A Case Study Presentation on a PCL Rupture in a Women's Basketball Player: Surgical Vs. Non-Surgical Treatment

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Purpose

The purpose of this case report is to show whether surgical or non-surgical treatment of a posterior cruciate ligament (PCL) tear is more beneficial in a women's basketball player. As athletic trainers, we are often faced with the difficult decision to decide with the team physician on what treatment plan is best for an athlete. Research shows that most often PCL injury management is non-operative with emphasis on rehabilitation. However, surgical repair is performed if the knee is unstable or if other ligaments have been injured with the PCL.

History

A female basketball player was cutting during a game and immediately felt a pop in her right knee, causing her to collapse to the court. The athlete has a history of an ACL, meniscal injury, and abnormal patellar tracking in the opposite knee. Athlete has a history of on-going patellar tendinitis in both knees and quadriceps muscle weakness in the left knee.

Differential Diagnoses

The athlete was experiencing a large amount of lateral knee pain with less intense amounts of pain in the back of her knee during the varus stress test and posterior drawer test performed by the Certified Athletic Trainer. It was first thought the injury included a torn lateral collateral ligament because of the lateral knee pain, with a possible PCL sprain or an ACL sprain. The next few days consisted of rest, ice, electrical stimulation, and very minimal rehabilitation exercises. A referral to the team physician was scheduled for the following day.

Diagnosis

Due to the increase in swelling, the team physician was unable to complete a full evaluation; therefore, an MRI was ordered. The MRI showed there was a positive PCL tear, meniscal injury (unable to differentiate whether it was a new or old tear), as well as a fracture to the head of the fibula. There was suspicion of a PCL injury in her initial diagnosis and the fractured fibula head would explain the individuals lateral knee pain.

Treatment

The athlete was faced with the decision of whether she would go the non-surgical route or the operative route for her course of treatment. It was decided by the physician; the athlete would wait for surgery to repair the PCL and start light rehabilitation exercises while her fibular head was healing. Once the fibula head healed, more extensive rehab exercises were started to strengthen the quadriceps and surrounding muscles. The athlete then went back to see the orthopedic surgeon where she decided to begin the non-operative course of treatment for her PCL tear.

Reference

Dr. Jenkinson, M.D., Orthopedics NorthEast – Team Physician

Prognosis

The athlete continued with rehabilitation exercises for the next four months. After completing her four months of rehabilitation, the athlete still complains of residual pain and weakness from her injury, even after she received a cortisone shot. The athlete still shows significant decreases in quadriceps strength ten months post-injury. The athlete hopes to return to full potential for her basketball season of 2013-2014.

Fibula Head Fracture