

Preface

I first came across Platelet Rich Plasma (PRP) while attending the World Congress of Arthroscopy and Sports Medicine in Buenos Ayres, Argentina 2006. Dr. Ramon Cugat, from Spain, gave a fascinating PRP lecture at this meeting titled “Los Factores de Crecimiento in la Medicina Deportiva.” I was delighted with the possibility of stimulating healing through the use of an anabolic-autologous environment with minimal risk to the patient.

I subsequently visited Dr. Cugat in Barcelona and became trained in Platelet Rich in Growth Factors (PRGF).

I returned to Brazil with a strong interest in Regenerative Medicine and PRP. This newfound interest galvanized me to find a university with a strong focused regenerative research division. The University of Campinas (UNICAMP) has an outstanding, world-renowned reputation as leaders in medical innovation. The idea of researching PRP was enthusiastically received by a group of professors who set up a project involving basic and applied sciences. UNICAMP has now developed a PRP research center in large part due to the hard work of professors William D. Belangero, Angela C. M. Luzo, Joyce M. A. Bizzacchi, and Maria Helena A. Santana.

Platelet Rich Plasma is a rapidly growing and developing treatment modality, with new research coming out weekly. The aim of this text will be to provide a concise review of the current literature and practical aspects of PRP. We hope that this text will serve as a guide to both clinicians and researchers. Platelet Rich Plasma is emerging as a primary source of autologous products in Regenerative Medicine. A true precursor and promoter of the healing process along with the Scaffolds and Stem Cells. This new technology opens up a broad spectrum of action and simultaneously increases the challenges to be scientifically confronted.

Standardized products or autologous biomaterial often seem impossible. Unlike synthetic biomaterial that comes from the industry with a controlled quality, an autologous biomaterial depends on the health of the individuals. Therefore, it is impossible to set an exact quality when it involves a plethora of variables of each individual's general health. Several studies that have collected data had difficulties to compare and standardize the technique. However, scientific knowledge of the phenomena, variables, and interactions involved in the formulation of PRP have allowed us to modulate its behavior and form the basis of its standardization for clinical applications. Moreover, it is also possible to have PRP tailored for specific

applications. It is with this approach that we believe that the science of PRP should be developed.

Our expectation is to use the healing potential of the human body and specifically the blood of each individual. The blood cells collection, processing, and activation, as well as the choice of the best way for clinical application are widely discussed topics in this book. The best indications, along with the expected results for each type of nosology will be presented here.

My great motivation was to bring together in the same book the authors who have seriously experienced this technique, collect, and publish their results. Herein, renowned professionals, pioneers, and also those who accumulated expressive results in the last ten years were invited to write about their experiences. I emphasize that this book would not exist without the confidence and friendship that international and national authors had in me when I asked and they kindly agreed to write their experiences in the form of chapters that compose this work. My special gratitude to Maria Helena Andrade Santana who effectively helped me organize this book.

I hope that this work will contribute in this wonderfully emerging phase of Medicine, which is Tissue Regeneration.

José Fábio Santos Duarte Lana

Platelet-Rich Plasma

Regenerative Medicine: Sports Medicine, Orthopedic,
and Recovery of Musculoskeletal Injuries

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2014, XVII, 360 p. 89 illus., 77 illus. in color., Hardcover

ISBN: 978-3-642-40116-9