

Science, Movement and Health, Vol. XVII, ISSUE 2 Supplement, 2017
September 2017, 17 (2, Supplement): 290-295
Original article

RECOVERY SPECIFIC MENISCAL LESIONS ATHLETES

GHEORGHE Georgeta Ioana¹, PĂUN Dan Gheorghe¹, CĂTUNĂ George Cristian¹, BUȚU Ioana Maria¹, PĂUN Ioan Laurian²

Abstract*

Aim. The knee is the largest joint in the body. By its position through his role in static and dynamic biomechanics of the lower limb, as well as by its poor soft tissue coverage, it is particularly vulnerable and prone to injuries both direct and indirect cit. The knee can be felt in the case of assets imposed by certain diseases or trauma treatment.

Meniscus tears often occur during sports practice, when players curl or twist around its own axis, causing a rupture. Sometimes they can be the result of direct contact, as if against football. The elderly are more prone to degenerative meniscus tear. Meniscus erode and degrade over time, it is frequently affected by such ruptures. Even a simple back up from a chair can be enough to cause a rupture, if the meniscus was weakened with age.

Meniscus injuries may be isolated but very often associates and other internal injuries of the knee - ligament injuries (collateral ligament, cruciate ligaments), cartilage, encapsulation, etc.

Methods. In the study we used research ascertaining.

Results. Recovery time depends on the type of surgery performed. In the case of rupture of the meniscus, the period of hospitalization is 24 hours. Next day, the patient can walk on the operated leg and in exercises under the supervision of a physical therapist. It is considered completely recovered 3 weeks after surgery. If meniscal suturing, the recovery period is longer, about two months.

Conclusions. Torn meniscus injuries of the knee is the most commonly found but, if diagnosed in time and treated properly, allowing the patient to resume activities they had before the appearance of the lesion.

Keywords: recovery, knee joint, meniscus.

Introduction

The knee is the largest and most complex joint of the human body. Because it is so used, it is also highly vulnerable to the appearance of lesions. The smell of grass are among the most common

injuries to the knee. Athletes, and especially those who practice contact sports, are at risk of a rupture of the meniscus, although, in fact, anyone at any age, may face such a condition (Baciu, 2006).

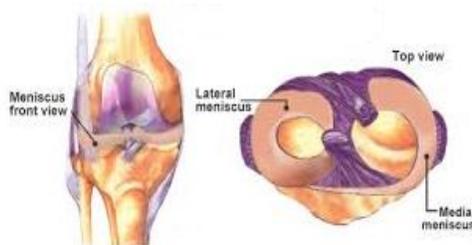


Figure nr. 1. Meniscus (front view)

Menisci are two fibrocartilaginos structures (medial and lateral) crescent shape and triangular section which are located inside the knee between the tibia and femur. They are designed to absorb shocks and to increase the contact surface between the tibia plateau (flat) and femoral condyles (cylindrical).

Menisci are vascularized (First Blood) only one third of their peripheral (where contact with the joint capsule), also called red zone, the rest of the transition area and the white area feeding directly from the synovial fluid (precarious) and having a low potential the spontaneous healing.

¹ Spiru Haret University, Physical Education Faculty, Bucharest, ROMANIA

² School No.1, Braşov ROMANIA

E-mail address: mi2oana@yahoo.com

Received 17.02.2017 / Accepted 21.03.2017

* the abstract was published in the 17th I.S.C. "Perspectives in Physical Education and Sport" - Ovidius University of Constanta, May 18-20, 2017, Romania



Menisci, especially the internal structures are well anchored around (the femur, tibia and patella, croce ligaments, capsule, internal lateral ligament etc). Meniscus internally is also more exposed traumatisation (80% of lesions meniscus) due fixity of the surrounding structures, especially the ligament lateral internal, like all pressure exerted on him by the femoral condyle internal project passes center of body weight (Crețu, 2007).

