

Acetabular Labral Tear

Patrick Graham

Introduction

The acetabular labrum is a layer of fibrocartilage attached to the bony rim of the acetabulum (Groh & Herrera, 2009; Wheelless, 2012). It functions to stabilize vertical and lateral movements, provide a cushion for shock absorption, as well as create a seal for synovial fluid, which maintains pressure and lubricates the joint (Bharam, 2006; Burnett et al., 2006). The prevalence of labral pathology, in those patients presenting with hip or groin pain, has been reported as 22%–55% (Groh & Herrera, 2009). It is more common in women than in men (Groh & Herrera, 2009; Hunt, Clohisy, & Prather, 2007). The etiology of acetabular labral pathology includes trauma, femoroacetabular impingement, capsular laxity/hip hypermobility, dysplasia, and degeneration, the latter four being most common, lending to the insidious nature of reported symptoms (Burnett et al., 2006; McCarthy et al., 2003).

The most common presenting symptoms are aching to sharp anterior hip or groin pains. Patients may also report concurrent anterior or lateral thigh pain and radiating or isolated posterior/buttock pain. One of the hallmarks of hip labral pathology is an associated catching, clicking, pinching, or locking sensation with or without a feeling of instability. Patients may also relate compensatory gait changes and an inability to participate in strenuous impact activities. (Bharam, 2006; Lewis & Sahrman, 2006; McCarthy et al., 2003; Schmerl, Pollard, & Hoskins, 2005)

Case Presentation

A 31-year-old woman presented with near 10 years of waxing and waning right hip pain, notably worse in the last year. She had danced ballet from the age of 5–22 years, with intermittent hip pains during that time. She described pinching sensations and groin and buttock pains with variable levels of intensity. These symptoms would always resolve with rest and stretching. She had never noted swelling or discoloration. She reported times of catching and locking without any feeling of instability.

About a year ago, she decided it was time to “get back in shape” and joined a Cross Fit gym. She regularly took weight lifting and plyometric based classes, noting worsening pain of the right posterior hip after exercise involving squatting or lunging. This gradually gave way to recurrent catching and pinching sensations that would inhibit her from continuing workouts. She noted three such incidents in the month preceding her appointment.

With these episodes, she described sharp posterior pain with radiation into the groin. She reported difficulty ambulating, given painful flexion as well as pain with prolonged sitting. No swelling or discoloration was noted. No numbness, tingling, or burning was noted. There was prolonged soreness of the hip, lasting about a week, despite her efforts at rest and stretching after the last such incident a couple weeks prior.

Upon presentation, she was an alert, oriented, affect-appropriate female in no apparent distress. She ambulated with a nonantalgic gait and no assistive device. There was no gross deformity, muscle atrophy, swelling, discoloration, or abrasions. Focal tenderness posterior was observed. Range of motion was equal and smooth. She noted posterior pain with scouring, thigh thrust, and FABER and McCarthy’s maneuvers. Strength was equal, and she was found to be distally neurovascularly intact. Radiographs obtained were without noted abnormality (see Figure 1).

Management

With various options discussed, the patient was referred to physical therapy, advised on activity modification to include avoidance of impact activities and deep squats or lunges, and prescribed a course of anti-inflammatory medication (Bharam, 2006; Groh & Herrera, 2009; Lewis & Sahrman, 2006). She presented for follow-up 7 weeks later, reporting overall improvement, but an attempted return to gym activities caused her pain to flare up again. She reported that her hip felt as bad as it was at time of initial evaluation. With this, we discussed further diagnostic options and elected for magnetic resonance imaging post-hip arthrogram (MR arthrogram/MRA).

The MRA revealed the presence of a hip labral tear without evidence of significant articular cartilage loss (see Figure 2). Although surgery is considered the gold standard in addressing hip labral pathology, the patient was hesitant, wanting to investigate less invasive options. She was referred for fluoroscopy-guided intra-articular steroid injection and noted complete resolution of symptoms within a couple days of administration (Burnett et al., 2006; Groh & Herrera, 2009; McCarthy et al., 2003).

