

MR-ARTHROGRAM VS X-RAY AND PHYSICAL EXAM FOR THE DIAGNOSIS OF LABRAL TEAR IN PATIENTS PRESENTING WITH HIP PAIN

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ORTHOPAEDICS

BACKGROUND: Femoroacetabular impingement (FAI) is recognized as a major cause of labral tears. Currently, it is common practice to obtain magnetic resonance arthrography (MRA) imaging for the detection of labral tears. The purpose of this study is to compare X-ray radiological findings and clinical findings to that of MRA for the diagnosis of labral tears in patients with FAI.

METHODS: A retrospective chart review of a total of 316 patients (Male 156, Female 160) was completed to record clinical findings (FABER test, SLR, impingement sign) and radiological findings (a-angle, crossover signs, presence of femoral osseous bumps, pistol deformities and FAI type). Predictive values of MRA, radiographic findings and clinical findings were determined by comparing them to the operating room videos. Predictive values of MRA, radiographic findings and clinical findings were then compared.

RESULTS: The Positive Predictive Value (PPV) and Negative Predictive Value (NPV) for MRA in the diagnosis of labral tears was 99.4% and 3.9%; respectively. The PPV and NPV of radiological findings were 100% and 2.3%; respectively. The PPV and NPV of clinical findings were 98% and 10%, respectively.

CONCLUSION: The accuracy of radiological findings and clinical exam findings are both near equivalent to MRA in detecting labral tears. All test results produced low NPVs. This demonstrates the need for better pre-operative diagnostic criteria to detect labral tears. Clinicians treating patients with FAI must be alerted of this when using the current practice of MRA alone to detect labral tears.