

Method to Recover from Meniscus Tearing

Yichen Li *

Nanjing Foreign Language School British Columbia Academy, Nanjing, China

* Corresponding author: pli@nflsbca.com

Abstract. A torn meniscus, a prevalent knee injury, holds significant importance due to its impact on post-surgery outcomes. Failure to undergo timely and appropriate rehabilitation can result in numerous complications, including muscle atrophy and limited joint mobility. Current research has made strides in assessing the efficacy of various rehabilitation protocols for patients with meniscus tears, aiming to restore strength and functionality to the affected knee. Despite progress, challenges persist, such as determining the optimal timing and intensity of rehabilitation exercises and addressing individual variability in recovery rates. Thus, the crux lies in selecting tailored treatments that address the specific nature and severity of the meniscus injury, aiming to mitigate post-operative complications like muscle atrophy and ensure comprehensive recovery.

Keywords: meniscus tear; rehabilitation training; muscle atrophy.

1. Introduction

The meniscus is a C-shaped piece of tough, rubbery cartilage located between the shinbone and the thighbone. Its primary function is to act as a shock absorber, preventing friction and distributing load between the two bones [1]. However, the meniscus is prone to tearing, especially when the knee is suddenly twisted while bearing weight. Conservative treatment options such as rest, ice, and medication can often alleviate the pain and allow the torn meniscus to heal naturally. In some cases, however, surgical intervention becomes necessary.

Unfortunately, many individuals who undergo meniscus surgery do not fully recover or may even experience worsened problems [2]. These complications can include cartilage damage, secondary osteoarthritis, lower limb muscle atrophy, and severe arthroplasty. This outcome is often due to a miscommunication between doctors and patients. Doctors may focus solely on completing the meniscus surgery and ensuring that the patient's meniscus functions properly. However, most patients who require meniscus surgery are athletes or regular exercisers. When doctors inform them that their knee has recovered, they may mistakenly believe they can return to their previous level of physical activity [3].

In reality, doctors usually mean that the patients can resume normal daily activities, such as walking. Unfortunately, they often fail to inform patients about potential issues like muscle atrophy and other related problems. Even when doctors do provide warnings, the rehabilitation training for meniscus injuries can vary greatly, and some methods may even exacerbate the condition. Therefore, the focus of this paper is to compare and identify the most effective rehabilitation methods for patients who have undergone meniscus surgery [4].

This paper aims to introduce post-surgery rehabilitation training for meniscus injuries, emphasizing different treatment approaches and comparing their effectiveness. Various concerns surround these treatments. For example, some suggest prioritizing quadriceps femoris training as it can help stabilize the knee and enable patients to walk normally more quickly. However, others argue that this approach may lead to muscle compensation and potentially result in other health issues. They believe that it is crucial to focus on training the buttocks muscles first, as they form the foundation for the lower limb's structural integrity.

2. Approaches

2.1. Individualized Approach

Each patient is unique, and their rehabilitation needs may vary. Therefore, it is essential to choose a rehabilitation program that offers an individualized approach, tailored to the specific needs and capabilities of the patient. This ensures that the training is effective and safe.

2.2. Qualified Professionals

Rehabilitation training should be conducted under the guidance of qualified professionals, such as physical therapists or sports medicine specialists [5]. These experts have the knowledge and expertise to design and supervise appropriate exercises and techniques, ensuring optimal recovery.

2.3. Progressive Training

A good rehabilitation program should incorporate progressive training techniques. This means gradually increasing the intensity and complexity of exercises as the patient's strength and stability improve. Progressive training promotes a gradual return to full functionality, reducing the risk of re-injury.

2.4. Variety of Exercises

To keep the rehabilitation process engaging and effective, it is important to choose a program that offers a variety of exercises. This helps prevent monotony and ensures that all muscle groups surrounding the knee joint are adequately targeted.

2.5. Pain Management

Meniscus surgery can be accompanied by discomfort and pain. A comprehensive rehabilitation program should include strategies for pain management, such as modalities like ice or heat therapy. Pain management techniques help alleviate discomfort and promote a more comfortable recovery.

2.6. Education and Support

It is crucial to choose a rehabilitation program that emphasizes patient education and provides ongoing support. Patients need to is above.

Both scores are significantly better than the reference group ($P < 0.05$).

In the structure of the knee joint, the meniscus is one of the most critical parts. It can control the sliding of the femur, prevent its excessive sliding, absorb the oscillation caused by movement, and lubricate and stabilize the joint [6]. Therefore, during the diagnosis and treatment of patients with knee meniscus injury, the maximum retention and functional repair of the structure of the meniscus is an important part. Only in this way can the function of the knee joint achieve the maximum recovery effect [7]. Nowadays, when patients facing meniscus injury are diagnosed and treated, they mainly use arthroscopic meniscus partial resection, meniscus tear repair, unstable repair, and meniscus subtotal and total incision. Relevant follow-up data show that although the treatment effect achieved by traditional meniscus surgery is better, the probability of knee degenerative lesions in patients after surgery will also be significantly improved.

The formation of the meniscus under arthroscopy is a kind of minimally invasive treatment. It is the process of opening a 5 ~ 10 mm hole at the patient's disease, extending the camera and surgical device into it, and performing the operation under the display of a microscope [8]. Its advantages are small incision, high safety and wide application range. After the operation, the rehabilitation exercise of the patient can exercise the quadriceps and the annial cord muscles of the patient, so that the patient's muscles can avoid waste atrophy, and the rehabilitation training can significantly improve the recovery effect of the patient's knee joint function and exercise the stability and flexibility of the knee

joint. [9]. This study was carried out on patients with knee meniscus injury in our hospital and grouped them into groups.

After routine surgical treatment and postoperative rehabilitation training treatment, various clinical manifestations of patients are now observed, recorded and analyzed. The research results show that in terms of clinical efficacy, the research group has a significant advantage over the reference group ($P < 0.05$); compared with the degree of recovery of knee movement function. Above, the research group is significantly higher than the reference group ($P < 0.05$) [10]. Rehabilitation training and treatment after arthroscopic meniscus formation in patients with knee meniscus injury can significantly improve the clinical diagnosis and treatment results, and have an obvious promotion effect on the recovery of the patient's knee joint function, so that the patient's knee joint activity can be improved, which can accumulate for the patient's disease healing. Extremely effective.

Overall, arthroscopic postoperative rehabilitation training plays a crucial role in the successful recovery of patients with knee meniscus injuries. It helps promote healing, restore function, and improve the quality of life for individuals affected by this condition.

3. Summary

In conclusion, rehabilitation training and nursing utilizing muscle energy technology have shown promising results in reducing postoperative pain, promoting knee function recovery, and enhancing overall functional recovery in patients. By implementing an individualized approach, involving qualified professionals, incorporating progressive training methods, diversifying exercise routines, effectively managing pain, and providing education and support, patients can achieve optimal outcomes in their rehabilitation journey. It is crucial for individuals to select the appropriate rehabilitation program after meniscus surgery to regain strength, mobility, and ultimately improve their quality of life. Looking ahead, further research and advancements in this field can lead to even more effective rehabilitation strategies and improved patient outcomes.

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