ABSTRACT

Background & Objectives:

The purpose of this study was to compare the efficacy of platelet rich fibrin assisted with and without laser application in the treatment of periodontal intrabony defects.

Materials and Methods:

Ten healthy patients in age range of 20-60 years, showing bilateral identical intrabony defects were selected. The defects were assigned randomly into Experimental site A (open flap debridement and PRF placement) and Experimental site B (laser disinfection with PRF placement). Clinical parameters such as the plaque index and gingival index were recorded at baseline and at 1 month,3rd month and 6th month post operatively and probing pocket depth and clinical attachment level were recorded at baseline and then 6th month post operatively. The radiographic parameter was recorded at baseline and 6th month post operatively, using standardized intra-oral periapical radiographs taken with long cone paralleling technique and were then assessed using image analysis software.

RESULTS

Re-evaluation at 6 months revealed that both the groups showed a significant reduction in probing pocket depth (4.1 ± 0.9mm in experimental site A and 4.7 ± 1.6mm in experimental site B) and clinical attachment gain (3.7 ± 1.4mm in experimental site A and 4.3 ± 1.8mm in experimental site B).All the clinical parameters were improved slightly better in experimental site B.

There was no significant difference between experimental site A and B in bone fill at 6 months post operatively.

CONCLUSION:

Within the limitations of this study, it can be concluded that, clinically the use of PRF and laser is more effective than PRF alone. But there was no significant difference in bone fill radiographically between two groups.

Keywords: Periodontal regeneration, Platelet Rich Fibrin, Diode Laser, Growth Factors.