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Blood test can help predict RA treatment response

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The results of a study presented today at the European League Against Rheumatism Annual Congress (EULAR 2016) showed that the presence of an antibody (anti-CPP) in the bloodstream of patients with rheumatoid arthritis (RA) correlates with response to different drug treatments. This finding is another important step towards the introduction of personalised medicine in rheumatology, which is already having a major impact in cancer treatment.

Being positive for the anti-CCP antibody was associated with a better response to the T cell co-stimulation blocker abatacept however, this antibody status was not correlated with the effectiveness of a tumour necrosis factor-inhibitor (TNFi).

Anti-CCP positive patients have a more severe form of disease; some studies have shown that both anti-CCP and RF antibodies are independent predictors of disease progression seen on X-rays, others have suggested only anti-CCP antibodies are an independent predictor. In addition, these antibody-positive patients have been shown to benefit less from treatment with a combination of non-biological DMARDs and steroids than anti-CCP antibody-negative patients.2

"These findings are exciting as anti-CCP antibodies are a marker of disease severity and detectable early in the course of the disease. A better understanding of the relationship between anti-CCP antibodies and treatment response has the potential to advance patient care," said Dr Leslie R. Harrold of the University of Massachusetts, Worcester,

MA, US and Corrona, LLC Southborough, MA, US. "Specifically, patients with RA can spend years trying different treatments until their disease is properly controlled. Therefore, identifying subsets of patients likely to respond to a specific drug or class of drugs is so critical," she explained.

"Our findings have shown that the effects of TNF inhibitors are not dependent on the ACPA antibody status. However, the outcomes of patients receiving the T cell co-stimulation modulator abatacept were dependent on ACPA status with better responses observed in those who were positive for anti-CCP antibodies, compared to those who didn't have these antibodies," Dr Harrold concluded.

This study evaluated the impact of anti-CCP and RF antibodies on treatment response separately in patients initiating abatacept or TNFi. For the 566 patients who initiated abatacept, double positive status was associated with a significantly greater response compared with double negative status on all outcomes (disease activity measures and achievement of remission). Additionally, single positive status was associated with a greater likelihood of remission as compared with double negative status for abatacept users. Conversely, there were no significant differences in responses between anti-CCP/RF groups in the 1,715 TNFi users. When the study team investigated the relationship with anti-CCP and RF separately, the responses shown were driven by seropositivity to anti-CCP antibodies alone and that RF was not an independent factor influencing response.

The investigators concluded that the differential effect of anti-CCP antibody status on treatment response may be due to differences in the mechanism of action between the treatment agents.

Provided by European League Against Rheumatism