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# β-TCP as a scaffold for tissue engineered bone

P. Poleník<sup>1</sup>

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The use of platelet rich plasma (PRP) can enhance tissue regeneration. Macro and micro-porous beta-tricalcium phosphate (PORESORB-TCP, Lasak, Czech Rep.) was used as a scaffold for periodontal bone defects treated by PRP. The surface of this material was formed in order to enable the best attachment of proteins. 27 patients with adult periodontitis and alveolar bone defects were treated by combination of PORESORB and PRP. Plaque index, pocket depth, attachment level and extent of bone fill were recorded before treatment and after six and twelve months. Six specimens from the area of regeneration were taken and histologically prepared by HE and Goldner trichrome. After 6 months reduction of pocket depth from 7,6 to 3,2 mm was observed. Nearly the same value was recorded after 12 months. The attachment gain after 6 months

reached the average value of 3,2 mm without any substantial difference after 12 months. Radiologically evaluated bone fill revealed the average value of 4,1 mm after 6 months and 4,0 mm after 12 months. The level of hygienic conditions was did not vary during the experimental period with values of PII 0,72 before treatment and 0,65 and 0,62 after 6 and 12 months respectively. Histological examinations revealed very good integration of material inside the periodontal and defect, and also osteogenic activity in the central part of its volume. This study indicated that PORESORB acts as a very good scaffold for tissue engineered bone.

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<sup>1</sup> Clinic of Dental Medicine, Medical Faculty, Charles University, Czech Republic