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Review of PRP for chronic tendinopathies, with a focus on gluteus medius/minimus tendinopathy

During my PM&R residency at a Division 1 School, platelet-rich plasma therapy (PRP), bone marrow aspirate (BMAC) and micronized fat aspirate (MFAT) were used for out-of-season athletes with tendon issues with great success. Since we were focused on college-aged athletes, I did not often consider it for a more diverse age range of people with more chronic issues. As an interventional pain fellow in Arizona, my patient population has changed. About two weeks ago, I attended an orthobiologics conference for Mayo interventional pain fellows at Mayo Jacksonville which has sparked my new interested in orthobiologics for chronic pathologies, specifically chronic tendionpathies. High quality level 1 evidence exists for using PRP for plantar fasciopathy (21 RCTs according to Herber et al.'s 2024 systematic review and meta-analysis[1]), common extensor tendinopathy, and gluteus medius/minimus tendinopathy/partial thickness tears[2-5]. I am most interested in focusing on the latter as gluteus medius/minimus tendinopathy (GT) is very common. Tears in these tendons are part of greater trochanteric pain syndrome, a pain pathology that tends to occur between the fourth and sixth decades of life[2]. Tears in these tendons have emerged as the principle cause for GTPS[2]. For patients who have failed conservative management, steroid injections to the greater trochanter have often been considered as first line intervention therapy for this pathology[2]. However, I have often found that my patients with this syndrome are also receiving steroids in other contexts (knee injections, epidurals, and more) and are often at risk of reaching the limit of recommended steroid use per year. For this reason, it's important to be able to offer another intervention for them. There are several randomized control trials (RCT) with level 1 evidence supporting the use of platelet rich plasma in these situations. Fitzpatrick et al. (2019) found patients had 2 year sustained pain relief with a leukocyte-rich PRP injection compared to 6-24 week maximum pain relief with a corticosteroid injection (CST)[3]. Another RCT by the same team found that patients with chronic gluteal tendinopathy over 4 months had better outcomes at 12 weeks with PRP than at 12 weeks with CST[4]. Additionally, when compared to surgery, PRP is superior with a larger effect size[5]. This and similar information was presented at the recent Jacksonville conference, and I will be offering PRP to these patients in the future. Research in the orthobiologics sphere is affected by study heterogeneity and a lack of standardized protocols. Future high-quality, large-scale RCTs with standardized PRP preparation and administration methods are essential to establish definitive conclusions regarding the efficacy of PRP therapy across various tendinopathies.

Sources:

1. Herber A, Covarrubias O, Daher M, Tung WS, Gianakos AL. Platelet rich plasma therapy versus other modalities for treatment of plantar fasciitis: A systematic review and meta-analysis. *Foot Ankle Surg*. 2024;30(4):285-293. doi:10.1016/j.fas.2024.02.004
2. Victor M. Ilizaliturri, Rafael Zepeda Mora, Liliana Patricia Rodríguez Vega. Rehabilitation After Gluteus Medius and Minimus Treatment. *Arthroscopy, Sports Medicine, and Rehabilitation*. 2022;1(4):e41-e50. doi.org/10.1016/j.asmr.2021.10.024.
3. Fitzpatrick J, Bulsara MK, O'Donnell J, Zheng MH. Leucocyte-Rich Platelet-Rich Plasma Treatment of Gluteus Medius and Minimus Tendinopathy: A Double-Blind Randomized Controlled Trial With 2-Year Follow-up. *Am J Sports Med*. 2019;47(5):1130-1137. doi:10.1177/0363546519826969
4. Fitzpatrick J, Bulsara MK, O'Donnell J, McCrory PR, Zheng MH. The Effectiveness of Platelet-Rich Plasma Injections in Gluteal Tendinopathy: A Randomized, Double-Blind Controlled Trial Comparing a Single Platelet-Rich Plasma Injection With a Single Corticosteroid Injection. *Am J Sports Med*. 2018;46(4):933-939. doi:10.1177/0363546517745525

5. Rafael Walker-Santiago, Natalia M. Wojnowski, Ajay C. Lall, David R. Maldonado, Stephanie M. Rabe, Benjamin G. Domb. Platelet-Rich Plasma Versus Surgery for the Management of Recalcitrant Greater Trochanteric Pain Syndrome: A Systematic Review. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*. 2020;36(3):875-888.