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Ramp Lesions with ACL Injuries Between MRI and Arthroscopic Evaluation

Mohamed Samir[1], Ehab Alieldin[1], Ahmed T Ashour[2], Ahmed Abouelnaga[3], Ahmed Attia[4], Ahmed Ashour[5], Ahmed Ismail[6], Ahmed Waly[1], Tarek Elkhadrawy[1]
[1]Department of Trauma and Orthopedics, Faculty of Medicine, Alexandria Main University Hospital, Egypt
[2]Royal Free London nhs Trust, London, UK
[3]Manchester Royal Infirmary (MRI), Manchester, UK
[4]Bart's NHS Trust, London, UK
[5]Queen Elizabeth Hospital, Birmingham, UK
[6]Bradford Royal Infirmary, UK

Abstract

Objective: To compare the accuracy of arthroscopy with MRI in diagnosing ramp lesions associated with anterior cruciate ligament (ACL) injuries.

Design: Prospective observational study.

Material and Methods: We included 100 patients with complete ACL tear. Exclusion criteria:
1) Partial ACL tear, 2) ACL revision surgery or previous knee surgery, 3) Multi-ligamentous knee injury, 4) Extensive medial meniscus tear.

Results: Nine patients were diagnosed with ACL-associated ramp lesions. All nine had magnetic resonance imaging (MRI) signs, but these were not statistically significant (C^2 =1.884, FEp=0.348). Mean medial meniscal slope for patients with ramp lesions was 2.88 ± 0.46, without was 2.47 ± 0.55 (T=2.146, P=0.034), implying statistical significance as visualized by arthroscopy. Arthroscopy is superior in diagnosing ramp lesions.

Conclusion: Arthroscopy is superior in diagnosing ramp lesions due to cost-effectiveness, direct visualization, and immediate treatment capability. The absence of specific MRI signs for ramp lesions further supports this conclusion.

Key words: ACL, ramp lesion, arthroscopy, knee, meniscus, MRI