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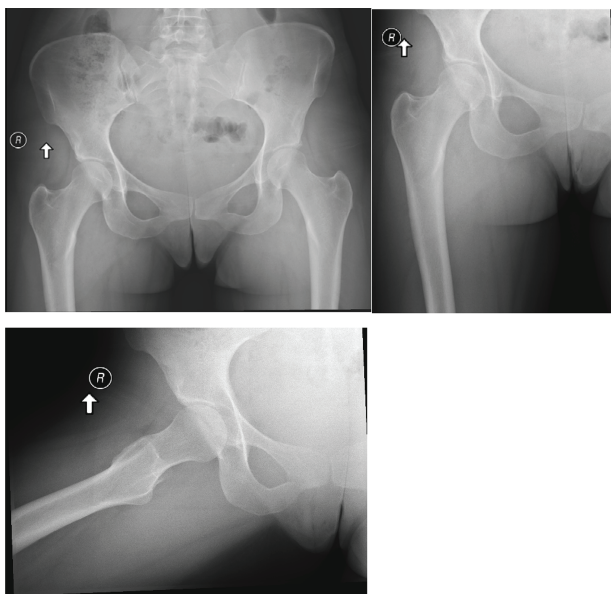


FIGURE 1. AP pelvis, AP/Lat of the right hip. AP = anteroposterior; Lat = lateral.

At 2 months postinjection, she noted a return of mild aching hip pains and again was unable to continue with particular exercises and classes at her gym. With this failure of conservative management, she was referred to an orthopaedic sports medicine surgeon to discuss options for hip arthroscopy.

Arthroscopic surgery for hip labral tears can generally be classified as those that repair the tear or debride the torn area of cartilage. Specific surgical intervention depends on the type of tear, presence of cartilage loss or wear consistent with osteoarthritis, and the patient's age and activity level. There are variable rates of success and return to functional activities reported in the literature, with no particular intervention identified as superior (Burnett et al., 2006; Groh & Herrera, 2009; McCarthy et al., 2003; Wheelless, 2012).

Discussion

There is a broad list of differential diagnoses the advanced practice nurse must consider when a patient presents with hip, groin, or buttock pain. In regard to acetabular labral pathology, studies have reported a prolonged course to diagnosis with an average of 2 years from symptom onset to confirmation of pathology (Groh & Herrera, 2009; McCarthy et al., 2003). Diagnosing acetabular labral pathology requires a high index of suspicion, with particular attention given to reported symptoms, as are noted in this case report, consistent with labral pathology. Optimally, reaching diagnosis will precede the advancement of intra-articular cartilage wear consistent with an early onset of osteoarthritis and associated symptoms.

It is important for the advanced practice provider to set realistic expectations about activity modification and symptom management in those patients pursuing conservative management for hip labral tears.

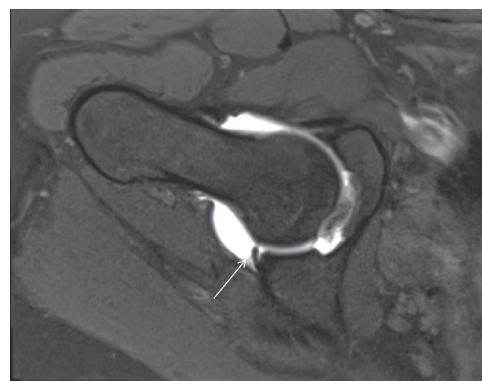
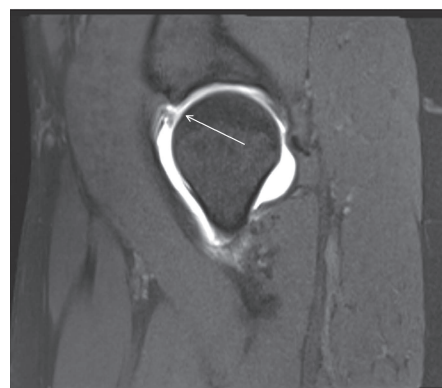


FIGURE 2. AP, sagittal, axial T2, fat-suppressed, postarthrogram (bright/white signal encircling the joint). Arrows denote labral tear. AP = anteroposterior.

One must also understand the long-term impact on joint health, given the predisposition to earlier onset of hip osteoarthritis, when labral pathology is present. Those who fail conservative management, or are unwilling to give up strenuous impact activities, should be referred to a sports medicine surgeon for consultation regarding hip arthroscopy (Burnett et al., 2006; Groh & Herrera, 2009; McCarthy et al., 2003; Wheelless, 2012).

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