

## Tool Assesses Intermittent and Constant Osteoarthritis Pain

BY DAMIAN McNAMARA  
Miami Bureau

FORT LAUDERDALE, FLA. — A new 11-item measure of osteoarthritis pain developed with patient input was validated in a study of 100 people with x-ray-confirmed hip or knee osteoarthritis.

Investigators hope to improve on traditional assessments done with the pain subscale of the Western Ontario and McMaster Universities osteoarthritis index (WOMAC). “We realize it is not getting at the pain of osteoarthritis. It is only five questions relating to pain, and three of them have to do with pain during specific activities,” Dr. Gillian Hawker said in an interview during a poster session at the World Congress of Osteoarthritis.

The Measure of Intermittent and Constant Osteoarthritis Pain “will be much more precise. It really gets at the minutiae of living with pain,” said Dr. Hawker of the department of medicine, Women’s College Hospital, Toronto.

Development of this new instrument began with a request from the U.S. Food and Drug Administration. The agency was seeking a good outcome measure for studies to indicate when nonpharmacologic therapy has failed and drug treatment is warranted, said Dr. Hawker, who also is director of the institution’s osteoporosis research program and the Canadian osteoarthritis research program.

In clinical settings, physicians can use the measure to monitor response to different therapies—“a tool for the family doc to see if self-management or NSAIDs are making a difference.”

The instrument was developed with patient input. People with osteoarthritis are

able to discern two types of pain clearly—intermittent vs. constant pain—according to the focus groups.

“In the beginning, there is intermittent pain. Then it progresses to background pain combined with acute episodes.” Although both types of pain were important to patients, “it was this unpredictable, short-lived pain that curtailed activities,” Dr. Hawker said at the meeting, which was sponsored by the Osteoarthritis Research Society International (OARSI).

For this reason, Dr. Hawker and her associates developed the questionnaire to address both types of pain. “We put it into our osteoarthritis cohort in Toronto, and it looked pretty good.”

The researchers then tested the reliability and validity of the instrument with a telephone survey of 18 people with hip osteoarthritis and 82 with knee osteoarthritis. Researchers also asked three global hip/knee questions, and administered the WOMAC pain subscale, the symptoms subscales of both the Hip Disability and Osteoarthritis Outcome Score (HOOS) and the Knee Injury and Osteoarthritis Outcome Score (KOOS). This preliminary psychometric testing supports the validity and reliability of the Measure of Intermittent and Constant Osteoarthritis Pain, Dr. Hawker said. There was no correlation, however, with the limitation dimension of the Late Life Function and Disability Instrument.

Dr. Hawker and her associates plan to determine the cutoff values for pain and function leading to joint replacement.

The instrument will be online at [www.oarsi.org](http://www.oarsi.org). Copies in advance of publication can be obtained by e-mailing Dr. Hawker at [g.hawker@utoronto.ca](mailto:g.hawker@utoronto.ca). ■

## Total Knee Replacement Falls Short of Expectations

BY DAMIAN McNAMARA  
Miami Bureau

FORT LAUDERDALE, FLA. — The first 5-year follow-up study of pain and function after total knee replacement reveals a discrepancy between patients’ expectations and their actual ability to engage in sports and recreational activities postoperatively, according to a presentation at the World Congress on Osteoarthritis.

Although patients have realistic expectations about their ability to perform activities of daily life after knee surgery, many are disappointed with their diminished capacity for recreational activities or sports at the 5-year mark, said Dr. Anna K. Nilsson, a researcher at Halmstad (Sweden) Central Hospital.

Researchers typically follow patients for just 12 months and record only the number of prosthesis failures. However, Dr. Nilsson said, “The best result for patients is after 1 year. Then it declines.”

“I have done the same thing in hip replacement after 8 years with the same result,” she added. “Patients report maximum effect at 1 year.” Dr. Nilsson and her associates assessed 102 patients with primary osteoarthritis prior to total knee replacement and at 6 months, 1 year, and 5 years after surgery to determine their pain, function, and satisfaction. Using the Short Form-36 health survey and the Knee Injury and Osteoarthritis Outcome Score (KOOS), they evaluated pain, symptoms, activities of daily living, sport and recreation function, and knee-related quality of life domains. The researchers also asked additional questions about physical activi-

ty levels, expectations, and satisfaction.

At baseline, the mean age of participants was 71 years, 62% were women, and 6% had bilateral operations. A total of 21% of patients had a history of surgery on their contralateral knee.

