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Case Abstract

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PRP for High Grade Tear of Common Extensor Tendon

Case History

48-year-old, right-handed, male, with past medical history significant for Hashimoto's Thyroiditis and hyperlipidemia, presents to his PCP for 8 weeks of right lateral elbow pain that impaired his function of his right upper extremity and work. It initially began after repetitive wrist movements while completing a home improvement project on his deck. There is no numbness or tingling.

He was diagnosed with common extensor tendinopathy by his PCP. He underwent a common extensor tendon sheath corticosteroid injection under ultrasound guidance with his PCP, and continued ice, as needed NSAIDs, counterforce bracing, and a home rehabilitation program.

After no further improvement, he underwent an MRI which revealed a high-grade partial-thickness tear of the common extensor tendon involving approximately 75% of the cross-sectional thickness. He was referred to an orthopedic hand surgeon, who referred him for platelet rich plasma consultation due to patient preference for nonsurgical treatment.

At our sports medicine practice, he underwent an ultrasound guided, PRP injection to the common extensor tendon origin, tendon tear, abnormal hypoechoic pathology, and peri-tendon sheath. The PRP injection is leukocyte poor, with platelets concentrated to 10 times his baseline concentration using an EmCyte kit. He tolerated this well, with follow up scheduled and plans for activity modification and a progressive rehabilitation program with mobility and eccentric strengthening.

Physical Examination on Presentation

He is alert and well appearing. Right elbow with full, painless, range of motion with the exception of pain with passive wrist flexion. Strength testing is 5/5 with flexion and extension except for pain limiting strength of wrist and digit extension. Has tenderness to palpation over lateral epicondyle and extensor muscle group. Varus and valgus stress testing without instability. Neurovascularly intact. Normal sensory exam to light touch and pressure. Reflexes were 2/4 and equal bilaterally. No skin rashes, lesions, erythema, or induration.

Tests & Results

X-ray Right Elbow, 3 view: Unremarkable. No acute fracture or dislocation. Joint spaces are preserved. No significant elbow joint effusion. Soft tissues are grossly unremarkable.

MRI Right Elbow: There is a high-grade partial-thickness tear of the common extensor tendon involving approximately 75% of the cross-sectional thickness of the tendon. The radial collateral ligament is intact. Triceps tendon is intact. Biceps tendon is intact. Musculature is maintained. Common flexor tendon is intact. Ulnar collateral ligament is intact. No significant elbow joint arthrosis or effusion. No fracture or OCD.

Discussion

Lateral epicondylitis of the elbow, more appropriately known as common extensor tendinopathy, is a relatively common condition, particularly among upper extremity athletes and among manual laborers. The overall incidence may approach 1 to 3 percent in the general population, while the incidence among patients presenting to a general medical practice is approximately 0.4 to 0.7 percent (1). Even when a tendon tear is present, the majority can be managed non-operatively. Generally, surgical referral is reserved for patients with severe symptoms, larger tendon tears with greater than 50% cross-sectional tendon thickness that do not improve despite conservative treatment for longer than six months. Additionally, the amount of tendinosis present can affect the success of surgical repair. The use of biologic therapies such as PRP is a growing field, with theorized benefit to stimulate tissue repair. Research looking at treatment with PRP reported relative improvements in pain (2). Randomized trials with chronic LET have demonstrated significant and sustained improvements in pain scores and elbow tenderness at 24 weeks in patients treated with PRP injection compared with those not administered PRP (3,4,5). While research involving PRP is limited in regard to high grade tears of the common extensor tendon, this case is a promising example.

Outcome

At 1 month follow up post-PRP injection, patient noted a small improvement in pain and function, while continuing with home exercise program. He was referred to performance physical therapy and will follow up with us again in 3 to 4 weeks.

References

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