternative to CTG and can be used as a choice in the augmentation of receded papillae

Keywords

Interdental papilla, Papilla deficiency, A-PRF, Han & Takei technique, gingival black triangle, GBT

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Biography

I am a lecturer in Periodontology at the faculty of dentistry, Zarqa university-Jordan. I hold a PhD in periodontology. In addition I hold the Jordanian Medical/Dental council certification in Periodontology. Besides my qualification in Periodontics, I hold a Masters degree in Public Health. I have clinical experience in periodontal and implant therapy. My research interests focus on soft tissue regeneration and esthetic periodontal procedures. I have participated in methodological and clinical studies and I presented in national conferences. I love teaching and enjoy working with my students.