

Alpha-2 Macroglobulin Platelet-Rich Plasma
Case Report

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Shawn Tierney, DC, RSMK Musculoskeletal Sonologist

Carol Hanselman, RNP

Rome Walter, DO

Diagnosis

Tendinosis of the quadriceps tendon and patellar tendon, and medial meniscal degeneration and medial joint line spurring of the right knee

Intro

Patient is a 35-year-old male who has had six years of right knee pain, which started after falling on his knee when he was carrying a box. His knee was initially treated with aspiration, a cortisone injection, and physical therapy. Patient had another similar contusion to the knee four years ago. This year, his knee has become significantly worse, where it will “give out” and become significantly swollen and stiff after a day of walking. His pain is in the front of the knee, and is worse when descending stairs.

His MRI report of the right knee on June 15, 2016 showed the following:

1. No meniscus tear
2. Low grade strains of the popliteus and soleus muscles
3. Common peroneal nerve prominent posteriolaterally
4. Tri-compartmental articular cartilage loss moderate in the mediofemoral tibial compartment and patello-femoral compartment
5. Altered patellar tracking
6. Lateral patellar tilt and subluxation

7. Large joint effusion with synovitis and small articular loose bodies

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. Synovial hypertrophy and effusion of the right knee suprapatellar pouch
2. Laxity of the right lateral collateral ligament
3. Normal proximal popliteus tendon
4. Loss of fibers in medial collateral ligament
5. Tenderness and loss of fibers in the quadriceps and patellar tendon insertion
6. Mild lateral tracking of the patellar tendon
7. Medial joint spurring with loss of thickness of the right medial meniscus

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, decrease his pain, and return to playing basketball.

Treatment

100cc of blood was harvested intravenously from the patient and processed to produce 24 cc of platelet rich plasma.

Under ultrasound guidance, a needle injected the right distal quadriceps tendon, the right patellar tendon, the coronary ligaments, the medial collateral ligament, the medial meniscus and the supra patellar pouch with A2M PRP.

Cover roll and Leukotape were then applied to the right knee, to stabilize the knee.

Tape was maintained for the next six weeks.

Follow-up

At the two-month follow-up appointment on October 20, 2016, the patient reported major relief, and his pain questionnaire reported no pain at all. For the first week after the procedure, patient reported he did not have leg pain at rest, but he did have leg pain when walking. After 9 days, patient could shower without any pain and could walk without pain and without need for ice. After 21 days, he started physical therapy, including stretching and pilates two times a week, and he began swimming every day. Patient will return to Jiu Jitsu in January. Patient did have a sensation in the low back for the first two weeks, as if it was regenerating in some way. Before the treatment, patient could not sleep for five hours due to pain, but after the procedure, he is now able to sleep 12 hours without distress. This past weekend, he drove for 17 hours and had no pain. He is very appreciative; he wants to refer Jiu Jitsu fighters from Brazil to come and receive the treatment. Patient states, "I am completely happy, with no pain at all. It seems that my back is stronger overall. I am walking every day with the dogs; I am eager to return to Jiu Jitsu in January."

Figure 1. Reduction in Self-Reported Pain on a 1-10 Scale, before and after PTM Placental Tissue Matrix

Level of Pain	Pre- PX50®	Post- PX50®
	8/22/17	10/19/17
Average Pain	6	0
% Reduction in Pain	100%	