Dear Colleague,

RaleighRad Note strives to provide clear, concise summaries of current topics in diagnostic imaging. We hope it will assist you in choosing accurate, cost-effective imaging for your patients. Your confidence in our practice through referrals is always appreciated. Please feel free to call one of our physicians for consultation at any time.

Thank you,
Cynthia S. Payne, MD

RaleighRad Note is available on our website, www.raleighrad.com, along with practice information and helpful links for patients.

A Raleigh Radiology physician is available 24/7 at Rex Hospital.

MR ARTHROGRAPHY

As a minimally invasive procedure, direct arthrography offers a means to evaluate intra-articular pathology which may otherwise remain equivocal or occult by conventional MRI. It also allows better characterization of many pathologic entities already diagnosed. In the current regimen of radiologic diagnosis MR arthrography utilizes the paramagnetic effects of gadolinium agents to expand diagnostic potential in many anatomic regions. In the shoulder it is optimally utilized for identifying labroligamentous pathology, better characterizing rotator cuff tears as partial or full-thickness, or identifying cartilaginous pathology. With conventional MRI labral characterization can be quite difficult, but, with associated arthrography, identification of certain labral tears exceeds 90% accuracy. When used in the elbow, definitive visualization of ligamentous tears can be achieved, especially partial or subacute full-thickness involvement of the UCL, RCL, and LUCL. Contrast introduction into the radiocarpal joint can improve delineation of subtle SLL and LTL tears as well as pathology involving the TFC. Characterization of labral pathology in the hip is optimized with contrast joint distension with additional capability of delineating chondral abnormalities and the features of femoro-acetabular impingement. In fact, MR arthrography can significantly improve the sensitivity and specificity (92% and approaching 100%, respectively) for labral tear detection over conventional MRI, with sensitivity less than 25%.

NEXT ISSUE

FDA issues black box warning for gadolinium because of NSF (Nephrogenic Systemic Fibrosis) risk.

What does this mean for your patients who need MRI studies?
tear from post-meniscectomy changes is greatly improved¹. Sensitivity for presence and severity of ligament tears as well as identification of impingement syndrome features in the ankle is also increased with direct MR arthrography as compared to conventional MRI⁷. Furthermore, characterization of osteochondral injury stability as well as the presence of intra-articular bodies is improved with contrast distension of all of these joints⁸.

**KEY POINTS:**

- Shoulder arthrography improves labral/gamentous detection and RC tear characterization
- Elbow arthrography allows definitive visualization of ligamentous tears
- Wrist arthrography accentuates identification of TFC or SSL/LTL tears
- Hip arthrography optimally delineates labral pathology
- Knee arthrography allows better differentiation of postoperative change and recurrent tear
- Ankle arthrography improves characterization of ligamentous tears and impingement syndromes
- Arthrography in general improves loose body detection and stability determination of osteochondral injury stability

**REFERENCES:**