A Complicated and Unusual Recovery for a Collegiate Male Wrestler with Anterior Cruciate Ligament and Medical Meniscus Injuries.

**Background:** A 21 year old collegiate, male wrestler suffered a right knee injury during competition in November 2011. The patient had no previous history of significant medical issues including injury, surgery, disease or hospitalization; no significant family history of disease. The patient planted on the right leg, felt a sensation of the knee "sliding" and heard a loud pop. Examination revealed joint line swelling, knee locking at 30 degrees of flexion, significant range of motion and strength deficits, point tenderness over the medial joint line, a positive Lachman’s test, and inability to bear weight. **Differential Diagnosis:** X-ray and MRI imaging of the right lower extremity were performed to determine the presence of an ACL tear and medial meniscus injury, and rule out chondral defects and fracture. **Treatment:** X-rays were negative; MRI imaging confirmed a complete ACL rupture and large, displaced medial meniscus tear (MM tear). The MM tear was repaired 6 days post injury with plans to surgically repair the ACL 1 month post injury. The patient was non weight bearing with a leg brace for 1 week. Two weeks after injury, the patient complained of pain and swelling in the right calf. Doppler ultrasound confirmed the presence of a DVT in the calf. The patient was hospitalized for anticoagulation (AC) therapy using Lovenox and Coumadin. Doppler ultrasound showed decreased DVT size 2 months post injury. ACL reconstruction was performed 3.5 months post injury. Four days post ACL repair the patient complained of increased thigh pain and the right thigh was significantly swollen; quadriceps compartment syndrome was suspected. The patient was rushed to the hospital for a fasciotomy, incision and drainage, and IVC filter. Hematology was consulted 4 months post injury for anti-coagulation (AC) therapy. The previous DVT was deemed provocative but the patient’s condition was resolving. The filter was removed 2 days later (contained a clot) and AC therapy was initiated. A few days later (4 months post injury) the patient complained of chest pain, specifically with deep breaths. The patient was rushed to the ER where CT angiogram with contrast dye was performed and evidenced an acute pulmonary embolism. The patient was admitted for monitoring and an increased AC therapy was initiated. The patient was diagnosed, days later, with pneumonia after a CT of the chest revealed atelectasis and bilateral consolidations. A series of antibiotics were administered. The patient experienced a large drop in Hemoglobin levels and was treated. A second CT was negative and rehabilitation for the knee was continued. The patient was discharged after resolving the pulmonary embolism. Blood levels continued to be monitored and 5 months post injury and the patient was cleared for full activity. AC treatment was discontinued 8 months post ACL injury, after blood tests ruled out genetic cause for clotting complications. 11 months post injury the athlete was cleared for a gradual return to play. Currently, nearly 2 years post-injury, the athlete is prepared to return to competition.

**Uniqueness:** An acute but significant orthopedic injury prompted a prolonged, atypical physiological response. Despite typical ACL and MM tear recovery, abnormal blood coagulation over 6 months and the subsequent 3 hospital admissions are noteworthy. **Conclusions:** The ACL and MM tear treatments were appropriate and successful. It is unclear why the patient had an atypical clotting episode over a lengthy period of time. Appropriate AC precautions were taken, yet this patient suffered from multiple hospital admissions due to complications of a provocative DVT. It is possible that there are other predisposing factors, yet to be recognized, that contribute to this unexpected response to trauma and surgery. **Word Count:** 592.