Anterolateral Fibular Head Dislocation in a College Basketball Player with a Horizontal Joint Type: A Case Report

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Abstract

Background: A 21-year old female basketball player with no previous history of knee injuries presented with an anterolateral fibular head dislocation after a teammate fell on her left lower leg at practice. The dislocation spontaneously reduced. An obvious deformity was seen by the athlete and athletic trainer at the time of injury. Differential Diagnosis: Lateral meniscal tear, ganglion cyst, fibular fracture, or tendinitis of the iliotibial band or popliteus tendon. Radiographs and magnetic resonance imaging were performed. Treatment: Radiographs ruled out a fibular fracture. A MRI confirmed the diagnosis of a fibular head dislocation. An obvious deformation was observed by both the athlete and athletic trainer. Diagnosis: Anterolateral Fibular Head Dislocation. Exercises included knee ROM, general knee strengthening, and ankle strengthening and stabilization. Modalities included GameReady, US, and ice. The athlete returned to play 5-1/2 weeks post injury. The athlete suffered MCL sprain and medial meniscal tear to the left 6 weeks post injury and then an ACL tear 9-1/2 weeks post fibular head dislocation.

Differential Diagnosis

• Due to the nature of symptoms, fibular head dislocations can be mistaken for a lateral meniscal tear, a ganglion cyst, and the tendinitis of the iliotibial band or popliteus tendon. Another differential diagnosis could also include patellar dislocation.

Treatment

• Radiographs showed no signs of fracture. MRI results showed swelling around the fibular head and medical retnaculum which led to the physician’s confirmation of a fibular head dislocation. An obvious deformation was observed by both the athlete and athletic trainer.

• Diagnosis: Anterolateral Fibular Head Dislocation

• Exercises included knee ROM, general knee strengthening, and ankle strengthening and stabilization

• Modalities included GameReady, US, and ice

• The athlete returned to play 5-1/2 weeks post injury

• The athlete suffered MCL sprain and medial meniscal tear to the left 6 weeks post injury and then an ACL tear 9-1/2 weeks post fibular head dislocation

Uniqueness

• Fibular head dislocations account for less than 1% of all knee injuries. Tibiofibular joints can have one of two different types, horizontal and oblique. Horizontal joints have increased joint surface area and have increased fibular head rotation. Oblique joints have less surface area articulation. Horizontal joint types are less commonly associated with fibular head dislocations. The athlete has a horizontal joint.

Conclusions

• It is unknown if the injuries the athlete suffered after her fibular head dislocation were related to the dislocation itself, but it does not seem likely. Muscle strength was increased and pain was decreased to nothing when she RTP.

• By possibly being more aggressive with exercises, the athlete might have been able to RTP sooner.

Clinical Significance

• It is important to correctly diagnose a fibular head dislocation because of the potential complications, such as drop-foot, chronic subluxations or dislocations, arthritis, or basic instability. Radiograph is the best way to diagnose a dislocated fibular head unless it spontaneously reduces before a radiograph can be taken. If that happens, an MRI is the best way to determine a dislocation.

References