Tidal Irrigation Outlasts Steroids in One OA Study

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Tidal irrigation leads to more sustained benefits than intraarticular corticosteroid injections in patients with knee osteoarthritis, particularly in those without an effusion, Nigel K. Arden, M.D., said at the 2004 World Congress on Osteoarthritis.

Both treatments significantly improved pain and function at 2 weeks, according to results from a randomized, single-blinded, parallel group trial involving patients with symptomatic knee OA. But the benefits were maintained only in the irrigation group at 26 weeks.

Tidal irrigation, which involves infusing saline into the knee under local anesthesia to repeatedly distend the capsule, is thought to provide benefit by disrupting intraarticular adhesions and by cleansing away debris and inflammatory cytokines, said Dr. Arden of Southampton (England) University Hospitals NHS Trust.

The 150 study participants were randomized to intraarticular corticosteroid injections with 40 mg triamcinolone and 2 mL of 1% lidocaine or irrigation of the knee with 500-1,000 mL of normal saline.

At 2 weeks, pain scores had improved significantly from baseline, and there were no significant differences between treatment groups. The mean pain score for both groups was 243 at baseline, on a 0-500 scale. At 2 weeks scores fell to 168 in the steroid group and 155 in the irrigation group. At 26 weeks, significant pain relief was maintained only in the irrigation group (mean 173 vs. 232 for the steroid group). A similar pattern was seen for function at 26 weeks.

At baseline, 61% of patients had an effusion, and at 2 weeks' follow-up, there was little difference between treatment groups in this subset of patients.

By 26 weeks, however, only patients treated with tidal irrigation had significant improvement, and this was more marked in patients without an effusion.

Among patients without an effusion, the mean pain score for those treated with irrigation was 164 vs. 262 for patients treated with injections. Among patients with an effusion, the mean pain score for those treated with irrigation was 180 vs. 214 for patients treated with injections.

Patients' overall assessment of treatment was similar at 2 weeks' and 4 weeks' follow-up. But patients' self-assessments significantly favored tidal irrigation at 12 and 24 weeks, Dr. Arden said at the meeting, sponsored by the Osteoarthritis Research Society International.

Such findings in no way account for the placebo effect of the interventions, John D. Bradley, M.D., told this newspaper. Generally, "the more elaborate the intervention, the more potent the placebo effect."

COURTESY DR. NIGEL K. ARDEN

The controversial procedure is thought to disrupt intraarticular adhesions, and clear away debris and inflammatory cytokines.

In their investigation, Dr. Bradley and colleagues at Indiana University, Indianapolis, tracked 180 randomized subjects with knee OA for up to 12 months following randomization to tidal irrigation or a sham procedure, which involved placement of a needle through the soft tissue and down to, but not through, the joint capsule. Both groups received intraarticular anesthesia with bupivacaine.

The investigators concluded that after adjusting for baseline differences between groups, there were no differences between outcomes from the real and the sham procedures (Arthritis Rheum. 2002; 46:100-8).

Dr. Bradley noted that psychological factors and the subjects' guesses regarding the identity of their treatment correlated with their response to treatment. ■

Arthritis Pain Varies With Barometric Pressure and Outside Temperature

BY TIMOTHY F. KIRN
Sacramento Bureau

SAN ANTONIO — Physicians tend to be skeptical of arthritis patients' claims that they can feel bad weather coming on, but maybe they shouldn't be, Timothy E. McAlindon, M.D., said at the annual meeting of the American College of Rheumatology.

Findings from a study by Dr. McAlindon and his colleagues at Tufts-New England Medical Center, Boston, suggest that persons with knee osteoarthritis do have greater pain when there are changes in barometric pressure.

Previous studies probably have failed to document this phenomenon because they have not been able to be as precise in their weather measurements as this study, surmised Dr. McAlindon, chief of the division of rheumatology at Tufts.

The investigators collected data on 205 patients who took part in a 3-month trial of glucosamine that tracked participants using the Internet, which enabled them to be from a variety of regions within the U.S. The subjects lived in 41 different states; almost all of them experienced very different weather.

During the initial study, which found no positive effect from glucosamine, subjects completed Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index pain questionnaires every 2 weeks.

Corresponding weather data were collected from the National Oceanic and Atmospheric Administration stations, which in some instances were less than a mile from the subject's house, Dr. McAlindon said.

In all, the investigators identified more than 900 pain reports that correlated with weather. The data indicated that there was no significant association between pain scores and either the dew point or precipitation, which may be another reason previous studies have been confounded, he said.

It did, however, find a weak but consistent association between pain and temperature: Each degree (Fahrenheit) drop was associated with a one-degree increase in pain on the WOMAC scale. Similarly, the investigators found a strong association between pain and change in barometric pressure; this association was more pronounced with lower temperatures.

In keeping with the fact that patients tend to say they have greater pain before the weather changes, the pain-barometric pressure association did not occur so much with the drop in barometric pressure that accompanies a change in weather, but rather with the increase in barometric pressure that generally precedes a change in weather. Patients also often reported feeling better after a rain, which again is consistent with the fact that barometric pressure drops once a storm arrives, he added.

In a related report comparing 42 control subjects with 92 rheumatic disease patients, 80 of whom had osteoarthritis and 12 of whom had rheumatoid arthritis, José Vergés, M.D., of Bioiberica SA, a pharmaceutical company in Barcelona, Spain, found that patients with osteoarthritis, in particular, had more joint pain when atmospheric pressure was low.

Dr. Vergés concluded that "it may be possible to modulate pharmacological and nonpharmacological treatments for some osteoarthritic patients, depending on the predictable weather conditions in order to avoid, as much as possible, the disease-associated joint pain and functional incapacity" (Proc. West Pharmacol. Soc. 2004;47:134-6). ■

Glucosamine's Benefits Supported in 5-Year Study

BY TIMOTHY F. KIRN
Sacramento Bureau

SAN ANTONIO — Glucosamine appears superior to many other osteoarthritis agents in reducing pain and disability, according to the findings of a 5-year observational study.

Among 1,376 patients with osteoarthritis, those who took glucosamine consistently had Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index scores that were a mean 1.8 points lower than the scores of similar patients not taking glucosamine, Elizabeth Badley, Ph.D., reported at the annual meeting of the American College of Rheumatology.

At baseline, 9% of participants were using glucosamine, 42% were using NSAIDs, 62% were taking other pain medications, 2% were using steroid injections, 50% were using walking aids, and 92% were using lower-extremity devices.

Compared with glucosamine, none of the other treatments was associated with comparable improvements in WOMAC scores, which reflect disability and pain based on responses to a 24-item questionnaire, said Dr. Badley, director of the arthritis community research and evaluation unit at the University of Toronto.

All patients had knee or hip osteoarthritis, and their mean age at baseline was 72 years.

By the end of the 5-year period, 17% of patients were taking glucosamine. No dosage information was available.

"Whether it was the glucosamine or whether it was the people who take glucosamine, we don't know," Dr. Badley said in an interview. "But clearly, we need to investigate this finding further."

Some of the other factors associated with the lower WOMAC scores included younger age, higher level of education, and male gender. The men's WOMAC scores were on average 4 points lower than those of women with similar demographic profiles and treatments.

Dr. Badley reported no financial interest in glucosamine or in companies that manufacture the dietary supplement. ■