



Clinical-Medical Image

Understanding Knee MRI: A Comprehensive Guide to Diagnosis and Treatment of Joint Injuries

Belouaer Antonio*

Department of Physical Therapy and Rehabilitation Services, St George's University of London, London, UK

Case Study

A 45-year-old male patient sought medical attention for persistent knee pain and swelling after a sports injury. After a physical examination, his physician recommended an MRI to evaluate potential damage to the soft tissues and cartilage. The MRI revealed a complex tear of the medial meniscus, mild osteoarthritis, and fluid accumulation in the joint. This detailed imaging allowed the healthcare team to develop a tailored treatment plan based on the injury's extent.

Given the patient's age and activity level, the initial approach was conservative, focusing on physical therapy to strengthen the surrounding muscles and improve flexibility. Alongside this, he was prescribed anti-inflammatory medications to manage pain and swelling. After several weeks of therapy, the patient showed some improvement, but continued to experience occasional discomfort. A follow-up MRI was conducted to assess his healing progress and the effectiveness of the conservative treatment. While the imaging indicated some reduction in the meniscal tear size, it also revealed persistent abnormalities, prompting further intervention discussions. Weighing the benefits and risks of arthroscopic surgery, the patient opted for a partial meniscectomy to remove the damaged portion of the meniscus.

The surgery was successful, and the patient entered a structured rehabilitation program. Throughout his recovery, regular follow-up MRIs monitored healing and helped prevent complications. The collaboration between the Orthopedic surgeon and physical therapist was crucial in his recovery process. Ultimately, the patient returned to his pre-injury activity level, underscoring the importance of knee MRI in diagnosing joint injuries and guiding effective treatment. This case illustrates the critical role of MRI in Orthopedic care, enhancing treatment decisions and patient outcomes while advancing our understanding of knee health [1,2].

Keywords: Physical therapy; Orthopedic care; Knee health

Acknowledgement

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Conflict of Interest

None.

References

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2. Katz JN, Arant KR. and Loeser RF (2021). Diagnosis and treatment of hip and knee osteoarthritis: A review. *Jama* 325(6):568-578.

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***Corresponding author:** Belouaer Antonio, Department of Physical Therapy and Rehabilitation Services, St George's University of London, London, UK; E-mail: belouaerntonioa@ptrs.it

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