



Editorial Commentary: The Time Has Come to Try Intra-articular Platelet-Rich Plasma Injections for Your Patients With Symptomatic Knee Osteoarthritis

Timothy J. Hunt, M.D. (Associate Editor)

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Abstract

Platelet-rich plasma injections, in a systematic review and meta-analysis of 10 Level I randomized control trials, were found to provide more pain relief and better functional outcomes than hyaluronic acid in patients with knee osteoarthritis at 12 months after injection. The time has come for those of us who have not yet tried platelet-rich plasma injections in our patients with symptomatic knee osteoarthritis to do so.

Dai, Zhou, Zhang, and Zhang, in "Efficacy of Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis: A Meta-analysis of Randomized Controlled Trials,"¹ compare platelet-rich plasma injections with both hyaluronic acid and saline injections in the treatment of knee osteoarthritis. The systemic review and quantitative synthesis of 10 Level I randomized control trials revealed that, although platelet-rich plasma and hyaluronic acid injections had similar effects 6 months after injection, at 12 months after injection, platelet-rich plasma had significantly better pain relief and functional improvement than did hyaluronic acid injections. The authors provide an interesting and needed update on this subject matter. They are to be commended for clearly identifying a minimal clinically-important difference in their primary outcomes. They report their outcomes with 95% confidence intervals. A flowchart is provided, clearly accounting for the exclusion of studies that met initial inclusion criteria. Forest plots are provided to emphasize key take-home points. Previous meta-analyses^{2, 3, 4, 5} contained several flaws, including being underpowered. Often, hyaluronic acid and saline were taken together as a control. Many of the included studies were not Level I studies; many were simply observational studies. There was significant heterogeneity of the included studies, and only postoperative, rather than both preoperative and postoperative, functional scores were analyzed.

Finding efficacy with knee injections for patients with arthritis is difficult. Commonly, cortisone and hyaluronic acid injections are used. However, no single type of injection seems to work in all patients. Platelet-rich plasma injections are very popular for several orthopaedic conditions.⁶ Given the proposed effects of platelet-rich plasma,⁷ it was only a matter of time before they were offered in the treatment of symptomatic knee osteoarthritis. I have no personal experience with platelet-rich plasma injections for the treatment of symptomatic knee osteoarthritis. Several of my colleagues similarly report no experience, or very little

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experience, in this matter. Some of my patients find cortisone injections to be more helpful than hyaluronic acid injections. In others, the reverse is true. Having another option with proven efficacy is exciting. The obvious questions for those of us just starting to use platelet-rich plasma injections in the treatment of symptomatic knee osteoarthritis include the starter costs, finding or training appropriately knowledgeable personnel to assist in the preparation of the platelet-rich plasma, as well as issues of obtaining authorization or appropriate reimbursement.

In the future, further randomized control trials regarding the use of platelet-rich plasma injections in treatment of symptomatic knee osteoarthritis are indicated. This would allow for more power in the comparisons. Ideally, the studies would be more homogeneous regarding preparation of the platelet-rich plasma, patient populations, and scheduling of the injections. Standardized methods, including strict inclusion/exclusion criteria, assessment of alignment, and longer clinical follow-up, would be very helpful. It would be interesting to see how steroid injections would compare with platelet-rich plasma and hyaluronic acid injections in this patient population.

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