Symptoms meniscus lesion diagnosis is sometimes revealing, sometimes additional signs should be sought, and sometimes can go unnoticed and later will be recorded late sequelae (osteoarthritis, knee unstable). Pain is violent, sudden, accompanied immediately for a variable period of functional impotence. Hidrartrose is almost the rule, hemarthrosis is also fairly common. As with any injury to the knee, quadriceps atrophy is installed immediately.

Traumatic meniscal lesion is most commonly a break at one of the two menisci (medial and lateral), which can be complete rupture or not, with:

- Involvement only deep area of meniscus (there was only MRI - Levels I and II);
- Involvement one of meniscal surfaces (tibia or the femur to) - Level III;
- Partial detachment zone broken and the appearance of abnormal mobility type "hinge" (in "basket handle", "parrot beak" etc.);
- Separation of fragments that become available in the joint.

Meniscus injuries may be isolated but very often associates and other internal injuries of the knee - ligament injuries (collateral ligament, cruciate ligaments), cartilage, encapsulation, etc.

Meniscus injuries can be classified and direction describing the geometry of the tear meniscus damage there as longitudinal, radial, horizontal, and combinations of these.

Degenerative meniscal lesions are due to wear and are generally associated with varying degrees of osteoarthritis. The structure of the meniscus is affected, and the lesion is generally irregular.

The most common scenario for a break acute meniscus - sore knee (gonalgia) occurs after a trauma usually average energy (most commonly in the context sport) which associates and possibly jam in the semi-flexible (leg cannot be straightened) and increase in volume of knee (hidrartrose - the accumulation of excess fluid in intraarticular). For smaller lesions, chronic pain, accentuated by sharp

knee load (eg from down stairs) or pivot is the most prominent phenomenon. Hidrartrose repetitive outbursts may occur ("water on the knee") or other signs of chronic inflammation.

Torn meniscus are favored by trauma to the knee which associates exercise force in several planes simultaneously (often deflecting-rotation - ie pivoting during lifting from the front squat) that generally corresponds to a force that immobilizes meniscus on the tibial plateau with another that makes him break his femur (Kiss, 1999).

Besides sports related injuries (the most frequent type of trauma average energy in general), meniscal tears can occur during ordinary activities, daily (low energy trauma).

Also meniscal tears can be associated with other types of serious knee injuries sprains (high energy trauma).

After describing symptoms and medical history, your doctor will review your knee joint checking line level sensitivity that is located meniscus, as such can identify a meniscus tear.

Methods

One of the tests for diagnosing a meniscal tear is McMurray test. Patient's knee will bend and will rotate, and then bring in the lying position to put pressure on the meniscus. If there is rupture of the meniscus, this type of pain and movement will generate a pop-like sound. The knee will "snap" each time the doctor repeat the test.

Given that there are other diseases with symptoms similar knee meniscus tears, the doctor may order imaging tests to confirm the diagnosis. These include: Radiographs. Although meniscal tear is not visible on X-rays, it can help your doctor determine if there are other causes of knee pain, such as osteoarthritis.

Nuclear magnetic resonance (RMN). This type of examination can provide better images of soft tissues of the knee joint, so including meniscus.

The appearance of a tear of the meniscus can be accompanied by a noise like a "pop." Most people can travel further and may step on the affected knee and many athletes continue to practice sport even rupture of the meniscus. In 2-3 days but knee will stiffen and swells.

The symptoms most common in case of rupture of the meniscus are:

- Pain;
- Stiffness and swelling in the knee;
- Locking of the knee;
- The feeling of "release" under weight;

- Unable to perform the full range of motion with the knee.

Without treatment, the torn meniscus can move inside the joint, and this can lead to blocking knee.

Results

The physical therapist will tell you what exercises you can do for a proper recovery. It is necessary to perform these exercises regularly to restore mobility to the knee and strengthen it. You start with exercises that will increase the mobility of the knee and then the recovery plan will be progressively added muscle toning exercises (fortification).

