Early RA patients have impaired myocardial & vascular function at early stage of disease

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The results of a study presented today at the European League Against Rheumatism Annual Congress (EULAR 2015) demonstrated for the first time that treatment-naive patients with early Rheumatoid Arthritis (RA) have myocardial and vascular abnormalities, even at the earliest stage of their disease. These findings suggest that patients may develop early cardiomyopathy (disease of the heart muscle), increasing their risk of cardiovascular morbidity and mortality from the time of their diagnosis. Cardiomyopathy is a serious condition and a leading cause of hospitalisation worldwide.

Patients with RA have an excess risk of heart failure and associated mortality compared with the general population. Previous cardiac studies of patients with established RA have demonstrated left ventricular (LV) abnormalities associated with the development of heart failure and CV morbidity and mortality. This is the first study to use cardiac MRI to identify the presence of changes in myocardial and vascular function in treatment-naïve early RA.

"We've seen that, even in patients with early RA, changes suggestive of cardiomyopathy are evident, including reduced vascular function, ventricular volumes, and a trend towards a change in LV geometry," said senior author Dr. Maya Buch of the Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds. "Further investigation will now be required to clarify the natural history of these changes, their clinical implications, and most importantly the scope to modify CV outcomes with effective RA therapy," she added.

EULAR guidelines recommend that the increased CV risk for RA patients is managed by involving a cardiovascular specialist, and with aggressive suppression of the inflammatory process using one or more DMARDs .

66 patients with treatment-naïve early RA fulfilling ACR /EULAR classification criteria and with no previous history of CV disease underwent cardiac MRI. All patients had experienced RA symptoms for less than 1 year, were DMARD treatment-naïve, and had a minimum disease activity score (DAS28) of at least 3.2. Thirty healthy controls were matched by age, sex and blood pressure for comparison.

Aortic stiffness is considered to be an independent predictor of cardiovascular mortality and is measured by aortic distensibility, the ability of the artery to expand. Distensibility was significantly reduced in the early RA patients compared to healthy controls (p=0.001), with other measures of arterial stiffness showing similar significant differences. Left ventricular and right ventricular end-systolic and end-diastolic volumes were all significantly lower in the group of early RA patients vs. healthy controls.

Provided by European League Against Rheumatism