Hip Complications Post-Multiple Surgeries in a College Football Athlete

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Abstract

Background: Athlete is a 21-year-old (71 inches and 165lbs) male NAIA football player. Athlete’s prior medical history includes hip impingements from birth, right hip labral surgery 6 years prior, left hip labral surgery 2 years prior, left hip wash outs 2 years prior, and a second left hip surgery one year prior. Athlete reported to the athletic trainer following practice during fall camp complaining of pain in his left hip that started the day before and was consistently painful after the two practices. Athlete denied any specific mechanism. Initial evaluation revealed swelling and slight heat to the anterior side of the left hip. Athlete showed no point tenderness, discoloration, or other deformities. Full Passive ROM and 3/5 MMT with hip flexion, extension, abduction, adduction, internal and external rotation. Differential Diagnosis: Infection, Hip Impingement, Acute Inflammatory Response, Lymphadenopathy, Chondromalacia, Femoral Head Fracture, Acetabular Labral Tear. Treatment: Conservative treatment with athletic trainer and after one week with progress and began drill exercises. Two days later, athlete returned to Athletic Trainer complaining of his inability to walk without extreme pain. The Athletic Trainer also noted major swelling around the hip. Athlete was referred to the team physician due to change in pain and swelling. Athlete underwent an MRI and aspiration. Aspiration drew no fluid which suggests no infection. MRI imaging revealed possible infection with moderate asymmetric external iliac lymphadenopathy, mild asymmetric left inguinal lymphadenopathy, and diffuse soft tissue and muscle edema. The imaging also revealed the anterior aspect of the left femoral head and neck with chronic degenerated and deficient left acetabular labrum, diffuse high-grade anterosuperior acetabular chondromalacia and advanced osteoarthritides of the left hip joint resulting in bone-on-bone appearance. Lastly, imaging revealed large prominent edema with debris dissecting anteriorly and laterally throughout the wide capsular defect anteriorly and prominent periarticular marrow edema affecting the left acetabulum as well as the left femoral head and neck extending to the level of the intertrochanteric plane raising concern for osteomyelitis and septic joint. It was noted that there is uncoverage of the superior outer aspect of the left femoral head with shallow anterior groins and later performed an MRI and was diagnosed with bilateral hip acetabular labral tears.

Mechanism of Injury

Mechanism of Initial Injury: The initial injury occurred during the athlete’s freshman year of high school when he sustained a groin strain. Two years later, he strained both anterior and posterioraspect of the left femoral head with shallow anterior groins and later performed another MRI and was diagnosed with bilateral hip acetabular labral tears.

Mechanism of Injury Post-Surgeries: Athlete was performing a squats during weight training when he felt a sharp pain in his left hip. Performed another MRI which diagnosed him with a second torn acetabular labrum.

Compared to other lower extremity injuries, hip injuries are relatively uncommon. An individual that presents with hip pain can be the result of many different pathologies. Labral tears can occur after isolated traumatic injuries but more often result from chronic repetitive activities that require hyperflexion of the hip. (Lynch, Terry, & Kelly, 2013). This pathology usually is seen in highly active individuals or athletes (Austin, Souza, Meyer & Powers, 2008).

Introduction

The purpose of this case study was to introduce a 21-year-old NAIA football athlete who received multiple hip surgeries during his football career. To learn about the different treatment options that can be used to resolve each pathology and possibly prevent a new one from arising.

Purpose

As stated before, acetabular labrum tears do not commonly present on their own. Other complications are seen accompanying a labral tear. Because of this, there are many types of treatment routes the athlete could have taken:

Surgical route:

• Arthroscopy for labral tear and Femoral Acetabular Impingment (FAI)
• Wash out for infection– antibiotics should accompany this route to fight further infections

Rehabilitation to follow surgery:

• Passive ROM
• Active ROM once athlete progresses
• Muscle strengthening
• Sensory motor training
• Sport-specific functional progression

Nonsurgical route: this route is utilized when surgery is not a want or a need for the athlete. During this route you are doing rehabilitative exercises to strengthen and become functional during daily life activities.

Athlete underwent a total of 7 hip surgeries that resulted in total hip replacement. After the total replacement, athlete was unable to return to sport.

Anatomy

The hip is considered a diarthrodial joint in which it is comprised of the femoral head and the acetabular socket. A soft tissue structure covered by the labrum. The labrum is a fibrocartilaginous sealant effect, maintaining articular cartilage fluid” (Martin et al., 2008). The function of the labrum is to stabilize the joint, prevent impingement, and absorb shock, protection, and deformation and protects the joint from stress or friction (Hartig-Andreasen & Troelsen 2013).

Conclusion

Hip injuries have been the rise in the past recent years and with them comes new ways to treat the different complications. Acetabular labral tears are the common injuries seen in athletes. There are few studies that research outcomes of acetabular labral post surgery complications and differing treatments for each complication that may have resulted. References: This case highlights the diagnosis and treatment of an athlete suffering from post surgical hip complications and whether there will be a successful return to play through a total hip replacement or steroid injection. This case highlights the complexities of treating athletes with prior history of hip complications after surgery.