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($P < 0.05$). Group 4 ranked second in terms of microleakage. Increasing the torque decreased microleakage in all groups except for group 3.

Conclusion: Microbial leakage occurred in almost all implant systems in our study. In one-stage implant placement, healing abutments should be preferably torqued to 20N/cm to minimize microleakage. Optimal torque for healing abutment insertion should be analyzed individually for each system.

PD206

Porcine bone graft mixed with collagen regenerates bone in rabbit calvaria critical size defects

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Background & Aim: Porcine bone graft had demonstrated similarities to the human bone, without the possibility of Spongiform Encephalopathy transmission like the one bovine graft has. Porcine bone can be use alone or together with Autografts in different procedures. Type I collagen fibrillar structure provides a scaffold for the ingrowth of regenerative cells, and gives physical characteristics to the graft material, making easy to adjust its form to different bone defects shapes. The aim of this study was to develop a novel porcine graft with collagen, determined its bone regeneration properties in rabbit calvaria bone defects, while comparing these results with porcine graft and HA/β-TCP during 8 weeks of healing.

Methods: Prior to the animal study the Porcine-Collagen graft underwent Cell Viability test (MTT) and Alkaline Phosphatase Assay (ALP). The surgical procedure was performed in 20 adult male New Zealand white rabbits. During a standardized surgical procedure, 4 calvaria critical-size defects of 6 mm diameter were prepared in each rabbit. Upper left defect was filled with porcine graft 500-1000 μm, the upper right with Porcine-Collagen graft, the lower left with commercial HA/β-TCP, and the lower right was the control defect healing without any material. The specimens were divided equally in 4 groups, and sacrificed at 2, 4, 6 and 8 weeks after surgery. All samples blocks were prepared for histomorphometric analysis.

Results: The histological results showed Porcine-Collagen graft performance regenerating new bone trough osteoconduction was better than control group and porcine graft alone, and similar to HA/β-TCP, balancing new bone regeneration/particle reabsorption rate. MTT assay and Alkaline Phosphatase tests indicated Porcine-Collagen graft promoted cell viability and osteoblast like cell differentiation.

Conclusion: Porcine-Collagen graft didn't interfere with wound healing and promoted bone regeneration through osteoconduction. Porcine-Collagen graft can be considered for further studies as a possible bone-graft for new bone regeneration in different dental procedures.

PD207

Factors that influence the content and functional properties of platelets in plasma-rich in growth factors (PRGF)

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Background & Aim: One of the methods used for obtaining "platelet concentrates" is PRGF EndoRet (BTI, Spain).This plasma is rich in platelets, circulating proteins and growth factors, however the exact content of the platelets in different patients is not constant and has significant individual variability. The aim of the study was to examine the content of platelets in PRGF obtained by standard protocol and their functional properties depending on the patient's individual hematological features and clinical parameters.

Methods: The study involved 30 patients with maxillary bone reconstructive procedures performed with the usage of PRGF. Before surgical intervention the clinical and radiological examination, blood test, coagulation study and study of induced platelets aggregation was performed. During the reconstructive surgery two fractions of plasma were produced according to the PRGF EndoRet protocol for all patients. The content of platelets and other blood cells, as well as the morphology of fibrin membrane was evaluated for each fraction.

Results: The average ratio between the content of platelets in fraction rich in growth factors (F2) and native blood (concentration index) consisted 1.48, the platelets content in F1 (plasma poor in platelets) was 1.3 time less than in blood. The main factors that influence to the platelet concentration in plasma were the initial number of platelets in blood, hematocrit and fibrinogen concentration. The ratio of platelets content in fractions depended only on hematocrit. The study of correlations between the functional activity of platelets in F1 and F2 fractions, revealed the inverse correlation between platelets aggregation activity and their content in F2 fraction.

Conclusion: For appropriate treatment strategy and correct prognosis of PRGF clinical efficiency it's recommended to evaluated platelet count in native blood and compare it with the data of aggregatogram before PRGF preparation and application.

PD208

Effects of combined use of recombinant human Fibroblast growth factor-2 and β-Tricalcium phosphate on ridge preservation in dehiscence bone defects after tooth extraction: a split-mouth study in dogs

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Tokyo/Japan

Background & Aim: Tooth extraction often leads to an alveolar ridge of extremely reduced height and width, causing esthetic and functional disorder. Various bone graft materials have been used for alveolar ridge preservation. Anzai and co-workers reported periodontal regeneration using recombinant human fibroblast growth factor-2 (rhFGF-2) with β-Tricalcium phosphate (β-TCP) in beagle dog one-wall periodontal defects. This