

Letters to the Editor

Platelet-Rich Plasma Effective for Patients with Knee Osteoarthritis

Original Article: Top POEMs of 2019 Consistent with the Principles of the Choosing Wisely Campaign

Issue Date: December 1, 2020

See additional reader comments at: <https://www.aafp.org/afp/2020/1201/p673.html>

To the Editor: I was confused by the conclusion of Drs. Grad and Ebell that platelet-rich plasma should not be recommended for knee osteoarthritis. The study summarized in their article reported minimal function and subjective benefit after five years; however, that overlooks the participants' favorable and well-tolerated response to platelet-rich plasma for up to two years.¹ This study was a prospective, double-blind trial, with platelet-rich plasma vials taped to conceal them from the hyaluronic acid comparison group and three injections administered in a weekly series.

Having an additional modality to treat knee osteoarthritis with injections every six to 12 months is important. At my institution, repeat hyaluronic acid or cortisone injections are offered at six months if there is functional improvement after the first injection. With up to an 11% excessive inflammatory reaction rate to hyaluronic acid, platelet-rich plasma offers a better-tolerated alternative to help decrease or postpone the need for knee arthroplasty.²

Drs. Grad and Ebell noted hyaluronic acid to be similar to placebo in effectiveness. However, in the trial, both the hyaluronic acid and platelet-rich plasma groups had subjective and functional improvement scores significantly above baseline for up to two years, suggesting that both treatments were effective.

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Letters should be fewer than 400 words and limited to six references, one table or figure, and three authors. Letters submitted for publication in *AFP* must not be submitted to any other publication. Letters may be edited to meet style and space requirements.

This series is coordinated by Kenny Lin, MD, MPH, deputy editor.

References

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2. Puttick MP, Wade JP, Chalmers A, et al. Acute local reactions after intraarticular hyaluron for osteoarthritis of the knee. *J Rheumatol*. 1995;22(7):1311-1314.

In Reply: We thank Dr. Kersch for his comments on this topic. Knee osteoarthritis is a chronic painful condition, and studies typically use subjective patient-reported outcomes. A placebo effect is more likely when there is a subjective outcome, such as pain, and an impressive intervention, such as a physician with a large needle. Therefore, we must focus our attention on adequately controlled studies with a true sham intervention and blinded outcome assessment.¹

Many randomized trials of hyaluronic acid injections failed to compare the active drug to a sham or placebo injection or to mask outcome assessors. A systematic review of 71 randomized trials also found clear evidence of publication bias, meaning that trials finding no benefit or finding harm were not published. Benefits were found in 58 studies that did not have adequate allocation concealment, but benefits were not clinically significant in 13 studies with adequate allocation concealment. Similarly, no clinically important benefit was found when outcomes were blindly assessed compared with when they were not. There was also no benefit in larger studies and unpublished studies. To summarize, in the best quality and largest studies, little or no benefit was found; many studies went unreported, and harms were significantly greater in the viscosupplementation groups.²

POEMs (Patient-Oriented Evidence that Matters) have reported on many studies of joint injections for patients with knee arthritis (e.g., hyaluronic acid, platelet-rich plasma, corticosteroids, ozone therapy, prolotherapy). A search of Essential Evidence Plus found a systematic review of six randomized trials comparing platelet-rich plasma injections with hyaluronic acid (five studies) or saline (one study).³ The researchers found no significant difference between groups in pain score or patient satisfaction and more adverse events with platelet-rich plasma (8.4% vs. 3.8%; $P = .002$). We cannot recommend this treatment to our patients until we have adequately powered studies that compare platelet-rich plasma with saline or placebo injection

and adequate masking of patients and investigators. We conclude that the observed score improvements found with platelet-rich plasma injections most likely reflect a placebo effect.

Editor's Note: Dr. Ebell is deputy editor for evidence-based medicine for *AFP*.

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1. Hróbjartsson A, Gøtzsche PC. Placebo interventions for all clinical conditions. *Cochrane Database Syst Rev*. 2010;(1):CD003974.
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Ultrasound Subthalamotomy for the Management of Parkinson Disease

Original Article: Parkinson Disease

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To the Editor: I am a family physician who has Parkinson disease and read with great interest the superb review article by Drs. Halli-Tierney and colleagues. I want to offer a surgical option that was not discussed in the article.

I was the recipient of a near-miraculous treatment for tremors called focused ultrasound subthalamotomy.¹ This outpatient procedure is best suited for people who have Parkinson disease with unilateral tremor. The procedure creates a lesion in the ventrolateral thalamus using ultrasonography and magnetic resonance imaging guidance. Unlike deep brain stimulation, this procedure involves no cutting, and there is no need for battery-driven stimulation.

Before this procedure, I had a debilitating left arm and hand tremor that was barely responsive to pharmacologic treatment. The tremor made things like holding a phone impossible,

caused constant painful lateral epicondylitis, and resulted in nightly insomnia from regularly flicking myself. My neurosurgeon classified my tremor as a "4+" out of 4. During the ultrasound subthalamotomy, an 8-mm lesion was created (while I was fully awake) that resulted in immediate and complete resolution of the tremor. Although adverse effects reported in a recent randomized controlled trial included weakness on the treated side, speech and gait disturbances, and dyskinesia for up to 12 months,¹ I have been fortunate not to experience any of these. An unexpected bonus has been a significantly decreased need for carbidopa/levodopa (Sinemet) with a resultant noticeable decrease in medication-mediated dyskinesias.

Although focused ultrasound subthalamotomy is not a treatment applicable to all people with Parkinson disease, family physicians should be aware of its existence in the neurosurgeon's toolbox.

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1. Martínez-Fernández R, Máñez-Miró JU, Rodríguez-Rojas R, et al. Randomized trial of focused ultrasound subthalamotomy for Parkinson's disease. *N Engl J Med*. 2020;383(26):2501-2513.

Editor's Note: This letter was sent to the authors of "Parkinson Disease," who declined to reply.

Correction

Incorrect Statistics. In the Lown Right Care, "Anticoagulation in Older Adults," (June 15, 2020, p. 748), the second sentence of the Clinical Commentary section incorrectly stated that atrial fibrillation is more common in women rather than men. The sentence should have read: "Approximately 9% of people 65 years and older have this condition, and it occurs more often in men."² Also, in the third sentence of the Resolution of Case section, the annual risk of stroke for the patient in the case scenario was incorrectly listed as 8% instead of 3.2%. The sentence should have read: "Mr. H has a 3.2% annual risk of stroke, with less than one-half of that being a risk of a disabling or fatal stroke.^{1,2,9,12}" The online version of this article has been corrected. ■