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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.

**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.
For observational studies, a measurement or observation that is used to describe patterns of diseases or traits, or associations with exposures, risk factors, or treatment. Types of outcome measures include primary outcome measure and secondary outcome measure. Parallel assignment. Growth factors contained in platelets represent an important physiological mixture of factors that may be involved in the healing process. Method. A literature review on the role played by certain biomolecules, such as growth factors and platelet-rich plasma (PRP), in the healing of different tissues and on their therapeutic use to promote this process was undertaken. Results. Platelet-rich plasma is a natural source of growth factors and this has been successfully used in different clinical situations such as dentistry, plastic surgery, trauma and orthopedics, ocular surgery, gastroenterology, or skin ulcers. However, standardized protocol for its preparation and application has yet to be established. The technology of plasma rich in growth factors (PRGF-Endoret or formerly Endoret) is a relatively new biological therapy that uses patient’s own proteins and growth factors as therapeutics [14-16]. In fact, it is obtained from patient’s own blood and it consists in a supernatant enriched in plasma and platelet-derived proteins and morphogens. Platelets are then activated by means of calcium to effectively release the protein content stored within their alpha granules [17]. The latter are full of morphogens including platelet-derived growth factor (PDGF), transforming growth factor beta (TGF-β), VEGF, fibroblast growth factor (FGF), epidermal growth factor (EGF), IGF-I and nerve growth factor (NGF) among others [15,18].