

Alpha-2 Macroglobulin Platelet-Rich Plasma

Case Report

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Diagnosis

Right Knee ACL Tear, PCL Tear, MCL Tear, Bursitis, and Effusion

Intro

Patient is a 33-year-old male who has had knee pain when doing Judo. He initially sought treatment in June 2016, after he took a bad fall and landed on his leg with his right leg bending versus to the right with pain that persisted since that point.

His MRI report of the right knee showed the following:

- Recent grade 2 to 3 sprain of the tibial collateral ligament with avulsion fracture involving the posterior fibers of the tibial collateral ligament at the femoral attachment extending antero-posteriorly 1.3 cm
- Low to moderate grade sprain of the anterior cruciate ligament most pronounced involving the posterior lateral bundle without full thickness tear
- Mild bone marrow edema involving the weight bearing surface of the lateral femoral condyle (osseous contusion = 1.9cm)
- Small popliteal cyst
- Small joint effusion
- Deep infrapatellar Bursitis

Dr. Tierney used a B-mode ultrasound with 8 to 13MHz high frequency GE 12L linear transducer to perform an additional diagnostic exam. The ultrasound revealed the additional following findings:

1. Right Lateral tibial bone marrow edema
2. Right posterior cruciate ligament anterior cruciate ligament tear
3. Right tibial nerve and peroneal nerve irritating in the proximal popliteal space
4. Mild supra patellar pouch effusion
5. Right medial collateral ligament tear irritating the obturator nerve
6. Lateral patellar tendon tracking

Patient agreed to the clinicians' recommendations of the Alpha-2 Macroglobulin Platelet-Rich Plasma (A2M PRP) treatment, in hopes of healing of his knee injury and returning to his sport of judo.

Treatment

100cc of blood was harvested intravenously from the patient and processed to produce 14cc of platelet rich plasma and 8cc of autologous fibrin glue.

Under ultrasound guidance, a needle performed a percutaneous tenotomy on the right medial collateral ligament with A2M PRP. The anterior cruciate ligament, posterior cruciate ligament and the right supra-patellar pouch were injected with A2M PRP.

Cover roll and Leukotape were then applied to the right knee, to stabilize patellar tendon and medial collateral ligament. Tape was maintained for the next three weeks.

Follow-up

Two weeks after the injection, patient posted his response on Facebook, grateful for the chance to get a regenerative treatment on his knee. "This treatment has, in my opinion, made the impossible possible," he stated. "A month ago, I was told that I would most likely have to undergo knee surgery and would possibly have a 6 to 8 months recovery time. I can now complete my Insanity videos with very little pain or discomfort. I'm back jogging, sprinting, lunging, and squatting, and should be back on the mat in about a week. I still have a ways to go for a full recovery, but I can definitely see the light."

Upon physical exam with Carol Hanselman, Nurse Practitioner, four weeks after the treatment, his knee was stable and pain-free, and he was cleared to return to Judo.