Is Magnetic Resonance Imaging (MRI) Reliable in the Diagnosis of Osteochondral Lesions (OCL’s)?
Triin Nurm, MD, Paulo Torres, FRCS(Ed), Jayasree Ramas Ramaskandhan, MD

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Introduction/Purpose: MRI is the preferred modality for the diagnosis of ankle joint pathology. Musculoskeletal radiologists aim to determine and report both chondral and/or osseous stability/instability of each lesion. The aim of this study was to specifically analyse the reliability of MRI reported findings in predicting the stability of OCL’s in symptomatic patients.

Methods: A single centre, single surgeon consecutive series of patients who had undergone an ankle arthroscopy procedure preceded by an MRI scan for symptomatic ankle pathology were included in this retrospective clinical study. All MRI scans were reported by a musculoskeletal radiologist. MRI reports and arthroscopic findings were extracted and analysed. Arthroscopy findings were taken as the gold standard.

Results: Between April 2012 and July 2016, 48 patients who fulfilled the criteria were included. There were 27 male and 21 female patients, the average age was 43.4. Average time interval between MRI and arthroscopy was 9 months. There was a significant negative relationship between OCL’s reported as stable on MRI to arthroscopic findings, r=-.31, p=0.03. Of the 21 patients who had OCL’s reported as stable on the MRI, all had unstable lesions on arthroscopic evaluation (100%). One patient had an unstable OCL reported on the MRI and it was also unstable arthroscopically. In 27 patients, there was no mention of the stability of the reported OCL on the MRI, 22 patients (81.5%) had unstable lesions and 5 patients (18.5%) had stable lesions on arthroscopic findings.

Conclusion: This study demonstrates that MRI has a poor predictive value for the stability of OCL’s of the ankle. Therefore we recommend that in the symptomatic patient an arthroscopy is indicated irrespective of MRI findings.