

# Smoking negatively affects response to anti-TNF treatment in patients with rheumatoid arthritis

June 8 2012

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A new study presented today at EULAR 2012, the Annual Congress of the European League Against Rheumatism, reinforces current thinking that smoking negatively affects treatment response in rheumatoid arthritis (RA) patients treated with anti-tumour necrosis factor (anti-TNF) drugs.

This American study, the largest of its kind, followed 2,811 treatment naïve patients initiated onto anti-TNF therapy. Of the study group, 19% (n=521) were smokers and 81% (n=2,290) were non-smokers. Smokers had significantly higher scores on the Clinical Disease Activity Index (CDAI)\* and DAS28\*\* at six months than non-smokers. There was no significant difference in the odds of smokers versus non-smokers in achieving at least moderate EULAR\*\*\* response at six months and no difference in the change of mHAQ\*\*\*\*.

Professor Ozlem Pala from the University of Miami Miller School of Medicine, USA and lead author of the study said: "There have been several studies which have investigated factors affecting response to anti-TNFs, but this is the first study to investigate response factors in such a large cohort of people. Being able to better predict response rates to treatment means that rheumatologists can discuss the findings with their patients who smoke and strongly encourage them to quit. This may also motivate them to develop successful strategies for smoking cessation in order to maximize effect of this expensive group of medications and

potentially increase quality of life for these patients."

Disease activity measures at baseline were similar for DAS28 (approximately 3.7, standard deviation [SD]: 1.6) for both groups but higher for CDAI (17.1, SD: 13.8 vs 15.5, SD: 12.9) and mHAQ (0.5, SD: 0.5 vs 0.4, SD: 0.4) in smokers and non-smokers, respectively.

Patients were taken from the Consortium of Rheumatology Researchers of North America (CORRONA) registry. Mean duration of follow-up per patient was 3.4 years (SD: 2.6). Patients enrolled in the study were followed for up to 10.2 years. Biologic naïve patients were followed for six months after initiation of an anti-TNF and outcomes of interest included DAS28, CDAI, mHAQ and EULAR response criteria after six months on therapy.

**More information:** Abstract Number: SAT0147

\*CDAI (Clinical activity disease index) is an index which measures disease activity in RA. The CDAI is the only composite index that does not incorporate an acute phase response and can therefore be used to conduct a disease activity evaluation essentially anytime and anywhere.

\*\*DAS28 (Disease Activity Score) is an index used by physicians to measure how active an individual's RA is. It assesses number of tender and swollen joints (out of a total of 28), the erythrocyte sedimentation rate (ESR, a blood marker of inflammation), and the patient's 'global assessment of global health'. A higher score indicates more active disease.

\*\*\*EULAR response criteria were developed to measure individual response in clinical trials. The EULAR response criteria classify individual patients as non-, moderate, or good responders, dependent on the extent of change and the level of disease activity reached.

\*\*\*\*mHAQ (Modified Health Assessment Questionnaire) is a modified version of the HAQ, a patient questionnaire that measures function and health-related quality of life through measuring a patient's ability to perform everyday tasks.

Provided by European League Against Rheumatism

Citation: Smoking negatively affects response to anti-TNF treatment in patients with rheumatoid arthritis (2012, June 8) retrieved 18 April 2024 from

<https://medicalxpress.com/news/2012-06-negatively-affects-response-anti-tnf-treatment.html>

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