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# Porous $\beta$ -TCP and platelet rich plasma (PRP) in treatment of periodontal defects

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The aim of the present investigation was to evaluate the clinical and histological results obtained in the therapy of periodontal defects by composite graft formed by calcium sulphate,  $\beta$ -TCP (Poresorb) and platelet rich plasma (PRP). In 10 patients with advanced periodontitis, ten 3-wall periodontal defects were treated. Autologous PRP was prepared immediately before periodontal surgery. Probing dept (PD), clinical attachment level (CAL), bleeding on probing (BOP) and X-ray examinations were recorded before surgery and 6 and 24 months after treatment. After 6 months the histological examination of regenerated bone was performed. After 6 months, reduction of pocket depth from 8.1 to 3.8 mm was observed. Nearly the same value was measured after 24 months.

The attachment gain after 6 months reached the average value of 4.2 mm without some substantial differences after 24 months. Radiologically evaluated bone fill was 4.6 mm after 6 months and 4.4 mm after 24 months. Bleeding in probing (BOP) was 54% at baseline and 36% and 34% after 6 months and 24 months respectively. Histological examination after 6 months showed complete resorption of calcium sulphate particles, advanced resorption of  $\beta$ -TCP and formation of regular alveolar bone. The clinical results also demonstrate that calcium sulphate and  $\beta$ -TCP in combination with PRP acts as a very good osteoconductive material for osteoinductive mechanisms and they are suitable materials for this type of GTR procedures.

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