

MR Guidance Speeds Sacroiliac Injections

BY BRUCE K. DIXON
Chicago Bureau

CHICAGO — Use of real-time magnetic resonance imaging to guide sacroiliac joint puncture is feasible and safe, and allows for interactive interventions in patients who have refractory sacroiliitis, according to a study presented at the annual meeting of the Radiological Society of North America.

Researchers injected steroids into the sacroiliac joints (SIJs) of 73 patients who had inflammatory back pain and acute sacroiliitis unresponsive to conventional drug therapy for longer than 6 months using real-time magnetic resonance (MR) guidance exposure, Dr. Jan Fritz said at a poster session. The other term for the

imaging technique, MR fluoroscopy, is a misnomer; unlike traditional fluoroscopy, MR fluoroscopy does not involve radiation. The entire procedure is performed using an interventional C-shaped open ultrafast MR scanner that provides an image every 1.2 seconds as the needle is being advanced.

"This allows you patient access while doing a procedure that formerly was done using x-ray fluoroscopy [and] CT, which have the disadvantage of exposure to ionizing radiation," said Dr. Fritz, with the department of diagnostic radiology at Eberhard Karls University of Tübingen (Germany). "Spondyloarthropathy patients are typically under age 30 and in their reproductive years, and we don't like to expose them to ionizing radiation," he said.

Each SIJ was injected with 40 mg triamcinolone acetonide using an MR-compatible 20-G puncture needle, they wrote.

Prior to intervention and 3 months after intervention, inflammatory back pain (IBP) was assessed on a visual analog scale, and volume and signal intensity of

the sacroiliac bone marrow edema (BME) were quantified on high-field short-TI inversion-recovery (STIR) MR images with a semi-automatic algorithm using Matlab software.



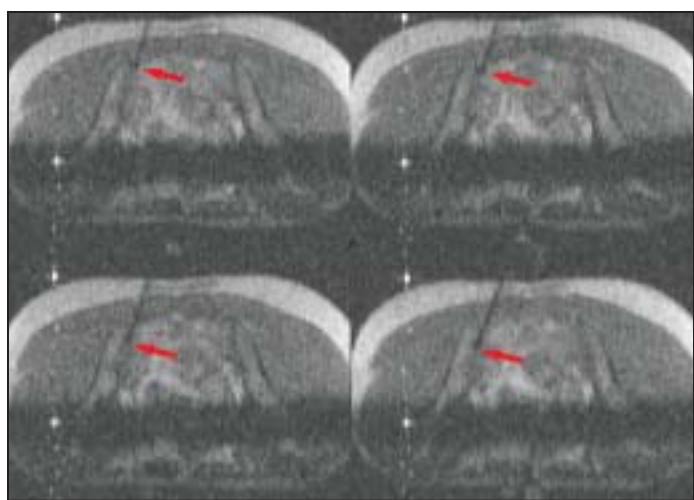
Use of real-time MRI in younger patients enables them to avoid radiation exposure.

DR. FRITZ

Technical success was achieved in 72 of the 73 patients, most of whom were injected bilaterally, Dr. Fritz said, adding that there were no complications.

In bilateral intervention (n=64), real-time MR guidance (n=36) required a mean time of 40.5 minutes, compared with 55 minutes for intermittent MR imaging guidance (n=28).

Postintervention, IBP decreased by 63%. Volume and signal intensity of the sacroiliac BME decreased by 69% and 64%, respectively, which was a statistically significant difference. Mean remission time was 10 months. "MR fluoroscopy guidance for percutaneous steroid injections into the SIJ is safe and accurate, allowing for shorter interventions. MR fluoroscopy proved to be effective in sacroiliitis unresponsive to conventional drug therapy," Dr. Fritz concluded.



COURTESY DR. JAN FRITZ

The red arrows indicate the tip of the needle as it advances toward the site of sacroiliitis in a patient with back pain.

Joint Injection Reduced Pain

Knee OA from page 1

with radiological evidence of osteoarthritis and pain greater than 50 points on a 100-point visual analog scale.

After blood was drawn from all patients, they were randomized, to ensure blinding, to intra-articular injections of either autologous conditioned serum (ACS), hyaluronan (HA), or saline twice a week for 3 weeks.

Outcomes were assessed at 7, 13, and 26 weeks after the last injection, using patient-administered outcome instruments of pain measurement including the Western Ontario and McMaster Osteoarthritis index (WOMAC), the Visual Analog Scale (VAS), and a health-related quality-of-life measure (SF-8).

"Pain was significantly reduced in all three groups and quality of life was increased. However, the positive therapeutic responses to ACS were stronger, compared to the other treatment modalities," said Dr. Moser.

