

Case Presentation of Repeated Hamstring Tear

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ABSTRACT

CASE HISTORY: The patient is a 25-year-old collegiate soccer player who suffered three hamstring strains in his left leg between the months of June and November 2018. Prior to transferring to the current university, the athlete tore his hamstring during practice with his former team. At his current university, he has experienced two more tears. The first injury occurred in a soccer game, when going for a volley kick on a high served soccer ball. Athlete collapsed grabbing at his hamstring. Athlete's pain was located on the mid distal aspect of the hamstring (bicep femoris). Post injury, the athlete experienced edema and ecchymosis, which originated at the tear and moved distally down the calf. Athlete was unable to walk or bear weight. The second tear occurred in a different game. Athlete was accelerating to a full sprint to defend the ball, when he abruptly decelerated to change directions. Athlete fell to the ground in pain grabbing at his hamstring more proximal than the last hamstring tear. **PHYSICAL EXAM:** The first hamstring tear examination identified tenderness along the left mid to distal bicep region, but no tenderness along the left medial hamstring from proximal to distal. His left hamstring strength was 4 out of 5. He had mild ecchymosis and a palpable defect of the biceps on the left side. The second hamstring tear examination presented no distal or lateral hamstring tenderness, where the patient had prior felt discomfort. His left hamstring strength was 5 out of 5. Ecchymosis and edema still presented.

DIFFERENTIAL DIAGNOSES: Adductor strain injury, avulsion injury, sacroiliac dysfunction, hamstring tendinitis, and ischial bursitis. **TESTS & RESULTS:** Athlete had a magnetic resonance imaging (MRI) that revealed a partial tear with associated edema in the bicep femoris muscle, at the distal third of the left thigh. In addition, the MRI identified a partial thickness cartilage erosion in the medial patellar facet, as well as 1.5 cm ganglion cyst. Moreover, a 1.7 cm bone island and an old benign cortical defect along the posterior cortex of the distal femoris metaphysis were identified. **FINAL DIAGNOSIS:** Left distal hamstring partial tear in the bicep femoris. **DISCUSSION:** Hamstring tear is an over stretch to one or more of the three muscles of the hamstring. These injuries can be caused by muscle overload, stretched beyond capacity, or challenged with sudden eccentric load contraction. Other aspects to consider preventing injury are muscle tightness and muscle imbalance. Hamstring tears are very common within the sport of soccer. On average, 37% of soccer players will suffer from this injury each season. It was reported that on average this type of injury occurs at a frequency of 5.6 reported injuries per every 1000 hours of training. Considering that many of these athletes have a history of tearing their hamstring, it is much more common for the reoccurrence of the tear. It is also most common in athletes over the age of 25 years old. **OUTCOME OF THE CASE:** The athlete received soft tissue massage, cupping, graston, thermal ultra sound, and cryotherapy. After the second tear, the athlete worked with the athletic trainer to strengthen and rehabilitate the hamstring to reduce symptoms. The athlete decided to continue to play through the partial tears with a compression sleeve, Ibuprofen, Tylenol, and biofreeze. The intervention assisted the athlete greatly and he was able to play through the season and win the national championship. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** The athlete has followed up with the physician multiple times through the season. He was cleared to play as the athletic trainer saw fit. Since the end of the season (December 2018) athlete has not followed up.