

## Arthroscopic Findings of a Diagnostic Dilemma- Normal Hip XR and MRI imaging but Positive Response to Intra-Articular Hip Injection

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### Summary:

When there is clinical suspicion of hip injury, despite normal MRI, if there is a positive response to an intra-articular injection, there is a very high chance of intra-articular hip pathology being discovered upon hip arthroscopy

### Abstract:

#### BACKGROUND

Patients with clinically suspected hip pathology but normal findings on X-ray and MRI can be a diagnostic problem. Intra-articular local anaesthetic injections can help localize the source of the pain. The aim of this study is to assess the pathology found during hip arthroscopy in this select group.

#### HYPOTHESIS

When hip pathology is clinically suspected and XR and MRI imaging is normal that a positive response to hip intra-articular local anaesthetic injection indicates significant intra-articular pathology.

#### STUDY DESIGN

Case series; Level of evidence, 4.

#### METHODS

A retrospective review of all hip arthroscopies performed between March 2011 to March 2014 (1008 arthroscopies) by two orthopaedic surgeons specializing in hip arthroscopy was conducted to identify patients with clinically suspected intra-articular hip pathology, normal XR and MRI reports and a positive response to a fluoroscopically guided intra-articular injection of local anaesthetic and corticosteroid. Pathologic findings were collated from standardised operative notes.

#### RESULTS

39 hip arthroscopies in 37 patients met the inclusion criteria for this study. The average age was 35yo and 81% were female. Clinically 95% of the hips (37/39) were FADIR positive. Arthroscopically all 39 hips had confirmed intra-articular pathology. The most common pathology found during arthroscopy was a tear of the ligamentum teres (92%), followed by chondral damage (67%) and a labral tear (31%).

#### CONCLUSION

Image guided injections of local anaesthetic are recommended when there is clinical suspicion despite normal imaging in patients with suspected hip pathology. In patients with normal XR and MRI and a positive response to an intra-articular injection, there is a very high chance of intra-articular hip pathology being discovered on hip arthroscopy.

**KEY TERMS:** Hip arthroscopy, radiography, magnetic resonance imaging, image-guided injection, intra-articular hip pathology