"The magnitude of improvement in the ACS group was significantly higher and persisted for months after the last injection. Compared to ACS, the mean reduction in pain was half in the other treatment groups," he said.

Dr. Moser added that adverse events were minor in all groups and were confined to localized pain and swelling from the injection.

This occurred in 23% of the ACS group, compared with 28% of the saline group and 38% of the HA group.

Anti-TNF Agents Eased Pain of Psoriatic Arthritis Better Than Did Methotrexate

BY CHRISTINE KILGORE
Contributing Writer

Treatment with tumor necrosis factor-blocking agents is more effective than methotrexate monotherapy at easing pain and fatigue in patients with psoriatic arthritis and in improving their general health when used in daily clinical practice, according to investigators of an ongoing longitudinal, observational study in Norway.

In a report of 6-month results, investigators said that 526 patients with psoriatic arthritis improved regardless of whether they received methotrexate (MTX) monotherapy or TNF-blocking agents, but "the improvement was larger with TNF-inhibitors." Assessments were made using numerous measures of disease activity and health-related quality of life (Ann. Rheum. Dis. 2007 Jan. 9 [Epub doi:10.1136/ard.2006.064808]).

The patients were part of a larger Norwegian registry—the NOR-DMARD Register—in which five Norwegian rheumatology departments consecutively register all

their patients with inflammatory arthropathies, said Dr. M.S. Heiberg, of the department of rheumatology in Diakonhjemmet Hospital in Oslo, Norway, and fellow associates.

The patients had a mean age of 48 years and mean disease duration of 7 years. Almost 50% were females; 35% had erosive disease.

Of the 526 patients, 380 received MTX monotherapy and 146 received the TNF-blocking agents infliximab, etanercept, and adalimumab. Of those receiving anti-TNF therapy, 75% of those on infliximab, 60% of those on etanercept, and 79% of those on adalimumab received concomitant MTX. Patients receiving anti-TNF therapy generally had more active and severe disease.

In assessing the clinical improvement, adjustments were made for age, gender, number of previous disease-modifying antirheumatic drugs, the presence of erosive disease, the treatment center, and the investigator's global assessment, the investigators said.

The adjusted changes at 3 and 6

months were significantly larger in the anti-TNF group for the following assessments: erythrocyte sedimentation rate, Disease Activity Score-28, a shortened version of the health assessment question (M-HAQ), fatigue and global disease activity on a visual analog scale, and four out of eight dimensions on the Short Form-36 health survey (bodily pain, vitality, role physical, and general health).

For instance, SF-36 scores for bodily pain rose by about 18 in the anti-TNF group and by 10 in the MTX group, while scores for general health rose by 7 and 2, respectively. (Scores are computed with a value from 0 to 100, with 100 being the best possible health state.)

Whether concomitant MTX was given in conjunction with anti-TNF therapy made little difference, a subanalysis showed. Improvements in the measures were similar between the subgroups of anti-TNF therapy.

More studies are needed to further establish the role of traditional drugs, they said.

Twin Study Data Show Heritability of Knee OA

WASHINGTON — Nearly half of the effects that contribute to knee osteoarthritis can be explained through heritable traits, Guangju Zhai, Ph.D., reported at the annual meeting of the American College of Rheumatology.

In a group of 114 monozygotic and 195 dizygotic twin pairs (all white females) from the Twins UK registry, heritability accounted for 49% of the total variance of joint space narrowing in the knee and for 47% of osteophytes. The results did not change substantially after adjustments were made for age and body mass index, said Dr. Zhai of St. Thomas' Hospital, London. At baseline and at a follow-up of about 7 years, radiographs of the anteroposterior aspect of patients' knees were obtained while in extension and bearing weight. A full lower-limb x-ray was obtained at the follow-up visit.

About 20% of the patients had joint space narrowing and osteophytes at baseline.

About 30% had progression of joint space narrowing or osteophytes at follow-up.

Genetic effects explained 65% of the total variance in knee alignment. Statistical analyses showed that the heritability estimate for knee alignment remained the same after adjustments were made for the presence of knee osteoarthritis, which suggests that they are not likely to share common genetic control.

The heritability of the progression of joint space narrowing or osteophytes appeared to be stronger than heritability was for the mere presence of either sign. About 80% of joint space narrowing could be accounted for through heritable traits, while osteophyte progression was 62% heritable. Adjustments for age and BMI did not change the heritability of joint space narrowing progression, but decreased the heritability of osteophyte progression to 50%, Dr. Zhai said.

—Jeff Evans