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Hip Arthroscopy Indications and Latest Techniques

DIAGNOSING NON-ARTHRITIC HIP PAIN IN ATHLETES

Recent advancements in hip arthroscopy and magnetic resonant imaging have elucidated several sources of non-arthritis hip abnormalities that have left on traces can result in chronic and disabling symptoms. What are the current indications of hip arthroscopy and what are the management issues clinicians need to be might aware of? You are listening to ReachMD, The Channel for Medical Professionals. Welcome to the Clinician's Roundtable. I am Dr. Mary Leuchars, your host and joining me today from New York is Dr. Bryan Kelly. Dr. Kelly is assistant professor of orthopedic surgery at the Weill Medical College of Cornell University. He is a specialist in sports medicine and arthroscopic surgery at the hospital for special surgery and also an assistant team physician for the New York Giants. Today, we are discussing the management of non-arthritis hip pains and the current indications, treatment options, and management issues surrounding arthroscopy.

DR. MARY LEUCHARS:

Welcome, Dr. Kelly. You have published many general articles about hip pain and hip arthroscopy. What is the first line of management once you diagnose a non-arthritis hip disorder in an athlete?

DR. BRYAN KELLY:

Well. I think the first is to identify what the source of problem is, so probably the most common injury that was seen in athlete is muscle strain and often times muscle strain can be treated with a period of rest, anti-inflammatories, occasional use of injections - cortisone injection, and the slow return to activity. In cases where there is more of intra-articular source of hip injury, the first goal is to really identify what the source is and that includes a workup, which usually includes an intra-articular injection to confirm that the location of pain is coming from the inside of the joint.

DR. MARY LEUCHARS:

How long do you precede nonoperative management techniques before you consider arthroscopy, particularly in an athlete?

DR. BRYAN KELLY:

I think it depends on the severity of the pain, the type of injury that we are dealing with, and how badly it is affecting the ability to perform at the level they want to perform, but in the setting of, for instance a labral tear, which is one of the more common diagnosis that we see, often times these will present themselves in the middle of the season and it gets very justifiable to try to get the athlete through the season with a single injection, so physical therapy to manage any associated muscular dysfunction around the hip joint to see if they can perform at the level they can. If it is the first time diagnosis and they have just recently had new-onset hip pain and after workup you do confirm that they have labral pathology within their joint, I think that is probably reasonable to try a course of physical therapy for 6 to 8 weeks to see if that is going to settle, settle the inflammatory component of the pain manifestation down. A lot of times with these, even with an intra-articular problem, the main source of the pain is more muscular, as the pain from the inside of the joint becomes more severe, there is a process called arthroscopic pain inhibition, which leads to inhibition of the muscle firing around that joint and leads to secondary muscular dysfunction with tendinitis, inflammation, and if you can manage those secondary muscular problems, often times you can get their pain under control, allow them to get back in the competition. It is for the athlete that has persistent hip pain that is really failed these nonoperative measures, we have ruled out an extra-articular source and it is truly mechanical problem. It is not getting better with some of these nonoperative approaches, those are the ones that end up requiring surgery.

DR. MARY LEUCHARS:

You mentioned joint injection or presumably talking about corticosteroid injection, how many of those are okay during say a football season?

DR. BRYAN KELLY:

I don't think it is a great idea to use corticosteroid injection as a method of treatment as well as long-term method of treatment. So, the primary goal for me with the use of corticosteroid is for diagnostic purposes. I want to make sure that I have identified the correct location of their hip pain. The secondary benefit from this is that they may get a period of sustained relief that may last up to 3 or 4 months. I don't in general recommend repeated injections to try to get them thorough a season with the exception of some extraordinary circumstances if, you know, they got one at the beginning of the season, it is great and three-quarters away through the season, the hip pain becomes debilitating and they have 3 games left before the championship, then that obviously is a different story, but in general I try to limit it to one injection, more for diagnostic purposes and true therapeutic purposes.

