

# Spinal Inflammation Is Visible on Ultrasound

BY PATRICE WENDLING  
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Color and duplex Doppler ultrasound may be useful in diagnosing ankylosing spondylitis and assessing response to therapy, new data suggest.

Dr. Ercüment Ünlü and colleagues presented data from a study demonstrating that color and duplex Doppler ultrasound can be used to determine the degree of sacroiliitis and spinal inflammation in patients with ankylosing spondylitis (AS).

The study included 39 consecutive patients with AS and 14 healthy, age- and gender-matched controls. Standardized ultrasound settings were applied including color Doppler gain 60-120 dB, wall filter 51-65 Hz, and pulse repetition frequency 300-850 Hz.

Patients with AS had significantly lower resistive index (RI) values in bilateral sacroiliac joints and in lumbar vertebral and thoracic vertebral paraspinal areas than healthy controls. RI is a measure of vascularity, and is expected to be lower in patients with active inflammation because of increased vascularization.

Patients with active disease, according to the Bath AS Disease Activity Index, had significantly higher mean lumbar vertebral and thoracic vertebral RI values (0.820 and 0.789, respectively) than patients with inactive disease (0.863 and 0.825, respectively). The mean RI tended to be lower around the sacroiliac joints in the active group, but the difference was not statistically significant (J. Rheumatol. 2007;34:110-6).

"The difference in spinal inflammation between active and inactive groups was prominent; however the difference in the degree of inflammation of SI [sacroiliac] joints between active and inactive groups became less significant because of the long disease duration of our AS patients," the authors wrote. The mean disease duration was nearly 10 years.

Among patients with active disease,

the ratio of men was significantly higher, as were average erythrocyte sedimentation rates, and C-reactive protein values.

A subset of 11 patients (7 men and 4 women with an average of age 38 years) was administered anti-tumor necrosis factor (TNF) therapy during the study period. Seven patients received infliximab 5 mg/kg IV initially and at week 2, 6, and 12, and four patients received etanercept 25 mg subcutaneous injections twice weekly. Doppler ultrasound measurements were performed at baseline and week 12 of therapy.

After 12 weeks of anti-TNF therapy, there were significant increases from baseline in average sacroiliac RI (0.814 to 0.884) and lumbar vertebral RI (0.821 to 0.883) values, but no significant change in thoracic vertebral RI (0.812 to 0.855), according to the authors from Trakya University Medical Facility in Edirne, Turkey, where the study was conducted.

An editorial accompanying the study called the data interesting, but said it was unfortunate that there was no comparison with MRI findings in the patients and controls (J. Rheumatol. 2007;34:5-7). MRI has been suggested as the best method of detecting sacroiliitis, but practical considerations such as cost and availability limit its use in the clinical setting.

Contrast-enhanced color Doppler ultrasonography has been shown previously to compare favorably with MRI in its ability to demonstrate sacroiliac joint inflammation. Ultrasound is also being used in the area of spondyloarthritis to detect enthesitis and to assess its response to therapy, according to the editorial.

"The presence or absence of sacroiliitis as detected by whatever reliable, reproducible, and affordable method will continue to be a cornerstone for earlier diagnosis of AS," the editorial stated. "Doppler ultrasonography may be a useful tool in diagnosing patients with AS and assessing response to therapy.

Further work is definitely warranted in this area." ■

# RA Disability Predictive of Cardiac Mortality in Polyarthritis

BY CHRISTINE KILGORE  
Contributing Writer

Early functional disability independently predicted cardiovascular disease-related mortality as well as all-cause mortality in patients with inflammatory polyarthritis, investigators reported.

The finding builds on other studies demonstrating the predictive value of early functional disability in rheumatoid arthritis (RA), and "may help guide the targeting of aggressive therapies," reported Tracey M. Farragher of the University of Manchester (England), and associates.

The investigators used the Norfolk Arthritis Register, in Norwich, England, to determine if early functional disability is a useful independent predictor of increased cardiac risk.

Disability was measured at baseline and again at 1 year using the Health Assessment Questionnaire (HAQ).

Patients were referred to the registry if they had swelling of at least two joints for at least 4 weeks. About 45% were classified as having RA at referral, and by 5 years about 67% had satisfied the American College of Rheumatology criteria for RA. All patients (mean age 54 years) were followed until death or for 10 years after registration, whichever came first.

By 10 years, 171 (17%) of 1,010 patients had died, and 89 (52%) of those deaths

were attributed to cardiovascular disease.

Both all-cause mortality and cardiovascular disease-related mortality increased sharply as the HAQ scores from either the baseline assessment or the 1-year follow-up increased, the investigators reported (Ann. Rheum. Dis. 2006 Nov. 7 [Epub doi: 10.1136/ard.2006.056390]).

