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Guest Editorial

Advanced PRF & i-PRF: Platelet Concentrates or Blood Concentrates?

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I express my heartfelt congratulations and best wishes to the team of Journal of Periodontal Medicine and Clinical Practice, for their creative research platform.

Nowadays, growth factors are routinely used in regenerative medicine and oral surgery. Since the beginning, the scientists and clinicians were focused on platelets and their growth factors. Our first proposition through the Platelet Rich Fibrin (PRF) was to get the fibrin mesh automatically at the end of the spin including the growth factors with a specific release from the fibrin. The question of the bone stimulation by the PRF is now explained: the PRF acts as a provisional extra cellular matrix (fibrin, fibronectin and thrombospondin), inducing an early and fast vascularization. The growth factors are coming to improve the vascularisation and the cell chemotaxis and proliferation. During this last decade, as the action of white cells was unclear, the controversy about the white cells induced a separation between the users of plasma rich in growth factors (PRGF) and PRF.

Recently, a considerable evidence on the role of white cells as monocytes on the bone regeneration and the vessels growth emerged through numerous publications. The monocytes play an essential role on bone growth, vascularization and production of vascular endothelial growth factor (VEGF). The monocytes have BMP receptors and recently it was demonstrated that Monocytes produce BMP-2. We started to try to include the monocytes within the PRF and we achieved to include them: a new name was applied: CHOUKROUN'S Advanced PRF™ or A-PRF™. The first clinical and scientific outcomes are very exciting: more and earlier vascularization, faster soft tissue growth, release of BMPs and more cytokines than classical PRF. The future is now more exciting with the next launch of the new protocol i-PRF during the Syfac meeting in Paris (www.syfac.com). The same PRF concept as no anticoagulant neither an additive gives us at the end of the spin a PRF liquid and injectable. It coagulates immediately after the injection. However, the i-PRF was designed with the same objectives than A-PRF, including the majority of the cells from the blood. The use of injectable PRF will help us to fill certain sites but also to inject it whit a major objective: changing the biotype of the gingiva.

We believe definitely in this concept to get the whole amount of cells from the blood, white cells, platelets, but also other cells: circulating stem cells and endothelial cells. It's the reason that we have to consider the A-PRF & i-PRF as “blood concentrates” and not platelet concentrates.