DR. MARY LEUCHARS:

Can we talk now about the surgical techniques used to perform hip arthroscopy?

DR. BRYAN KELLY:

The hip arthroscopy is a minimally invasive approach to the hip joint. It allows for complete access to the articulating surfaces between the femoral head and the acetabulum, which known as the central compartment. It also allows complete access to the peripheral compartment, which is the area at the junction of the femoral head and the neck of the femur that extends down toward the trochanter. This area is still encapsulated within the hip joint itself, but it is the area that can be evaluated when the hip is placed in the socket. There is a third compartment or space within the hip joint, which is called the lateral space or the peritrochanteric space and this is the location between the greater trochanter and the iliotibial band and the location the pathology such as chronic trochanteric bursitis exist tears of the abductor mechanism including gluteus medius and the minimus and then snapping syndromes across the trochanter, known as the external snapping hip or IT band snapping.

DR. MARY LEUCHARS:

If you are just joining us, you are listening to the Clinician's Roundtable on ReachMD XM 157, The Channel for Medical Professionals. I am your host, Dr. Mary Leuchars and joining me today is Dr. Bryan Kelly from the hospital for special surgery in New York. We are discussing the management issues and arthroscopy of non-arthritic hip pain.

Dr. Kelly, what are the limitations of arthroscopy.

DR. BRYAN KELLY:

Arthroscopy of the hip is a procedure that allows access to the joint. It allows you to repair some torn tissue and allows you to remove certain types of bone that are causing problems. The procedure is not affective in patients, who have arthritis even in the setting of bony impingement because, although you may be able to address some of the tissue that is torn and may be to address some of the impingement that occurs, they still have persistent pain after the procedure because of the underlying cartilage, where it is also non-effective procedure for patients with deficiencies of their hip joint in the form of dysplasia, hip dysplasia condition where the depth of the acetabular socket is too small and doesn't allow for adequate coverage of femoral head. This condition of dysplasia also leads to labral pathology, but it is a different type of labral pathology rather than labrum being crushed as occurs in an impingement because of the misfit of oversized femoral head and oversized acetabulum. In the setting of dysplasia, the labrum is statically overloaded because of shallow socket and if you are going to try to arthroscopically repair that labral tissue, you may provide some temporary relief, but you have left them with the same mechanical dysfunction that led them to the tear on the first place. In many cases, there will be recurrence of the injury or pain or tear and in some cases, it will actually be worsening the condition because of the, if you have debrided some of that labrum, that labrum may have in fact been acting as a buffer between the head and the socket. So, the 2 main deficiencies are limitations of the hip arthroscopy, in my practice are patients with arthritis or patients with acetabular dysplasia.

DR. MARY LEUCHARS:

And how then can a patient resume athletic activity after a hip arthroscopy?

DR. BRYAN KELLY:

My general recommendations for patients, who have undergone hip scope for treatment of labral tear, usually with some additional bone work for impingement, is that they can't return to full activities without any limitations until 6 months, often times they will get back sometime between 4 and 6 months, but starting off the procedure what is given the instructions, it will be 6 months before they return to their full activity. I let people leave the hospital the same day that they have the surgery, so it is an ambulatory procedure. They walk on crutches for the first 2 to 4 weeks depending upon the certain specifics of the operation. I get people on a stationary bike a day or over the day after surgery to encourage early range of motion of the hip joints, <____> then stiffen up and then it is a progressive 3 months formal physical therapy program, which allows for progressive increased range of motion, decrease in pain and inflammation around the surgical hip, and slow progression to increase strengthening programs. During the second 3 months, there is a functional rehab program where there is a slow return to normal activities. Often times, we can get people running somewhere between 3 and 4 months, a lot of times we can get people skating, so if you are hockey playing back on the ice, sometimes even sooner because the impact is less, sometimes as early as 8 weeks, but in general I usually tell people 4 to 6 months recovery.

