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**Original article:**

**MRI versus clinical examination in diagnosing meniscal and ligamentous injuries of knee**

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**Abstract**

**Objective**: The purpose of this study was to correlate clinical and MRI findings in diagnosing ligament and meniscus tears in knee joint injuries.

Material and methods: 30 cases with history of rotational injury having knee pain and recurrent swelling who were referred to Radiology Department for MRI of knee joint following injury to the knee with an age ranging from 11 to 60 years were subjected to this study. Prior to MRI, a detailed history, clinical, and local examination were done in all the subjects. MRI was carried out on .35 Tesla Siemens Magnetom C machine using specific knee coil. and the standard protocol consisted of fat-suppressed PD in axial, sagittal, and coronal planes, T2W in axial, and sagittal plane and T1W in axial, and sagittal plane.

**Results:** MRI had 100% sensitivity and negative predictive value (NPV) in diagnosing ACL tears in this study. Clinical examination had sensitivity of 88% and NPV 75% in diagnosing ACL injuries as compared to arthroscopy. There was high NPV of MR examination (96%) in diagnosing meniscus tear while the PPV of MR examination was low (71%) as compared to arthroscopy. These values were low in case of clinical examination.

**Conclusion:** Magnetic resonance imaging is useful as a preoperative diagnostic tool in selected cases where a clinical examination cannot be performed as in acute injuries or in cases where clinical examination is inconclusive. The efficacy of MRI in diagnosing a tear varies among different intra articular structures. MRI has a high accuracy in diagnosing a tear of PCL. Sensitivity for medial meniscal tear is higher as compared to lateral meniscus and high for PCL as compared to ACL. MRI has a high positive predictive value for ACL, but has a low negative predictive value. For PCL tears, MRI has a high negative predictive value which indicates that with a negative result for PCL on MRI, a diagnostic arthroscopy can be avoided.

**Key words:** MRI Knee, Clinical examination, Knee injuries, Meniscal injuries, Ligamentous injuries.