Is Magnetic Resonance Imaging (MRI) reliable in the diagnosis of Ankle Instability?

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Disclosure

NO CONFLICT TO DISCLOSURE

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Our disclosures are on the AAOS website. We have no potential conflicts with this presentation.
• MRI is the preferred modality for the diagnosis of ankle joint pathology

• The aim of this study was to specifically analyse the reliability of MRI reported lateral ligament findings in relation to examination under anaesthesia and stress X-rays in patients with symptomatic ankle instability.
Methods

- Single centre, single surgeon consecutive series

- Patients included in the study had
  - symptomatic ankle pathology
  - examination under anaesthesia and stress X-rays preceded by an MRI scan

- MRI scans reported by a musculoskeletal radiologist
Results

• Period April 2012 - December 2016

• 49 patients

• 25 male and 24 female patients

• average age 43.1 years (SD 14.4)

• average time interval between MRI scan and examination under anaesthesia was 9.7 months (2-49 months)

• 28 patients (57.1%) had a right sided pathology
Significant association between MRI reported lateral ligament findings and status of ankle stability detected on examination under anaesthesia and stress views, $p=0.003$ (Chi-square analysis for association)
100% concordance between MRI reported normal lateral ligament findings and stability on examination under anaesthesia and stress views (N=15)

In 34 patients who had abnormal lateral ligament findings on MRI

• 20 patients (58.8%) had stable findings on stress views
• 14 (41.2%) had unstable findings on stress views
Conclusion

MRI is accurate in diagnosing the status of ankle ligaments and in particular, in predicting true stability
References