

GPS™ II and GPS™ III: comparison of obtained platelets concentrations

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Introduction:

Recently, several researches, essentially in vitro, demonstrated the positive effects of platelets on healing process of different tissues: bones, muscles and tendons.

The aim of this study is to compare the obtained platelets concentration between the new GPS™ III and GPS™ II.

Methods:

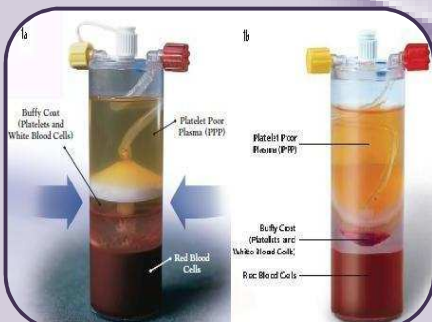
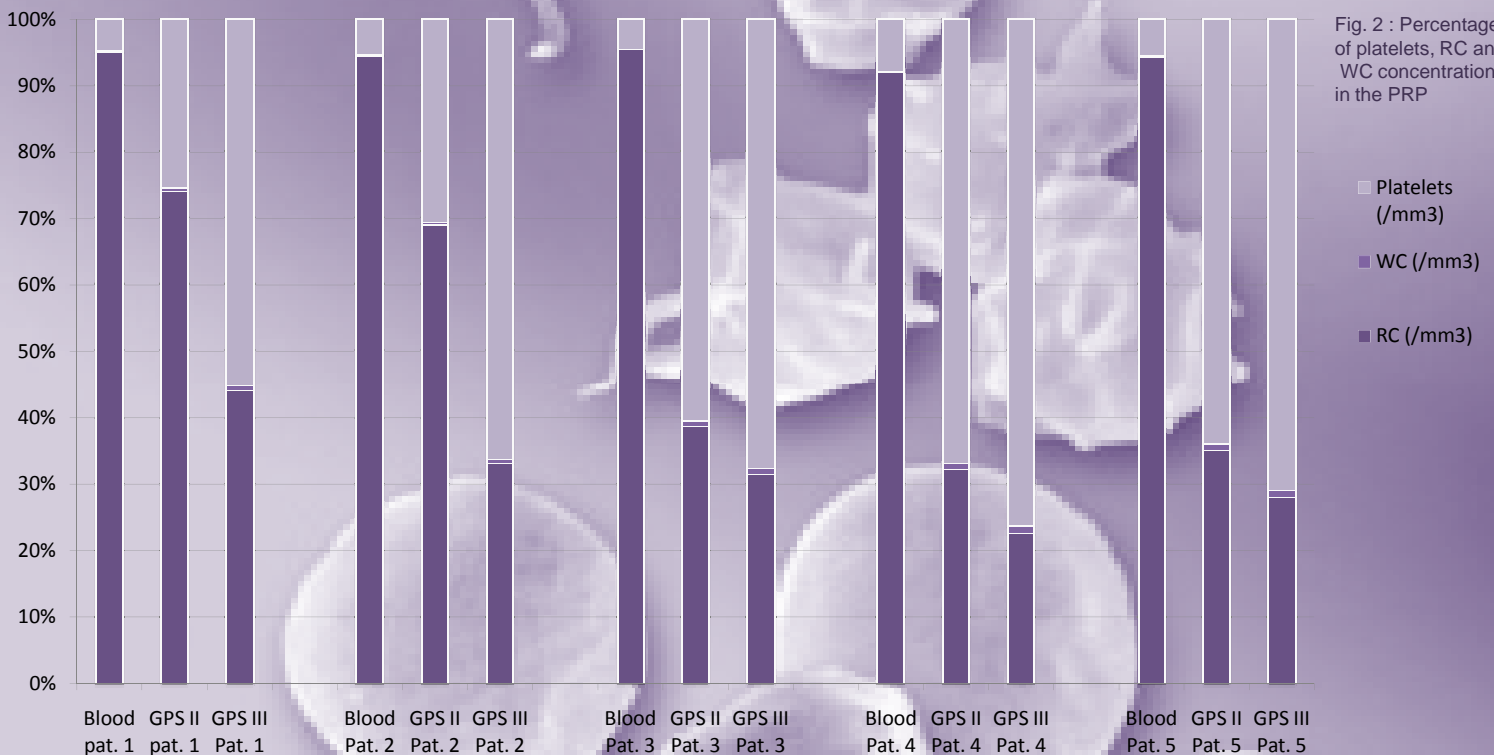
Two blood samples of 52 mL were taken in 5 volunteers and transferred respectively in both GPS™ II and GPS™ III (Fig. 1). These devices were centrifuged at 3200 RPM during 15 min. The platelet-rich plasma (PRP) was thus collected and transferred in 6 mL test tubes.

Cells count was done using an analyser ABX Micros 60.

Results (Fig. 2):

The obtained volume of PRP was respectively 6.2mL for GPS™ II and 6.6mL for GPS™ III. Platelets concentrations were more important from 6.2 up to 9.2 times with GPS™ II and from 7.3 up to 8.3 times with GPS™ III compared to blood samples. Efficiency of the collected platelets was around 92% for GPS™ II and 96% for GPS™ III. Both techniques made it possible to collect platelets but, unfortunately, also a lot of red (RC) and white blood cells (BC).

None of these techniques showed any significant difference ($p > 0.05$).



Conclusion:

There is **no significant difference** between obtained volume of PRP, efficiency of collect of platelets nor platelets concentrations obtained with GPS™ II or GPS™ III.

Conflicts of interests:

The 10 devices GPS™ II and GPS™ III were provided gracefully by the firm Biomet Biologics TTC.