Management of an Unsuspected Lateral Patella Dislocation in a Division III Baseball Player

Konzman MA, Lazenby L: Ithaca College, Ithaca, NY

Background: This case study report is not unique in the type of injury sustained, but rather in the mechanism of the injury, as well as the presentation of the athlete. According to the literature review, most lateral patella dislocations present in adolescent females in sports that contain pivoting motions. These injuries make up only 2%-3% of all knee injuries. This was contradictory to what we found in this specific case.

Case Presentation:

Patient: 19-year old male, right-handed baseball player. The athlete was injured while at bat at an away game early in the season. He reported feeling a "pop" in his right knee as he pivoted over a fixed foot during his swing. The host athletic trainer evaluated the athlete and reported that the LCL and MCL were both within normal limits, however there was a questionable end feel of the ACL. Upon returning home two days post injury, the team athletic trainer's evaluation revealed normal findings for the ACL, PCL, MCL, and LCL. The athlete demonstrated full passive ROM of flexion in his right knee with pain at end range, end range extension was limited due to a blocking sensation. The athlete also presented with a moderate joint effusion, anteromedial joint line pain, and presented with positive signs for both McMurrary's and Apley's tests. The differential diagnosis included possible bone contusion or medial meniscal tear. The athlete was sent to see the physician three days after the evaluation, who concurred with medial meniscus tear and proceeded to order a MRI. The MRI was performed five days later yielding the unsuspected findings consistent with a lateral patella dislocation with an impact fracture of the lateral femoral condyle, a partial tear of the medial patellofemoral ligament and medial retinaculum, and a partial tear of the anterior medial collateral ligament.

Intervention: Primary goals for the intervention were to decrease joint effusion, decrease pain, and return to functionality. To decrease knee effusion, the athlete was treated with Hivamat, light therapy, electrical stimulation, cryotherapy, and provided with an ERX sleeve and compression wrap. The athlete began a light rehab program, focusing the exercises on the quadriceps muscles.

Comparative Outcome: At three weeks post-injury, the athlete initiated functional movements progressively to sport specific motions, participated in limited practice at four weeks, and then returned to play with no pain at six weeks post injury. The unique aspect of this case was the mechanism of injury and the athlete's description of the pain he was feeling. The mechanism of the athlete's foot remaining planted in the ground, while he rotated and then noting a "pop", would indicate a meniscal injury. The evaluation of the athlete's knee the following day also showed signs of a possible meniscal injury due to anteromedial joint line pain, positive meniscal test findings, tolerance with full passive flexion range of motion, and a sense of an extension block.

Conclusions: Although the initial diagnosis was incorrect, this would not have changed the way the athlete was treated clinically. The athlete presented with a fair amount of

effusion in his knee, therefore independent of the diagnosis, our intervention focused on reducing effusion and thus decreasing his pain. The challenge of this case was the lack of medial patellar pain initially, coupled with the mechanism of injury and immediate reduction of the patellar dislocation, leading to the diagnosis of a possible meniscus tear. **Clinical Bottom Line:** Based on the findings from this case study, clinicians need to be aware of a different mechanism of injury for a lateral patella dislocation that is sport specific to baseball, but could occur in similar circumstances in other sports.