When year 1 HAQ scores were focused on and adjusted for other predictors, the investigators found that functional disability and rheumatoid factor positivity were independent predictors of subsequent early death, including cardiac death, according to the investigators. With each one-point increase in HAQ score, patients had a 48% higher risk of dying within the follow-up period, and a 52% higher risk of dying from cardiovascular disease.

Using HAQ scores obtained at baseline, the investigators found that while disability was a significant risk factor (increasing the risk of all-cause death and cardiovascular disease death by 27% and 15%, respectively, for each 1-point increase in HAQ score), rheumatoid factor positivity was the only independent predictor of all-cause and cardiovascular disease mortality. The investigators repeated the analysis for patients who satisfied ACR criteria for RA by 5 years, and found that the predictive value of 1-year HAQ scores was similar to the predictive value for patients with inflammatory polyarthritis and not RA. ■

# Nonpharmacologic OA Therapies Are Prescribed Less Frequently

BY KATE JOHNSON  
Montreal Bureau

PRAGUE — Nonpharmacologic therapies remain less commonly prescribed than are pharmacologic therapies for the treatment of knee and hand osteoarthritis—and this trend has been noted both for primary care physicians and rheumatologists, according to two studies presented at the 2006 World Congress on Osteoarthritis.

When it comes to primary care physicians (PCPs) treating knee osteoarthritis (OA), nonpharmacologic treatments are "insufficiently prescribed and, when initiated, are rarely continued over the long term," reported Dr. Bernard Mazières of Rangueil University Hospital, in Toulouse, France. However, first-line pharmacologic treatment with acetaminophen was initiated in 96% of patients, Dr. Mazières reported at the meeting, which was sponsored by the Osteoarthritis Research Society International.

Dr. Mazières' observational, prospective, multicenter, 1-year cohort study included a total of 933 knee OA patients from 383 randomly selected PCPs in France and Spain. Information on the EULAR recommendations for treating knee OA was provided to the PCPs at the start of the study.

While 99% of the patients were pre-

scribed acetaminophen during the study period, only 47% (437) were prescribed a treatment strictly following the EULAR recommendations. Among those who received nonpharmacologic therapy, the most common prescription was rehabilitation (40%), followed by weight loss (24%), and education (20%). The study concluded that under these therapeutic conditions patients were satisfied with their OA treatment and "improvement in pain, stiffness, and clinical signs of inflammation was clinically relevant."

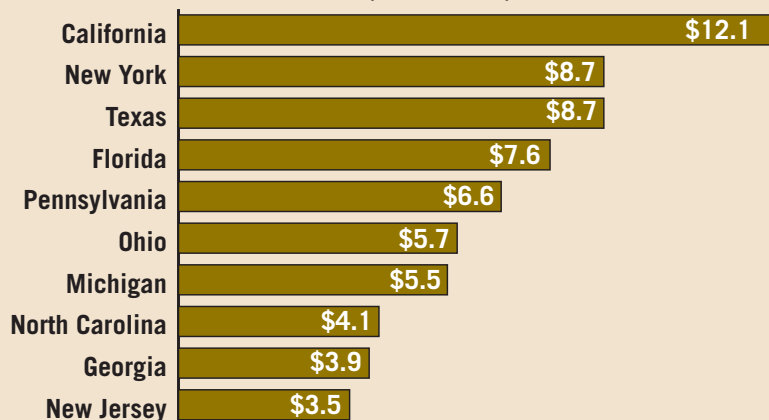
In a separate oral presentation at the meeting, Dr. Emmanuel Maheu reported that, when compared with PCPs, rheumatologists are no better at prescribing nonpharmacologic therapy—at least when it comes to the treatment of hand osteoarthritis.

His prospective cross-sectional study included 169 French rheumatologists and PCPs treating 316 hand OA patients. The study found that, when compared with rheumatologists, PCPs prescribed more analgesics (93% vs. 73%), more nonsteroidal anti-inflammatories (62% vs. 43%), and "surprisingly" more physical therapy (19% vs. 3%), said Dr. Maheu, of St. Antoine Hospital, Paris.

Rheumatologists prescribed more splints (30% vs. 13%) and more intra-articular steroid injections (16% vs. 5%). ■

## DATA WATCH

### States With Highest Rheumatic Disease Costs (in billions)



Notes: Costs based on direct expenditures and lost earnings. Data based on 2003 medical expenditure panel survey of 4,801 people with arthritis and other rheumatic conditions. Source: Centers for Disease Control and Prevention