

MRI Improved Care of Some Knee Pain Patients

BY JAY CHERNIAK

Preoperative MRI scanning of the knee in some patients with joint line pain revealed more advanced degenerative disease than was suggested by clinical examination and plain x-rays, judging from findings from a large British series.

In the study of more than 600 patients presenting with knee symptoms,

MRI assessment led to a change in the clinical management of 23% of the patients (141 of 618), study investigators reported.

In most of these patients (129 of 141), the scans revealed unexpected chondral surface lesions, unstable meniscal tears, and other pathologies. The purpose of the study was to determine if preoperative MRI assessment of knee pathology after a clinical examination and plain x-

rays affects the surgical management of patients with knee pain.

The study had two parts. First, investigators assessed the accuracy of MRI scans for detecting knee cartilage lesions at their institution, Royal Free Hampstead National Health Service (NHS) Trust, London.

They performed MRI scans and arthroscopic exams on 100 randomly selected patients with knee pain. Using

arthroscopy as the standard, the researchers found that the MRI scans had an overall sensitivity of 83% and an overall specificity of 94% for the detection of chondral lesions.

In the second part of the study, the researchers enrolled 618 patients with knee pain (316 women, mean age 55 years; 302 men, mean age 45 years).

All participants were initially examined by a clinician for evidence of arthritis or meniscal tears, and had plain x-rays. The clinician recorded the most probable cause of the pain and the likelihood of proceeding to arthroscopy. All the patients had an initial diagnosis of an arthroscopically treatable lesion.

After this initial consultation, the patients underwent an MRI scan.

The patients and their scans were then reviewed by one of two surgeons who specialized in knees.

The analysis showed that the MRI findings matched the clinical diagnosis in 477 (77%) of the 618 patients; the diag-

MRI findings allowed some patients to avoid arthroscopy. When MRI findings led to earlier arthroscopy, quality of life improved earlier than it would have with routine care.

nosis was confirmed by subsequent arthroscopy. In the 141 patients whose MRI findings did not match the clinical diagnosis, 77 had chondral lesions that were not suggested by the clinical exam and plain x-rays, 22 had unexpected meniscal tears rather than chondral lesions, 30 had miscellaneous pathologies, and 12 had a normal MRI scan.

As a result of the MRI findings in these patients, the orthopedic surgeons altered their clinical management, wrote the investigators, led by Dr. Arthur Galea of the Royal Free Hampstead NHS Trust (Arthroscopy 2009;25:473-80).

MRI assessment allowed some patients to avoid “unnecessary arthroscopic intervention and improved the quality of life in a subset of patients who underwent an arthroplasty as a primary procedure,” the authors wrote.

“Preoperative MRI identifies a group of patients who have more advanced DJD [degenerative joint disease] than the clinical assessment and the plain radiographs suggest,” the researchers concluded. The use of MRI “would expedite definitive surgery in patients with advanced osteoarthritis on MRI scans,” they wrote.

“A potential source of bias in our study was that the orthopaedic specialist had the opportunity to view the MRI scans at the time of arthroscopy.

Ethical considerations meant that it was not acceptable to blind the knee specialist from viewing the MRI scan,” they wrote.

The authors reported no conflicts of interest. ■

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