If the injury is minor and the pain and other symptoms go away, the doctor will recommend an exercise program to strengthen the muscles. The exercises are performed for meniscal problems initially under the supervision of a doctor or therapist. The therapist will ensure that the patient does the exercises properly and without risk of a new injury (Papilian, 1999). The following exercises are designed to build up the thigh muscles and increase flexibility:

- Warming up the joint by riding a bike, stretching exercises and then lift the leg;
- Foot expansion of upright posture (can be placed a little weight on the ankle for this exercise);
- In prone, execute lifting movements of the foot;
- Exercises in the pool, including fast paced water chest, lifting each leg 90 back against the wall of the basin.

Discussions

We believe that the use of specific means football game are very important for patient recovery scheme /Athlete Since there it involves the additional motivation in practice (at simplified some elements and techniques of football).

Path recovery scheme patient / athlete goes through different states of mind, from frustration and negative thoughts to positive and constructive, engaged and aware to improve, recovery, rehabilitation of injured joint (Untea, 1984).

In this sense, the patient / athlete subject to recovery occurs after a certain period of recovery went well, a state of lack of motivation in continuing body scheme, generated by lack of progress in recovering joint registration subject to recovery (Zaharia, 1999).

Obviously it is only a step, with moments of evolution and stagnation, which make the patient / athlete and want to continue the program of recovery.

Therefore, its experience therapist can introduce some specific means football game obviously adapted to the potential of directly involved in the recovery process, with the aim of restarting and continuing to recover fully. This is very effective for a certain period after which it returns to the conventional recovery means.

Emotional implications of introducing these sequences specific technical football game are huge succeeding anime heavily on patient / athlete, out of its lethargy had entered.

On a scale of 1-10, where 1 means the beginning of recovery, football comes somewhere in figure 8, which means almost complete recovery.

But beyond issues of physical therapy, the main effect in introducing these elements and techniques adapted physical therapy is the emotional meaning that the patient / athlete has recovery program elements and techniques of the game that he loves.

We believe that the introduction of these elements and lead to optimization techniques traumatized joint recovery by reducing the time and through purposeful effective.

The kinetic program proposed for recovering meniscal lesions through specific football:

1. Driving the ball with the sole (Figure 2).



Figure nr. 2. Exercises 1

- Driving the ball with the outside shoestring
(Figure 3), Păun, 2011.



Figure nr. 3. Exercices 2

- Hitting the ball with the outside of the foot
(Figure 4).



Figure nr. 4. Exercices 3

- Keeping the ball in the air with the flat
(Figure 5).



Figure nr. 5. Exercices 4

- Hitting the ball with shoe full of top
forwards (Figure 6).



Figure nr. 6. Exercises 5

6. Kicking the ball away with knee (Figure 7).



Figure nr. 7. Exercises 6

7. Hitting the ball with the outside foot in the lateral decubitus position, internal rotation of the knee joint (Figure 8).



Figure nr. 8. Exercises 7

Conclusions

Torn meniscus injuries of the knee is the most commonly found but, if diagnosed in time and

treated properly, allowing the patient to resume activities they had before the appearance of the lesion.



Aknowledgements

Thank you for all of subjects who participated in my experiments. No funding was used for this study.

References

Baciu C, 2006, Medical Gymnastics Programs, Ed. Scientific; 2006: 23 – 27.
Crețu A, 2007, Clinical Therapeutic Physical and Kinetic Therapy, Ed. Polirom; 2007: 15 – 19.

Kiss I, 1999, Physiotherapy and Medical Recovery, Ed. Medical; 1999: 78 – 82.
Papilian V, 1999, Human anatomy, Ed. Medical, vol.I; 1999: 110 – 121.
Păun D, 2011, Football - technical and tactical, Ed. Bren; 2011: 65 – 69.
Untea G, 1984, Methodological and biological aspects in football, Ed. Sport-Tourism; 1984: 27 – 34.
Zaharia C, 1999, Lordose Clinical Therapy Recovery, Ed. Medical; 1999: 99 – 107.