Nine patients died before the 5-year follow-up. Of the remaining patients, 61% reported improved function in activities of daily living. For example, patients rated their ability to walk on a scale of 1 to 6, ranging from a need for crutches to walking indoors and up to unlimited walking on uneven terrain. “As many as 39% of these patients expected unlimited walking ability on uneven ground postoperatively,” Dr. Nilsson said. Patients reported their best walking ability at 1 year—28% could walk on uneven ground, whereas at 5 years, 21% could do so.

A total of 96% of patients expected their daily activity levels to be “better or much better,” and 72% expected those same results for their ability to engage in sports and recreation, Dr. Nilsson said at the meeting, sponsored by the Osteoarthritis Research Society International. “Patients’ expectations were generally higher than their postoperative abilities,” Dr. Nilsson noted.

The greatest disparity between expectations and abilities was seen in postoperative functionality for sports and recreation. For example, 41% expected to be able to dance or golf, but at 5 years only 14% reported being able to do so, she said.

Most patients, 93%, were generally satisfied with results at 5 years postoperatively, but only 33% were totally or quite satisfied with their level of ability for sports or recreation. ■

## High RA Disease Activity Is Tied to Greater Risk of Infection

BY NANCY WALSH  
New York Bureau

BOSTON — Increased rheumatoid arthritis disease activity is associated with a greater risk of developing infections, judging from the analysis of data from a large rheumatology database, Dr. Daniel E. Furst said at the annual meeting of the American College of Rheumatology.

In clinical trials and in clinical practice, infectious adverse events are common among patients with rheumatoid arthritis (RA), and the frequency may vary according to factors that include disease activity and drug therapies, said Dr. Furst, who is Carl M. Pearson Professor of Medicine and director of arthritis clinical research at the University of California, Los Angeles.

To investigate the relationship between infections and disease activity after adjustment for the effects of drug therapy, analyses on infection rates were done for RA patients from the Consortium of Rheumatology Researchers of North America (CORRONA) database who were on stable doses of disease-modifying antirheumatic drugs, biologic agents, or corticosteroids, according to Dr. Furst.

Two composite measures of disease activity were used in the analysis: the Clinical Disease Activity Index (CDAI) among the entire cohort of 3,782 patients, and the Disease Activity Score (DAS) 28 among the subset of 2,081 patients who also had erythrocyte sedimentation rate (ESR) values available within 2 weeks of the study visit.

The CDAI is a validated measure that is calculated as the sum of the swollen joint count, tender joint count, patient global assessment on a 10-cm visual analog scale (VAS), and evaluator global assessment also on a 10-cm VAS.

Initial analysis considered the influence of age, sex, education, race, body mass index, disease duration, insurance, work status, smoking history, and RA drug therapies.

Covariates that were found to be significantly associated with disease activity or infection then were analyzed using a generalized estimating equation for Poisson regression multivariate model with infection as the dependent variable, and incident rate ratios (IRR) were calculated.

A total of 1,160 infections were seen among the entire cohort during 3,653 patient-years. The IRR was found to be significant for disease activity on both CDAI and DAS28.

Age, female sex, and work status—disabled also were significant, though less so, on at least one measure. An IRR of 1.04 for CDAI represents a 4% increase in risk per 5-unit increase in CDAI score, Dr. Furst explained.

No other significant associations were seen, including current use of tumor necrosis factor blockers, disease-modifying antirheumatic drug, or corticosteroids.

“In this cohort of RA patients from the CORRONA

database who were on stable background medications, increased disease activity was associated with a higher probability of developing infection,” Dr. Furst wrote in a poster session. Other factors, such as age and sex, also may affect the incidence, although further investigation is needed to clarify this.

Higher disease activity might be associated with an increased risk of infection because of subtle dysfunction of the immune system, particularly the innate immune system, though this remains speculative at the moment, Dr. Furst said in an interview. “There is increasing information that there is a connection between the innate and adaptive immune systems in RA and it is the innate immune system that responds initially to infection.”

“The study suggests rheumatologists should be aggressive about controlling RA and that, contrary to previous dogma, aggressive treatment actually may decrease infections despite the broader use of therapies that theoretically could worsen infections because of their immunosuppressive effects,” he said. “This will require careful follow-up and management and a balancing act between the side effects of drugs and their positive effects.”

Dr. Furst said he has received research grants and consulting fees from numerous pharmaceutical firms. ■



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