



Platelet-rich plasma and bovine porous bone mineral combined with guided tissue regeneration in the treatment of intrabony defects in humans.

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BACKGROUND: A combination of platelet-rich plasma (PRP), bovine porous bone mineral (BPBM) and guided tissue regeneration (GTR) has been shown to be effective in promoting clinical signs of periodontal regeneration in intrabony defects. As an initial attempt to clarify the role played by each of the three treatment components, this study was performed to compare the clinical effectiveness of two regenerative techniques for intrabony defects in humans: a combination of PRP/BPBM/GTR vs. GTR. **MATERIAL AND METHODS:** Eighteen patients participated in the study. Using a split-mouth design, interproximal bony defects were surgically treated with either an absorbable membrane made of polylactic acid for GTR or a combination of PRP/BPBM/GTR. Changes in pocket depth, attachment level and defect fill as revealed by 6-month reentry surgeries were evaluated. **RESULTS:** Both treatment modalities resulted in significant pocket depth reduction and clinical attachment gain as compared to baseline values. Pocket depth reduction was 4.98 +/- 0.96 mm on buccal and 4.93 +/- 0.92 mm on lingual sites of the PRP/BPBM/GTR group and 3.62 +/- 0.81 mm on buccal and 3.54 +/- 0.88 mm on lingual sites of the GTR group. The gain in clinical attachment observed was 4.37 +/- 1.31 mm on buccal and 4.28 +/- 1.33 mm on lingual sites of the PRP/BPBM/GTR group and 2.62 +/- 1.23 mm on buccal and 2.44 +/- 1.21 mm on lingual sites of the GTR group. The amount of defect fill observed was 4.78 +/- 1.26 mm on buccal and 4.66 +/- 1.32 mm on lingual sites of the PRP/BPBM/GTR group and 2.31 +/- 0.76 mm on buccal and 2.26 +/- 0.81 mm on lingual sites of the GTR group. All differences between the two groups were statistically significant in favor of the PRP/BPBM/GTR group. **CONCLUSIONS:** The results of this study suggest that PRP and BPBM provide an added regenerative effect to GTR in promoting the clinical resolution of intrabony defects on patients with severe periodontitis.