

# Ultrasound Predicted Outcomes of Early Arthritis

BY SARA FREEMAN

FROM THE ANNUAL MEETING OF  
THE BRITISH SOCIETY FOR RHEUMATOLOGY

BIRMINGHAM, ENGLAND — Musculoskeletal ultrasound of multiple small joints is more accurate than traditional clinical assessment at predicting patient outcomes in very early arthritis, judging from the results of a pilot investigation.

“Musculoskeletal ultrasound is not routinely used for diagnosing arthritis [in the United Kingdom],” according to Dr. Andrew Filer, who noted that there have been few studies of the technique for the prediction of patient outcome.

“We know that if we treat patients early they do better, not only in the short term but also in the long term,” he added. “The trouble is, not all patients come through the door with a confirmed diagnosis of rheumatoid or psoriatic arthritis,” said Dr. Filer, who is senior lecturer at the University of Birmingham and consultant rheumatologist at Sandwell and West Birmingham Hospitals NHS Trust. He is also a member of the Rheumatology Research Group at the University of Birmingham.

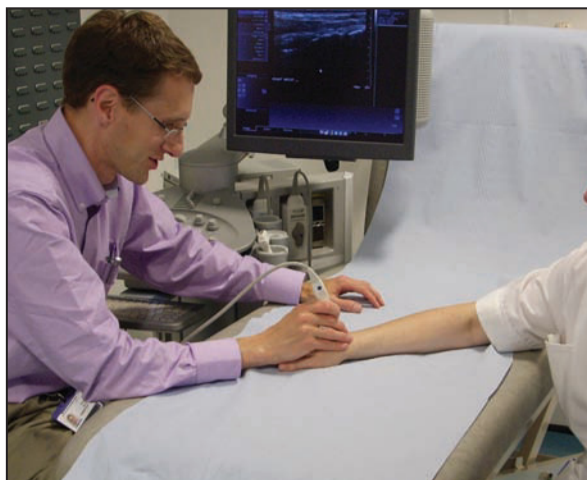
At the meeting, Dr. Filer reported the preliminary results of an ongoing study designed to determine if musculoskeletal ultrasound can help predict which patients with very early arthritis actually develop rheumatoid arthritis (RA) or related conditions.

The researchers recruited 58 patients who had inflammatory joint symptoms of 3 months or less duration and clinically apparent inflammation of at least one joint. Half of the cohort (50%, 29) had RA, with 48% (14) having detectable anti-citrullinated peptide antibodies. Sixteen (27.6%) patients had resolving arthritis, which was mostly unclassified, and 13 (22.4%) patients had persistent conditions other than RA.

The non-RA group included five patients with psoriatic arthritis, one with reactive arthritis, and two with systemic lupus erythematosus. Disease could not be classified in 5 patients.

Patients were assessed clinically before undergoing musculoskeletal ultrasound within 24 hours, and followed up prospectively for 18 months. Baseline and follow-up clinical assessments included 68 tender and 66 swollen joint counts; 28-joint disease activity score; serological data; and conventional radiography of the hands and feet.

An ultrasonographer, who was unaware of the clin-



Dr. Andrew Filer demonstrates ultrasound assessment of the wrist and metacarpophalangeal region.

ical findings, systematically assessed a total of 50 joints using four-point semi-quantitative scales to note the presence of erosions.

Musculoskeletal ultrasound detected significantly

## VITALS

**Major Finding:** Musculoskeletal ultrasound of the wrist, as well as the metacarpophalangeal and metatarsophalangeal regions, showed the highest predictive value in very early arthritis patients.

**Data Source:** A prospective study of 58 patients with very early arthritis.

**Disclosures:** Dr. Filer had no conflicts of interest in relation to the study. The study was funded by Arthritis Research UK and the AutoCure Consortium.

more joint involvement than did clinical examination. It also detected more clinically silent involvement of the wrist, elbow, knee, ankle, and metatarsophalangeal (MTP) region.

