



Pediatric Clips

Advances in arthroscopy: hip arthroscopy in the pediatric patient Jeffrey L. Mikutis, DO

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Pediatric Clips from The Children's Medical Center of Dayton are quick reviews of common pediatric conditions.

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CASE: TEENAGER WITH POST-TRAUMATIC HIP PAIN

MJ is a 15-year-old male, Tae Kwon Do Black Belt, who injured his left hip in a martial arts tournament. He states that he twisted his left hip landing after a flying back kick, fell to the floor and was unable to continue sparring. He proceeded to return to martial arts training the following week, but was unable to kick over the planted left leg due to pain in the left hip and experienced popping,

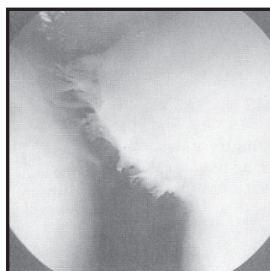
locking and catching symptoms in his groin area. His pediatrician evaluated him and ordered plain x-rays, which were negative. He was referred to pediatric orthopedics and after clinical exam and review of the x-rays suspicion existed for an acetabular labral tear. An MRI arthrogram was ordered and the diagnosis of a torn labrum was reported by radiology. The patient underwent an outpatient hip

arthroscopy where the diagnosis was confirmed and the labral tear was debrided. The patient spent one week on crutches post-operatively and took Vicodin for a few days followed by Motrin. The patient is now one month post-op and is asymptomatic and back to his regular training routine, planning another tournament in about two months.

CASE DISCUSSION

With the introduction of arthroscopic procedures in the 1980's for maladies of the joints, an evolution in both diagnosis and treatment occurred in the realm of orthopaedics. Beginning with the knee and progressing to virtually all joints of the body, arthroscopic surgery has evolved logarithmically resulting in improved diagnostic ability, diminished patient morbidity due to smaller incisions and overall faster recovery times. With the proliferation of children participating in sports over the last few decades, the contribution of arthroscopic surgery to the pediatric population has been invaluable.

Although most children with pathology of the hips are affected with the more common

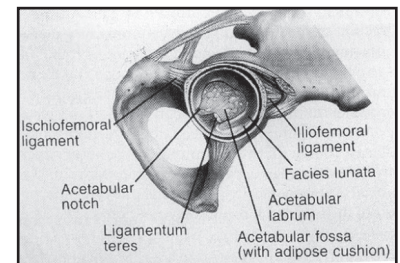


Anterior Labrum Tear

conditions; such as developmental dysplasia of the hip (DDH), Legg-

Calvé-Perthes disease, slipped capital femoral epiphysis (SCFE), transient synovitis, septic arthritis, snapping hip syndrome and femoral neck stress fractures, which can be diagnosed by plain x-rays or standard MRIs, the elusive conditions such as intraarticular loose bodies, chondral flap tears, or labral tears are often not diagnosed and treated until hip MRI arthrography or arthroscopy is employed.

The hip joint is a deep ball and socket joint surrounded by a rather large muscle and ligaments and is contained within an acetabulum labrum similar to that of the shoulder and the knee meniscus. Both chondral surfaces of the acetabular and femoral head as well the labrum can manifest similar patterns of pathology that exist in other joints, especially the other large weight bearing joint, the knee. Either twisting or impact injuries or simply coexisting disease such as Perthes disease may produce loose bodies, chondral flap tears or labral tears with resultant hip pain and limping associated with mechanical symptoms such as popping, locking and catching.



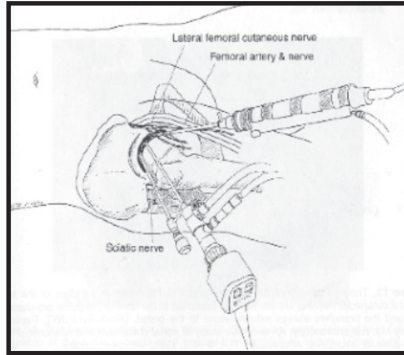
In instances of patients presenting with hip pain especially associated with mechanical symptoms and in the face of normal AP and Frog leg hip x-rays, the diagnosis of intraarticular loose bodies or tears should be entertained. During clinical examination patients with loose bodies, chondral or labral tears often experience groin pain or mechanical symptoms when the examined hip is brought through passive internal and external rotation with the hip in a flexed position. Index of suspicion is paramount; however, as even radiographic studies such as MRI arthrogram (where dye is injected into the hip joint prior to the MRI) is less sensitive than in other joints of the body. Occasionally, however, loose bodies may be clearly seen on plain films and the diagnosis is not in doubt.

Continued

Continued from the front.

When hip arthroscopy is performed the entirety of the procedure requires an unconventional setup and instruments. The deep hip joint must be distracted in order to obtain adequate visualization and to insert the longer than usual arthroscopic instruments. The patient is placed on a fracture table and traction is applied to "open up" the hip joint for successful access. Once access to the joint has been obtained using fluoroscopic guidance to assure appropriate portal placement (incisions for arthroscopic instruments) extra-long arthroscopic instruments are utilized to visualize and remove loose bodies, debride flap tears, and in some special circumstances, resect bone spurs

from around the joint in cases of long-standing Perthes, SCFE or DDH. Vigilance is necessary to avoid neurovascular injury from inappropriately placed instruments or excessive traction.



Instrument in hip joint

Once the surgery is over the patient is usually discharged the same day on crutches with information to begin progressive weight bearing as tolerated. The patient is usually seen back in a week to remove sutures from the small incisions.

Hip arthroscopy has added immeasurably to the armamentarium of the orthopaedic surgeon in successfully diagnosing and treating previously nebulous hip pain and mechanical symptoms in the pediatric patient that may have previously gone undiagnosed or later treated with a large incision and operative hip dislocation potentially associated with higher morbidity and longer recovery time.

FEATURED SPECIALIST



JEFFREY L. MIKUTIS, DO, is an orthopedist at The Children's Medical Center of Dayton. Dr. Mikutis is board certified in orthopedic surgery and is a

retired colonel in the United States Air Force Medical Corps. He was chief of orthopedic surgery at Wright-Patterson Air Force Base Medical Center for seven years. He completed his medical school education at the University of New

England College of Osteopathic Medicine. He completed a fellowship in pediatric orthopedics, Nemours Children's Clinic, Jacksonville, Florida.

Dr. Mikutis works with Michael Albert, MD, Henry Albers, MD, and James Lehner, MD in the Orthopaedic Center for Spinal and Pediatric Care (a private practice located at Dayton Children's).

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