# Ultrasound-defined tenosynovitis identified as strong predictor of early RA

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The results of a study presented today at the European League Against Rheumatism Annual Congress (EULAR 2015) Press Conference showed that ultrasound diagnosis of tenosynovitis (inflammation of the tendon sheath) was superior to clinical symptoms and signs in the prediction of early Rheumatoid Arthritis (RA). This is the first study to show that ultrasound-defined tenosynovitis is a strong predictor of early RA. By identifying the need for treatment before the onset of symptoms and signs, this procedure has the potential to improve clinical outcomes.

"There is a wealth of evidence that the clinical signs and symptoms of RA may be preceded by a preclinical phase lasting several years, and this preclinical phase is likely to represent an important therapeutic window within which clinical outcomes can be dramatically improved, " explained Dr. Andrew Filer of the Rheumatology Research Group, University of Birmingham, UK. "We therefore set out to explore the ability of ultrasound-defined tenosynovitis to predict very early RA during the earliest undifferentiated phase of disease," Dr. Filer said.

Results showed that ultrasound diagnosis of tenosynovitis was superior to clinical symptoms and signs, such as early morning stiffness, symmetrical arthritis and hand joint arthritis in predicting early RA. Specifically scanning of the hand flexor tendons and Extensor Carpi Ulnaris tendons provided the optimal minimal ultrasound data to predict early RA.

The EULAR Study Group for Risk Factors for Rheumatoid Arthritis

(RA) had previously recommended the need to identify new biomarkers for the prediction of RA in early undifferentiated disease.

107 patients with clinically apparent synovitis involving at least one joint, and symptom duration of three months or less, underwent clinical and multiple tendon ultrasound assessments. Outcomes were determined after 18 months using 1987 American College of Rheumatology criteria.

A blinded ultrasound assessment was carried out on each patient to determine the presence of tenosynovitis at 16 tendon regions: bilateral fingers (extensor and flexor compartments), wrists (extensor and flexor compartments), shoulders (biceps tendon), and ankles (anterior extensors, peroneals, and posterior tibialis). The definition of tenosynovitis using grey scale and Power Doppler readings was based on the OMERACT Ultrasound Task Force recommendations.4

Provided by European League Against Rheumatism