

## **Effectiveness of a combination of platelet-rich plasma, bovine porous bone mineral and guided tissue regeneration in the treatment of mandibular grade II molar furcations in humans.**

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**OBJECTIVE:** A combination of platelet-rich plasma (PRP), bovine porous bone mineral (BPBM) and guided tissue regeneration (GTR) has been shown to be effective as regenerative treatment for intrabony periodontal defects. The purpose of this study was to evaluate the effectiveness of PRP, BPBM and GTR used in combination as regenerative treatment for grade II molar furcation defects in humans. **MATERIAL AND METHODS:** Using a split-mouth design, a total of 52 grade II mandibular molar furcation defects were treated either with PRP/BPBM/GTR (experimental group, n=26) or with an open flap debridement (control group, n=26). The primary outcomes evaluated in this study included changes in pocket depth, attachment level and re-entry bone levels (horizontal and vertical) between baseline and 6 months postoperatively. **RESULTS:** The results showed that the experimental group presented with significantly greater pocket reduction (4.07+/-0.33 mm for experimental and 2.49+/-0.38 mm for control sites), gain in clinical attachment (3.29 +/- 0.42 mm for experimental and 1.68+/-0.31 mm for control sites), vertical defect fill (2.56+/- 0.36 mm for experimental and -0.19+/-0.02 for control sites) and horizontal defect fill (2.28+/-0.33 mm for experimental and 0.08+/-0.02 mm for control sites) than the control group. **CONCLUSIONS:** It was concluded that the PRP/BPBM/GTR combined technique is an effective modality of regenerative treatment for mandibular grade II furcation defects. Further studies are necessary to elucidate the role played by each component of the combined therapy in achieving these results.