DR. MARY LEUCHARS:

Describe what is sports hernia reason, how to fix the hip joint and how you manage this?

DR. BRYAN KELLY:

Sports hernia is sort of a general term, which refers to damage to some of the muscular tissues that cross the pubic symphysis, so it is not really the hip joint proper, but the pubic symphysis region. The simplest way to understand sports hernia were athletic pubalgia as it is more commonly described, is an injury to the mechanism of the adductor that is the groin muscle where inserts onto the pubis and secondary injury to the rectus abdominis or the lower abdomen where the inserts in the similar location on that pubic symphysis. There probably is a correlation between the presence of impingement in the hip joint and the development of athletic pubalgia, because decreases in rotation across the hip joint, which occur in the setting of impingement lead to increased stress or strains across the pubic symphysis and the adductor musculature and the rectus abdominis. These lead to chronic strains, chronic micro tears, then scarring of the adductor in the rectus and ultimately can lead to complete avulsions of the adductor or the rectus, which lead to deficiencies in the pelvic floor on the rectus side and complete avulsions of the adductor longus on the adductor side.

DR. MARY LEUCHARS:

What are you learning from your current research into non-arthritis hip pain in the athletic?

DR. BRYAN KELLY:

We are learning first of all the impingement surgery works and that to the arthroscopic approach to impingement surgery as a minimally invasive alternative to the traditional approach of the surgical dislocation, although does have some limitations with improvements in technique and instrumentation, we are able to perform the surgery almost as accurately as we can through the open surgical technique. We are looking outcome studies to try to assess how patients' symptoms improve and how much were able to affectively decrease the rate of which cartilage degenerates after impingement surgery was performed and we are finding favorable results at the minimal followup of 2 years and our next goal is to show similar results after mid-term results of 8 years.

DR. MARY LEUCHARS:

What is the overall level of patient satisfaction from the hip arthroscopy?

DR. BRYAN KELLY:

Depends on what the indication was, I think there is spectrum of indications for the surgery, probably the best indication for surgery is a young male athlete with impingement, who has no significant cartilage wear. So, if you are fortunate enough to identify impingement in a young athlete, who is still a teenager, the impingement has caused some early damage that leads to pain but hasn't led to any permanent damage to the cartilage surface that patient can be very effectively treated with an arthroscopic decompression of the bony impingement with labral refixation, which allows us to repair labrum back down to the bone with satisfaction rate in the mid 90s, probably 90%, 90 to 95%. On the other hand, if you get somebody, who has progressed already, somebody, who is in their mid 40s and they have had impingement for their whole life and this has led to some permanent cartilage wear, those patients are going to be significantly less predictable and how you can improve their symptoms and they are fully satisfied than the ones that does work on. I think the 2 things that we have learned about impingement overall are that impingement people, who have arthritis, large percentages of those people had impingement and impingement leads to arthritis and the second is that if we are going to effectively treat it, its most effectively treated earlier before than any permanent condyle wear and that is where higher satisfaction rates are.

DR. MARY LEUCHARS:

What is the future of hip arthroscopy?

DR. BRYAN KELLY:

I think the future is that as we begin to develop more sophisticated appreciation for the mechanics of the hip joint, we will be able to identify various specific causes of mechanical-mediated hip pain and mechanically-mediated arthritis and cartilage generation. Ultimately, we will see the ability to identify the hip at risk based upon computer modeling and identifying patients that are going to have a very high likelihood of progressing onto cartilage wear, offering them protective surgeries to recontour their shape to prevent this chondral damage from occurring.

DR. MARY LEUCHARS:

My thanks to Dr. Bryan Kelly for joining us today. We have been discussing current management issues surrounding non-arthritic hip pain and hip arthroscopy. I am Dr. Mary Leuchars. You have been listening to the Clinician's Roundtable on ReachMD, The Channel for Medical Professional. Thanks for listening.

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