



## Consideration of calcium carbonate (biocoral) bone graft, demineralized freeze dried bone allograft (dembone) along with platelet rich plasma (prp)/platelet rich fibrin (prf): Contemporary advances in periodontal regeneration

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### Abstract:

**Statement of the Problem:** Periodontal disease (PD) is one of the most common inflammatory diseases affecting 50% of adults. If untreated PD leads to degradation of periodontal tissues and eventually tooth loss. Conventional clinical therapy for PD aims at eliminating infection sources and reducing inflammation to arrest disease progression, which cannot achieve the regeneration of lost periodontal tissues. The function of teeth and dentition remain impaired after the treatment. Some regenerative approaches such as guided tissue regeneration (GTR) and bone grafts were used along with PRP/PRF to achieve periodontal tissue formation. GTR technique leads to significant amounts of regeneration. However for complete regeneration, additional stimuli to enhance the regenerative process are needed. Polypeptide growth factors/biologic modifiers can be used to provide additional stimulus. These factors have the potential to promote regeneration through a variety of cell tissue interactions, including promoting cell migration, attachment and subsequent spreading of cells at the local site, cell proliferation, chemo taxis, differentiation and matrix synthesis.

**Methodology:** 40 infrabony defects in forty patients were treated randomly with Cal Carbonate with PRP (Group A), DFDBA with PRP (Group B), Cal Carbonate (Group C) and DFDBA (Group D). Clinical parameters such as Plaque Index, Gingival Index, Recession, Probing depth, Clinical Attachment level were recorded at baseline, 3 months, 9 months postoperatively. Preoperative & Postoperative hard tissue measurements (bone defect volume, percent bone fill, bone density) were recorded using Dentascan.

**Results:** Probing pocket depth reduction were significant at 9 months from baseline for all groups demonstrating  $4.10 \pm 1.1738$ mm (Group A),  $4.20 \pm 0.89$ mm (Group B),  $2.75 \pm 1.09$ mm (Group C),  $4.20 \pm 0.92$ mm (Group D), respectively. Clinical attachment level gain were significantly improved for all groups A, B, C, D with  $3.35 \pm 1.2921$ mm,



$3.80 \pm 1.09$ mm,  $2.75 \pm 1.09$ mm,  $3.70 \pm 1.16$  mm. Maximum bone gain% was observed in Group A and minimum in Group C. Bone density was maximum in Group B and min in Group C. **CONCLUSION:** Group A has significantly better bone gain % as compared to Group B.

### Biography:

Ragini Sehgal Sethi is a Dental specialist (Periodontist, Implantologist & Cosmetologist). She is passionate about dentistry and creative things along with science and believes in healing, adding confidence and giving smile on the faces. She worked as Dental Surgeon at Dr. Soni's Clinic with Dr. Anil Kohli (Former President DCI) (1999). She worked with Dr. Subhash C. Gupta (2000). She had worked with Escorts Hospital and Research Center Limited, Faridabad as Dental Surgeon (2001). She worked with Sahara Hospital, Lucknow as Dental Specialist (2010). She is currently working with world class Medanta Hospital and Private Limited (MHPL) as Dental specialist. She has received Award from a prestigious International Bone and Mineral Society and the Japanese Society of Bone and Mineral Research at Kobe, JAPAN. She has received Certificate of Excellence in M.D.S. Did PCAD (N.Y.U.-U.S.A.). She is interested in novel research work which can be of help to the mankind.

### Publication of speakers:

1. Ragini Sehgal Sethi, Consideration of calcium carbonate (biocoral) bone graft, demineralized freeze dried bone allograft (dembone) along with platelet rich plasma (prp)/platelet rich fibrin (prf): Contemporary advances in periodontal regeneration, J Indian Soc Periodontol, 2011 Jan;15(1):46-50

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