

MAGNETIC RESONANCE IMAGING IN EVALUATION OF TRAUMATIC MEDIAL KNEE PAIN

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Introduction

MRI is used in the settings of investigation of acute knee injury or pain where there is clinical suspicion of internal injury and when fracture.
With its ability to detect different pathologies and injuries related to medial knee injuries ;medial meniscus, medial collateral ligament, bones, muscles and soft tissue; MRI imaging is fundamental in the diagnosis of medial knee injury, contributing in revealing different injury type.
It gives essential clues and keys related to different knee structures to reach in for a definite diagnosis for the occurring underlying conditions, as well as giving an accurate grading for the underlying injury , thus contributing in better management of the patient and better outcome.

Aim of the work

The aim of this study is to identify common traumatic pathologies seen in the medial side of the knee and describe their MRI features.

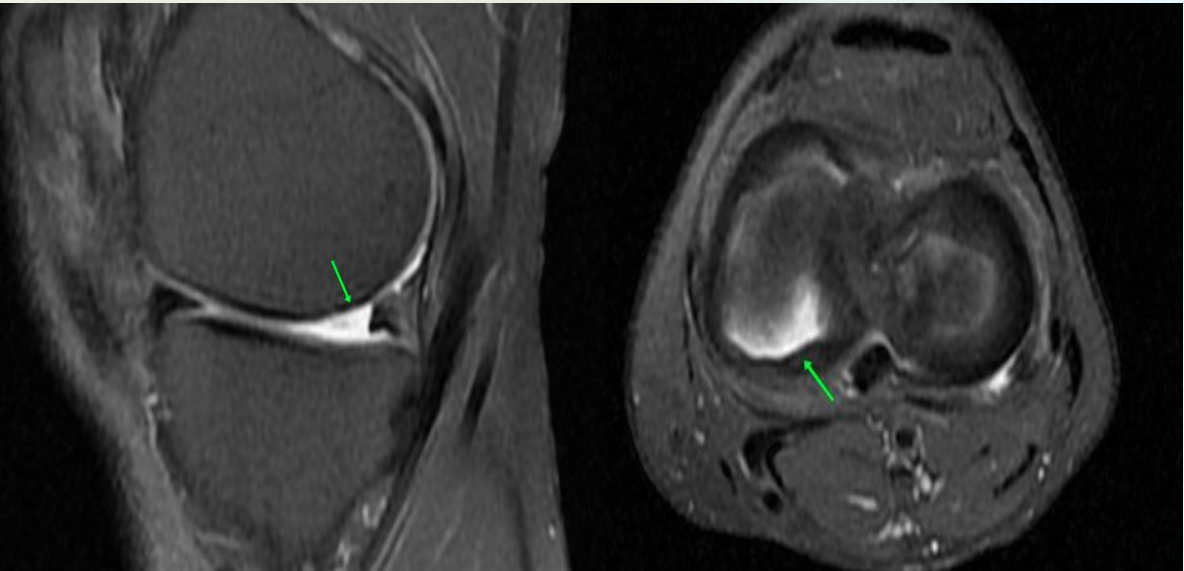
Patients and Methods

Patient: This study included 50 patients (50 knee joints) presented with traumatic medial knee pain complaint
Methods: all patients were subjected to:
•Full clinical history
•Thorough clinical examination
•MRI examination
•All patients were scanned using a 1.5T Philips Gyroscan Achieva (Best, The Netherlands) closed configuration scanner using a dedicated 8 channels extremity coil.
•The patient’s knees were properly positioned in the extremity coil, well supported by foam pads to avoid knee mal-rotation. Patients were examined in supine position with foot first entry.

Results

Table (1): Distribution of the studied patientsaccording to medial knee trauma on MRI findings (n = 50)

MRI finding	No.	%
Medial meniscus injury (tear)		
Yes	37	74
No	13	16
Medial collateral ligament injury		
Yes	9	18
No	41	82
Gastrocnemius muscle injury		
Yes	1	2
No	49	98
Bone marrow edema/ contusion		
Yes	15	30
No	35	70
Associated fractures		
Yes	4	8
No	46	92
Knee effusion		
Yes	27	54
No	23	46
Soft tissue edema		
Yes	2	4
No	48	96



A

B

Fig (1): MRI of left knee :(A) sagittal PD tse FS images shows disruption of bow tie of PHMM (PHMM radial tear), (B) axial PD tse FS images shows radial tear of PHMM extending from the inner c shaped margin and perpendicular to the long axis of the meniscus .

Conclusion

- MRI plays a significant role in diagnosis of medial knee pathologies in the setting of knee trauma.
- MRI is an highly valuable imaging tool for assessing knee injuries. It gives accurate data to the physician regarding type of the injury as well as its grade and severity for proper planning of the treatment .