PLATELET-RICH PLASMA: SCIENTIFIC BASICS AND A CRITICAL REVIEW OF THE LITERATURE

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Platelet-rich plasma is one of the available sources of multiple autologous growth factors for bone grafts and soft tissue healing. Since Marx has published his paper on the role of platelet-rich plasma and the growth factors in bone regeneration a lot of mostly clinical reports on these topics has been published. Only a few number of papers deals with the basics (growth factor amount or differentiation of the concentration methods) and looked to the cellular or experimental effects in animal-studies in a scientific way. Very different results have been published in combination with autogenous bone and allografts. We will discuss our results of correlation of platelet concentration in platelet-rich plasma to 5 different extraction methods, age, sex and platelet count of the donor side and we will show our first preliminary results of the animal study comparing implant healing and bone regeneration in augmentation materials with and without platelet-rich plasma. Our results will be discussed with the very different results on these topics in the literature.