adiponectin. We also investigated whether these biomarkers correlated with various demographic, clinical and laboratory markers.

**Methods** We treated 37 RA patients with either etanercept (ETN) or certolizumab pegol (CZP) in a 12 month follow-up study. Assessments were performed at baseline, and 3, 6 and 12 months after treatment initiation. Serum chemerin and adiponectin concentrations were measured by commercially available ELISA kits (R and D System, MN and USA). PON1 and arylesterase activities were measured by spectrophotometry. In addition, age, disease duration, disease activity (DAS28), CRP, anti-CCP, IgM rheumatoid factor and plasma lipid levels were also assessed. Arterial flow-mediated vasodilation (FMD), carotid intima-media thickness (cIMT) and arterial pulse-wave velocity (PWV) were assessed by ultrasound.

**Results** Anti-TNF treatment resulted in a significant decrease in the levels of chemerin (p<0.001) and adiponectin (p<0.007) after 12 months. There were no significant changes in the levels of other metabolic biomarkers. We found the following correlations between the baseline values: the PON1 levels correlated with the age of patients (R=0.466, p=0.004). The adiponectin correlated with the disease activity (R=0.385, p=0.030), HDL-C (R=0.417, p=0.012) and the triglyceride levels (R=0.481, p=0.003). The total cholesterol correlated with the PWV (R=0.449, p=0.021) and the levels of the LDL-C (R=0.911, p<0.001). The baseline triglyceride correlated with the IgM rheumatoid factor (R=0.343, p=0.021); and the levels of LDL-C correlated with the PWV values (R=0.444, p=0.023).

**Conclusions** Metabolic factors, such as certain adipokines, PON1 and arylesterase may play a role in oxidative stress and atherosclerosis associated with RA. Anti-TNF treatment may affect adipokine levels.

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