PRP injections are becoming a new medical advancing technology that is and will continue to be used in sports medicine and orthopedic settings.1,2,3,4,5,6 It is a procedure that current and future physical therapists should be well informed about as the *potential* for better outcomes, faster return to play/work, and enhanced repair and healing processes is evident.1 However, the word *potential* must be stressed. While there are both human and animal studies which investigate the use of PRP injections for promotion of beneficial effects in all musculoskeletal tissues, including articular cartilage regeneration, further studies are needed to confirm the results and understand the mechanism of action which could provide better and stronger results.2 Additionally, several athletes have experienced successful experimentation with PRP treatment for their knees, including NBA start Kobe Bryant, tennis star Rafael Nadal, Tiger Woods, and former Pittsburgh Steeler wide receiver Hines Ward.3

For those that are unfamiliar with the procedure (as I was before I investigated this topic), a small amount of blood is drawn from an unaffected area of the patient’s body (usually an upper extremity) and spun in a centrifuge for approximately 20 minutes to isolate platelets. With guidance from ultrasound, those same platelets are then injected into the affected musculoskeletal tissue in an attempt to stimulate tissue repair and healing.1 But the question I have regarding this procedure is: evolving new solution to articular cartilage degeneration or monetary gamble on an uncertain and unconfirmed science?

In a study by Filardo et al, the authors investigated the effect of PRP therapy for enhancing tissue regeneration for the treatment of degenerative cartilage lesions and OA.2 All patients evaluated presented with a chronic knee degenerative condition and were provided treatment in the form of three intra-articular PRP injections. The Internal Knee Documentation Committee (IKDC) and EQ-VAS outcome scores were used to assess effectiveness clinically. At 24 month follow up, the scores on each of the outcomes for all patient were lower (lower scores demonstrate better outcome on each of these functional measures). To that end, further exploration demonstrated better results in younger patients and lower degrees of cartilage degeneration.2 The results suggest treatment with PRP therapy can reduce pain and improve knee function and quality of life with short term efficacy. However, further studies are needed to confirm the results and long term efficacy of this treatment procedure.2

In a similar pilot study, Sampson et al examined the clinical effectiveness of intra-articular PRP injections was evaluated in patients with primary and secondary knee OA.4 14 patients received three PRP injections in the affected knee at 4 week intervals and the outcomes measures used included: Brittberg-Peterson Visual Pain, Activities, and Expectations score, and the Knee Injury and Osteoarthritis outcome score.4 Overall, the study depicted significant and ‘almost linear’ improvements in all functional outcome measures utilized.4 The results demonstrated that PRP therapy is effective for treatment of knee OA in this small group of patients; however, the authors stressed the need for a larger, blinded, RCT to solidify the results demonstrated.4

Furthermore, Hart et al demonstrated significant improvement in functional outcomes measures including: Lysholm, Tegner, IKDC, and Cincinnati scores with 1 year (9 injections) treatment with autologous PRP therapy for patients with Grade II or III tibiofemoral chondromalacia.5 The treatment resulted in reduced pain and increased quality of life for patients; however, MRI did not show any significant cartilage condition improvements (i.e. no increased thickness).5

The potential for decreased recovery times and better outcomes is there, with regard to PRP injection therapy.1,2,4,5 It is a trend setting, evolutionary procedure that can not only benefit elite athletes, but also the general population, ultimately leading to a better quality of life. As physical therapists, we should be aware of the principles of tissue healing and pathophysiology associated to PRP, in order to successfully apply this intervention into both conservative and operative treatment of musculoskeletal injuries.6 It is a fastening phenomenon to think about. Imagine more intense and faster rehab programs associated to the accelerated healing and repair process of PRP injection.

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