Sensitivity and specificity analyses showed that ultrasound images of the wrist, metacarpophalangeal (MCP) region, and MTP region were the best predictors of joint involvement, improving upon clinical predictive models for RA. In contrast, imaging of the large joints was not useful for predicting joint involvement. ■

## Patterns of Very Early Changes Must Be Confirmed

### MY TAKE

The study provides an indication that systematic evaluation of joints by ultrasound in patients presenting with very early undifferentiated arthritis may be a useful predictor of future diagnosis of rheumatoid arthritis. Ultrasound may detect involvement in more joints than are detected on clinical examination, and it may detect early erosions with greater sensitivity than conventional radiography. Especially in patients who do not have anti-citrullinated peptide antibodies, the presence of polyarthritis and ero-



sions on ultrasound appears to herald an eventual diagnosis of RA even when patients who do not appear to have polyarthritis on clinical examination.

This approach has promise, but examination of 50 joints is not likely to be efficiently done or reimbursable in routine clinical practice.

Further work may yield a profile of specific target joints that may have highest sensitivity and predictability for eventual development of RA when examined by ultrasound, or determine whether all joints would need to be evaluated. Studies of conven-

tional radiography have failed to reveal a consistent pattern or joints that could be consistently excluded. MRI studies of the hands have suggested that involvement of specific joints in the wrists, for example, might best discriminate the eventual diagnosis of RA early in the disease. Such studies are needed to better define the role of ultrasound in assessing patients with early undifferentiated inflammatory arthritis.

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# Data Do Not Justify Use of CAM in Rheumatic Diseases

BY SARA FREEMAN

FROM THE ANNUAL MEETING OF THE BRITISH  
SOCIETY OF RHEUMATOLOGY

BIRMINGHAM, ENGLAND — The use of complementary or alternative medicines in rheumatoid arthritis, osteoarthritis, and fibromyalgia is not supported by credible evidence, according to an expert review of available data.

The review, commissioned by Arthritis Research UK for patients, shows that although there is some consistent suggestion of a benefit of fish oil in RA and capsaicin gel in OA, there is no such support for the use of any oral or topical complementary or alternative medicines (CAMs) in fibromyalgia.

“Complementary medicines are popular, but considering particularly those taken orally or applied topically, we have relatively little information for most compounds on efficacy,” Dr. Gary

J. MacFarlane said at the meeting.

“Both positive and negative conclusions are based upon relatively little amounts of evidence,” added Dr. MacFarlane, professor of epidemiology at the University of Aberdeen (Scotland) and head of the Arthritis Research UK working group on complementary and alternative medicines.

The working group consisted of eight expert advisers who looked at the available evidence on 41 CAMs for which there was some evidence from randomized controlled trials. There were a further 38 compounds commonly used by patients for which no suitable trial evidence could be found.

The aim of the review was to determine both the efficacy and safety of the compounds to give patients some idea of which CAMs worked and which probably did not, Dr. MacFarlane said. If a rigid Cochrane Review had been performed,

he conceded, most of the studies that were assessed would probably have been excluded. “However, patients were saying to us, actually we want you to say something, not just that there is not enough evidence,” Dr. MacFarlane explained.

Efficacy was graded on a 5-level scale, with level 1 signifying that there is no overall evidence that the compound worked, and level 5 meaning there was some consistent evidence across several studies.

The only compounds at level 5 were fish oil for RA and capsaicin gel for OA.

Glucosamine sulfate for OA was graded at level 3, meaning that there was some promising evidence, despite its not being recommended for the treatment of OA in the 2008 OA clinical guidelines of the U.K. National Institute for Health and Clinical Excellence.

Out of four CAMs used for fibromyalgia, none was graded higher than a level 2.

Dr. MacFarlane said that in his view, “fibromyalgia is a condition that really doesn’t have any very effective therapy.” Although there have been a small number of positive CAM studies in fibromyalgia, he added, their lack of replication means that further, higher-quality trials are necessary to determine whether these initial findings can be supported by a larger evidence base.

The working group’s findings on the use of CAM in fibromyalgia have recently been published (*Rheumatology* 2010;49:1063-8), and publications on the use of CAM in OA and RA will be forthcoming in the coming months.

“Most patients consider complementary medicines as safe,” Dr. MacFarlane observed, adding that there are important safety issues to consider, such as the quality of the preparation, contraindications, and interactions with conventionally prescribed medicines. ■