



ADVANCED IMAGING CENTER
PHYSICIAN NEWS

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Advanced Topics in Orthopedic Radiology: MR ARTHROGRAM

Q. What is MR Arthrogram?

A. MR arthrogram is a combination of MR Imaging (MRI) and fluoroscopic-guided arthrogram for evaluation of joint abnormalities.

Q. What MRI techniques are utilized in MR Arthrogram?

A. After injection of **Gadolinium** contrast into the joint space, post-contrast FAT SAT sequences are utilized causing the injected dye to be white against dark bones providing maximum tissue contrast. Diluted gadolinium is injected into the joint under **fluoroscopic guidance**, similar to x-ray arthrogram.

Q. What are some applications?

A.
Knee: evaluation of the menisci for recurrent tears after partial meniscectomy (routine MRI may not be able to differentiate between postsurgical changes and recurrent tears).
Shoulder: evaluation of the glenoid labrum (labral tears, SLAP lesion, etc.); post surgical evaluation of the rotator cuff.
Wrist: Triangular fibrocartilage complex (TFCC) tear; scapholunate ligament tear; etc.

Q. Is MR Arthrogram performed at AIC?

A. Yes! We have been doing MR arthrograms for some time now mostly on the high-field (1.5 Tesla) short-bore Siemens Symphony MRI magnet. This procedure has allowed diagnosis of subtle joint abnormalities not obvious on routine MR imaging.



Examples of a wrist MR arthrogram (left) showing a tear of the triangular fibrocartilage complex (TFCC), a knee MR arthrogram (middle) with contrast in the joint, and a shoulder MR arthrogram (right) showing disruption of the inferior glenohumeral ligament-labral complex.

For more information, please call me personally at (661) 949-8111.

Ray Hashemi, MD
Ray Hashemi, MD, PhD
Director