AN INFRAPATELLAR FAT PAD TEAR IN A HIGH SCHOOL ATHLETE

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Background: The objective of this case study is to explore the rare occurrence of a tear to the infrapatellar fat pad. This case study focuses on an infrapatellar fat pad tear caused by knee hyperextension in a high school athlete. The infrapatellar fat pad is also known as Hoffa’s Fat Pad. The athlete is a fifteen year old, white male who is the place kicker of a high school varsity football team. The athlete’s previous medical history includes insulin-dependent diabetes, cold urticaria, and a slight sprain to the lateral collateral ligament of the right knee. The injury occurred during practice in an attempt to kick a field goal. Missing the ball, the athlete hyperextended his right knee. Immediately following the injury, the athlete’s chief complaint was discomfort in his right knee and the inability to fully flex the knee. He presented with minimal swelling, no ecchymosis, and no visual deformity over the lateral aspect of the knee. Upon palpation, there was point tenderness over the lateral collateral ligament and the lateral border of the patella. Hypomobility and discomfort of the patella was also evident during palpation. The athlete described a “tight” feeling in the knee during contraction of the quadriceps. Approximately twenty-four hours post-injury, further evaluation of the athlete displayed increased tissue temperature and an altered gait due to gross edema and effusion. Throughout the injury process, the athlete experienced no significant pain. There was a positive finding with the Stroke Test. Differential Diagnosis: In this particular case, possible injuries included Hoffa’s Disease (impingement of the infrapatellar fat pad), lateral collateral ligament sprain, patellar subluxation, infrapatellar bursitis, anterior cruciate ligament sprain, injury to the lateral retinaculum, and meniscal injury. Treatment: Directly following the injury, the athlete was instructed to rest, ice, and compress the knee. Upon presentation of the largely effused knee on the day following the injury, the athlete was referred to a physician who aspirated fifty-four cubic centimeters (cc’s) of frank blood from the athlete’s knee. After aspiration, the athlete was sent for magnetic resonance imaging tests. Four days after initial aspiration of the knee, the athlete returned to the physician and consequently had twelve cc’s of pink-tinted fluid drained. The athlete was instructed to continue ice and compression as well as to incorporate the use of over the counter non-steroidal anti-inflammatory drugs. The athlete returned to play one week following the initial injury. Uniqueness: This case deviates from the expected Hoffa’s Disease because of the genuine lesion of the infrapatellar fat pad. While Hoffa’s Disease is a fairly common occurrence, an actual tear to the fat pad is extremely rare. Conclusions: The diagnosis of this particular injury was difficult because of the similarity to multiple knee pathologies, especially Hoffa’s Disease. An awareness of this occurrence is important to consider during knee injury evaluation because the infrapatellar fat pad is a structure that is often overlooked. Therefore, a Certified Athletic Trainer should become familiar with this pathology because of the established potential of a torn, rather than merely impinged, infrapatellar fat pad. Word Count: 541