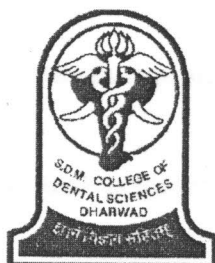


**EVALUATION OF THE EFFICACY OF BLOOD DERIVED  
PLATELETS, ALONE OR IN COMBINATION WITH BOVINE  
ANORGANIC BONE MINERAL (ABM) IN THE TREATMENT  
OF HUMAN PERIODONTAL ANGULAR DEFECTS - A  
CLINICO- RADIOGRAPHIC STUDY**



**By**

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## **ABSTRACT**

### **Background and Objectives:**

The efficacy of PRP in periodontal regeneration is still an enigma and the definite clinical viability of blood derived platelets still allures us. Hence, the aim of this study was to evaluate the effect of blood derived platelets, alone (Group A) or in combination with bovine Anorganic Bone Mineral (ABM) (Group B) in the treatment of human periodontal angular defects.

### **Material and Methods:**

Fourteen patients with a total of 20 intrabony periodontal defects; with clinical probing depth of  $\geq 6$  mm and radiographic evidence of an angular defect were recruited and randomly divided into two groups of 10 sites each, group A to be treated with Platelet rich plasma (PRP) alone and group B to be treated utilizing PRP with bovine Anorganic bone mineral (ABM). Clinical parameters of probing pocket depth (PPD), relative attachment level (RAL) and relative defect depth (RDD) were recorded at baseline, 3, 6 and 9 months along with surgical re-entry at the end of 9 months. Radiographs were taken at baseline and at the end of 9 months using a standardized technique and subjected to AutoCAD analysis. Students paired t-test was applied to obtain the results.

### **Results:**

At all intervals i.e. 3, 6 and 9 months, it was observed that there was a statistically significant difference in the PPD, RAL, RDD and RBL in both the groups as compared to baseline. There was a significant gain in the RAL and reduction in PPD; in both the groups with mean difference between groups being statistically significant

at 3 and 6 months; with better results in Group B. However there was no statistically significant difference between the groups at the end of 9 months. The mean reduction in RDD at the end of nine months between the two groups was statistically insignificant. The radiographic assessment was statistically significant with better results in Group B.

### **Interpretation and Conclusion:**

Within its limits, this study demonstrated that, at 9 months, both PRP and PRP combined with bovine ABM resulted in significant clinical improvement in human periodontal intrabony defects and the addition of bovine ABM to PRP did not significantly enhance the treatment outcome. However, albeit statistical insignificance, there was a preponderance of better clinical results with the addition of ABM to PRP.

**Keywords:** *Intrabony defects; regeneration; Platelet rich plasma (PRP); Bovine Anorganic bone mineral (ABM)*