

# MR arthrography is more accurate than MR in diagnosing shoulder tears

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MR arthrography of the shoulder allows physicians to better identify tears and provides patients with an accurate diagnosis to determine whether or not surgery is needed, according to a study performed at Neuroskeletal Imaging in Merritt Island, Florida.

The study included 150 patients who underwent both 3T MRI and MR arthrography examinations of the shoulder. "We did the study to see if MR, which is noninvasive, works as well as MR arthrography, an invasive procedure that some patients are fearful of having since contrast has to be injected into the shoulder," said Thomas Magee, MD, lead author of the study. The study found that MR arthrography was more accurate for making a diagnosis.

Sensitivity on conventional MRI for anterior labral tears was 83%; for posterior labral tears was 84%; for SLAP tears was 83%; for supraspinatus tendon tears was 92%; and for partial-thickness articular surface tears was 68%. Sensitivity on MR arthrography on the other hand was significantly higher. Sensitivity for anterior labral tears was 98%; for posterior labral tears was 95%; for SLAP tears was 98%; for supraspinatus tendon tears was 100%; and for partial-thickness articular surface tears was 97%. "With MR arthrography we were able to see things with a high degree of accuracy in the shoulder," said Dr. Magee.

"Resolution and picture quality using 3T MRI is high in the shoulder, except for lesions that are hidden without distention (swelling) of the joint. During MR arthrography, the distention of the joint allowed us to

uncover lesions that could not be seen on conventional MRI," said Dr. Magee.

"The performance of MR arthrograms allows us to see additional, pertinent surgical lesions and provides a better road map for surgeons. Patients should have MR arthrography before surgery to provide an accurate diagnosis, determining whether or not they really even need surgery," he said.

"If an MR arthrogram is normal, it is very likely to be normal during surgery," said Dr. Magee.

Source: American Roentgen Ray Society

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