

Modern Arthroscopic Treatment of Meniscus Injuries of the Kinder Joint Today

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Annotation: This article scientifically substantiates the importance of arthroscopic technologies in the modern diagnosis and treatment of meniscus injuries of the knee joint. Meniscus injuries are common as a result of sports injuries, overstrain, and degenerative changes and negatively affect the functional stability of the knee joint. Arthroscopy, as a minimally invasive surgical method, has high effectiveness in the detection and treatment of meniscus tears, degenerative changes, and other intraarticular pathologies. The article analyzes the advantages of arthroscopic treatment based on scientific sources - less damage, faster recovery, clear visual control, and shorter rehabilitation stages. Clinical results of arthroscopic meniscus restoration and meniscectomy, stages of rehabilitation, and measures for the prevention of complications are also described.

Keywords: Knee joint injury, meniscus injury, arthroscopy, arthroscopic surgery, meniscus restoration, meniscectomy, orthopedics, sports injuries, minimally invasive method, rehabilitation.

Introduction. The knee joint is one of the most complex and load-bearing joints in the human body, and its stable function depends on the coordinated activity of many anatomical structures. Menisci play an important biomechanical role in ensuring the stability of the knee joint, distributing the load evenly, mitigating impacts, and protecting the articular surfaces. Sports activities, sharp turns, direct injuries, and age-related degenerative changes lead to meniscus tears and other injuries, causing joint dysfunction.

Today, timely detection and effective treatment of meniscus injuries of the knee joint are important not only for preventing the aggravation of the disease, but also for restoring the patient's quality of life. Compared to traditional open surgical methods, the low invasiveness, accuracy, and short rehabilitation time of arthroscopic surgery made it one of the leading methods in orthopedic practice. With the help of arthroscopy, it is possible to restore meniscus tears, perform a partial meniscectomy, or eliminate other intra-articular pathologies with minimal damage.

Literature review. Scientific research on meniscus injuries of the knee joint and their arthroscopic treatment requires a comprehensive analysis in this area. Meniscus injuries are explained by the fact that they significantly affect the functional stability of the knee joint by many scientists. According to R. Jackson, "a detailed study of the anatomical and biomechanical functions of the meniscus leads to increased pressure on the articular surfaces and the development of arthrosis" [2].

In recent years, a number of scientific developments have been carried out on the application of arthroscopic technologies in the field of orthopedic and sports medicine. Andrews and co-authors, studying the clinical results of arthroscopic treatment of meniscus tears caused by sports injuries, noted the advantages of this method, such as rapid recovery, low invasiveness, and a reduction in postoperative complications. P. Beaufils also analyzed arthroscopic meniscus restoration techniques

and meniscectomy techniques, recommending treatment strategies depending on age and the type of injury [4].

Local research has also made a significant contribution to the development of this field. In the conditions of Uzbekistan, studies by O. Khamidov [5], M. Sharofova [5], A. Safarov [6], Sh. Pulatova [6], M. Mamadaliyeva [6], B. Mamaturaimov [7], K. Kobilov [7], and N. Umarova [8] show a high frequency of meniscus injuries of the knee joint in young people and athletes, as well as the effectiveness of arthroscopic treatment and the importance of postoperative rehabilitation. According to their research, the arthroscopic approach is important for maintaining knee joint function and restoring the patient's quality of life.

At the same time, modern literature also points out the disadvantages of arthroscopic surgery. For example, repeated injuries and functional limitations may occur in some patients as a result of an inaccurate diagnosis, lack of a qualified surgeon, or a violation of the rehabilitation protocol [9]. Therefore, the use of an individual approach and modern diagnostic methods in the treatment of meniscus injuries of the knee joint is considered scientifically important.

According to the above-mentioned scientists, the arthroscopic approach is one of the most effective and safe methods of treating meniscus injuries. At the same time, improving the stages of surgical intervention and rehabilitation, determining the criteria for patient selection, and monitoring long-term clinical outcomes remain relevant scientific issues in the field.

Main Part. Injuries to the meniscus of the knee joint can be caused by various factors. These injuries are mainly divided into two types: traumatic and degenerative. Traumatic tears often occur as a result of sports activities or sudden injuries and occur in young patients. Degenerative tears develop in adults and elderly patients as a result of chronic stress or degenerative changes in the joint. The main clinical signs of meniscus tears include pain, swelling, blockages in the knee joint, limited range of motion, and a feeling of "clicking" in a certain position.

Arthroscopic diagnosis is one of the most reliable methods for diagnosing meniscus injuries of the knee joint. This minimally invasive method allows for the detection of intra-articular tears under visual control. Arthroscopy plays an important role not only in making an accurate diagnosis, but also in choosing a treatment strategy.

Arthroscopic treatment includes restoration of meniscus tears or partial meniscectomy. Meniscus repair ensures the restoration of the ruptured meniscus and maximizes joint function. This method is mainly used in young patients and athletes. Partial meniscectomy (partial meniscectomy) is a surgical method in which a torn or degenerative part is removed while preserving healthy tissue. This approach is mainly used in degenerative lacerations. At the same time, arthroscopy also eliminates other intra-articular pathologies, such as lesions of soluble tissues or articular surfaces.

The rehabilitation process after arthroscopic treatment directly affects the surgical success and functional recovery of patients. The stages of rehabilitation consist of pain reduction, gradual restoration of joint range of motion, increasing muscle tone, and returning the patient to sports or physical activity. Clinical experience shows that as a result of arthroscopic treatment and proper rehabilitation, knee joint function is restored in 85-90% of patients, pain is reduced, and joint stability is maintained.

The main advantages of the arthroscopic approach are low invasiveness, rapid recovery, minimal complications, and clear visual control. At the same time, insufficient surgical skills or non-compliance with rehabilitation by the patient in some cases can lead to repeated injuries. Therefore, an individual approach and postoperative monitoring are important for each patient.

Conclusion. The results of the study showed that injuries to the meniscus of the knee joint can be treated effectively and safely using a modern arthroscopic approach. Arthroscopy is a minimally invasive method that allows for the detection of intra-articular tears, restoration of the meniscus, or partial meniscectomy. This approach leads to a faster recovery of patients, a reduction in postoperative complications, and preservation of joint function.

Clinical practice shows that as a result of arthroscopic treatment and proper rehabilitation, knee joint function is restored in 85-90% of patients, pain is reduced, and it has a positive effect on the quality of life. At the same time, the success of the operation and long-term results depend on the surgeon's qualifications, an individual approach, and strict adherence to postoperative rehabilitation. Therefore, the arthroscopic approach to the treatment of meniscus injuries of the knee joint is one of the most important and effective methods of modern orthopedic practice. In the future, it is recommended to focus research on maintaining joint function, improving rehabilitation protocols, and monitoring long-term clinical outcomes.

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