Acetabular Labral Tear in a Female Patient with Chronic Upper and Lower Extremity Spasticity.

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Abstract

Purpose

The purpose of this case study was to highlight the diagnosis and treatment of a patient suffering from an acetabular labral tear with chronic left upper and lower spasticity. Leading to a modified therapeutic exercise program designed to increase strength, improve motion, as well as decrease spasticity.

Case Report

Patient: A 36-year-old (167 cm and 54-kg) female teacher. Patient’s prior medical history included left upper and lower extremity spasticity from a traumatic brain injury when she was 8 years old. Patient first began exhibiting signs of an orthopedic injury leading to playing Frisbee, resulting with the patient landing on her posterior right hip.

Patient was then given a referral to physical therapy where the patient complained of right anterior hip pain. Initial evaluation revealed antalgic gait secondary to pain. Patient was found to be right shoulder over upper anterior superlicic iliopsoas, proximal iliopsoas, and a gross right hip flexion, rotation, 4–5 internal rotation and full strength for hip extension and adduction. (+) Faber’s Test for Pain, (+) Hip Scoring, (+) Anterior Hip Scoring

Diagnosis: Labral tear, Hernia, Athletic Pubalgia, Ostetis Pubis, OA, Bursitis, Hip Arthritis

Referred pain from Lumbosacral syndrome, Osteochondral defect, Femoral acetabular impingement, Hip dysplasia, Avascular necrosis of the Femoral head. Treatment: Patient began treatment immediately after initial evaluation, with goals to increase active ROM, correct faulty biomechanics, decrease pain and ultimately increasing strength and stability of the right hip. Focusing first on the symptomatic, soft tissue mobilization was used to decrease the restricted motion of soft tissue and facilitate fluid exchange to aid the healing process.

This protocol was then modified and in addition to cryotherapy. During the next three consecutive visits, therapy began with increasing strength and stability at the acetabulofemoral joint. This is where the patient began to have difficulty completing lower extremity therapeutic exercises with a history of chronic spasticity. A modified therapeutic exercise program was designed to ensure proper rehabilitation of the patients right labral tear without the chronic spasticity hindering progress.

Rehabilitation

It is believed that appropriate intervention should focus on reducing anterior directed forces on the hip by addressing the patterns of muscles that control hip motion, by correcting the movement patterns during exercises such as hip extension and adduction, and by instruction in the avoidance of pivoting motions in which the acetabulum is avascular. This case was designed to identify any clinically detectable impairments in the precision of both acetabular and labral tissue attachment to the bone of the acetabulum. A study of hip flexion and abduction, 4–5 external rotation, 4–5 internal rotation and full strength for hip extension and adduction. (+) Faber’s Test for Pain, (+) Hip Scoring, (+) Anterior Hip Scoring

Radiographic Findings: Improved imaging techniques have increased the number of labral tears diagnosed. Once thought to occur only as a result of major trauma such as hip dislocation, it is now understood that labral tears can be the result of femoral acetabular impingement, hypermobility, dysplasia, or degeneration. The results of the MRI confirmed the patient received an acetabular labral tear.

Conclusion

Comprehensive rehabilitation is the key to successful return to activity in patients with acetabular labral tears. This case study describes a patient with chronic upper and lower extremity spasticity who required a modification of a standard therapeutic exercise protocol to limit pain and ensure proper rehabilitation of the acetabular labral tear without the chronic spasticity hindering progress.

Introduction

The acetabular labrum is a continuous fibrocartilaginous structure that outlines the acetabular socket. The labrum is approximately 2.3 mm thick, and is wider around the acetabular notch than elsewhere. Its functions are: to assist in load distribution by decreasing contact stress on the acetabular surfaces; to provide joint lubrication by encapsulating the synovial fluid; and to maintain fluid pressure within the joint.

(Orrell & Smith, 2011, p.153) Patients may describe a localized dull groin pain with spasmodic episodes of pain brought on by the hip flexion, adduction, and internal rotation. Symptoms may be caused by suprapelvic, buttck and, right pain with prolonged sitting is common. Patients most commonly describe clicking with some describing catching or locking, or giving away. Medically, the location of the tear is described using a clock face. Anterior tears produce pain and catching when the hip is moving through flexion, internal rotation and abduction. Posterior tears are more likely to be caused by pain during passive hip flexion and internal rotation while a posterior load is being applied. (Starkey & Brown, 2014, p. 455) The following information explains the mechanism of injury, clinical assessments, radiographic findings, diagnosis, and treatment to provide additional information to this patient’s unique case.

Spasticity Defined

A motor disorder characterized by a velocity dependent increase in tonic stretch reflexes (muscle tone) with exaggerated tendon jerks, resulting from hyperexcitability of the stretch reflex, as one component of the upper motor neuron syndrome.

Spasticity is a common symptom seen in many neurological conditions, including single insult events such as head injury, spinal cord injury, stroke or cerebral palsy as well as many chronic neurological conditions such as multiple sclerosis, hereditary spastic paraparesis or motor neuron disease. The impact of spasticity is extremely variable, ranging from minor discomfort to complete immobility and loss of fuctional ability. In some cases, functional level walking may be slower or more difficult, falls more frequent, or the ability to self-propel a wheelchair or transfer compromised. Likewise, activities of daily living including washing, dressing, toileting and sexual activity can be affected. All of these aspects can have a negative impact on the quality of life, including those as an employee, parent or partner. Interestingly the presence of spasticity can also have a positive impact on individuals, perhaps allowing them to stand or walk when their weakness would not otherwise permit or through utilizing spams for transfers or bed mobility.

References


