Table 1. Joint involvement associated with average grip force (% of expected value), multivariate linear regression

	Unstandardized β	95 % CI
Right hand		
Swollen Wrist	-11.0	-17.5 to -4.5
Tender MCP IV	-15.6	-25.2 to -6.0
Tender PIP V	-2.3	-12.0 to 7.3
Tender Elbow	-11.7	-22.1 to -1.3
Left hand		
Swollen Wrist	-14.3	-20.4 to -7.6
Swollen MCP I	-7.6	-14.6 to -0.6
Swollen MCP V	-11.7	-21.9 to -1.5
Swollen PIP I	-0.8	-9.2 to 7.5

MCP: Metacarpal phalangeal joint; PIP: Proximal interphalangeal joint

Conclusion: Involvement of several different joints in the upper extremity contributes to impaired hand function. Clinical synovitis of the wrist was associated with reduced grip force in both hands. In the left hand, arthritis of the thumb had a major impact on grip force. In general, MCP involvement was found to be more important for the grip than PIP involvement.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.2837

POS0558 STATE OF ADIPOCYTOKINES IN PATIENTS WITH RHEUMATOID ARTHRITIS WITH SUBCLINICAL ATHEROSCLEROSIS

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Background: The causes of accelerated atherosclerosis in rheumatoid arthritis (RA) are not completely understood [1]. Therefore, there is a need to identify new biomarkers of increased cardiovascular risk in RA.

Objectives: To establish the relationship of adipocytokines (adiponectin and leptin) with metabolic and inflammatory markers of subclinical atherosclerosis in RA patients.

Methods: The study included 88 women with RA according to the ACR (American College of Rheumatology)/EULAR (European League Against Rheumatism) criteria, 2010 [2] who visited the adaptation therapy clinic of Orenburg State Medical University. The mean±SD age was 46.43±8.5 years and the mean±SD disease duration was 8.21±5.56 years.

We evaluated the following laboratory parameters in all patients: erythrocyte sedimentation rate (ESR), total cholesterol, triglycerides (TAG), high-density lipoproteins (HDL), low-density lipoproteins (LDL) and C-reactive protein (CRP). Serum concentrations of adiponectin, leptin, rheumatoid factor (RF), tumor necrosis factor- α (TNF- α), and interleukin-17 (IL-17) were determined by enzyme-linked immunosorbent assay (ELISA).

We carried out ultrasound (US) duplex scanning of the carotid arteries by the device "Philips Epiq 7" with linear transducer with frequency of 4-18 MHz with the division into 2 groups of patients: group I consisted of 44 women with US signs of subclinical atherosclerosis, group II – 44 women without these signs. The control group included 30 women without inflammatory joint diseases and US signs of subclinical atherosclerosis and similar in gender, age and body mass index (BMI) to RA patients.

The program STATISTICA, 12.0 was used for statistical analysis.

Results: The serum adiponectin level was significantly higher in RA patients compared to the control group ($p<0.0001$): 40.88±13.60 ng/ml versus 22.75±11.27 ng/ml. The level of leptin in the blood serum of women with RA and healthy individuals was approximately the same and amounted to 18.07±14.02 ng/ml and 16.60±11.45 ng/ml respectively. When comparing the levels of adipocytokines in RA patients, the predominance of concentrations of both adipocytokines in patients with paraclinical atherosclerosis were noted. The adiponectin concentration was 46.08±14.44 ng/ml versus 35.70±10.51 ng/ml ($p<0.001$). The leptin level was 26.40±20.06 ng/ml versus 14.96±16.62 ng/ml ($p<0.01$).

Correlation analysis showed a negative relationship between adiponectin levels and metabolic markers of atherosclerosis: BMI ($r=-0.52$; $p<0.05$), neck circumference (NC) ($r=-0.50$; $p<0.05$), levels of LDL ($r=-0.77$; $p<0.001$) and TAG ($r=-0.59$; $p<0.05$) as well as proinflammatory cytokines: TNF- α ($r=-0.48$; $p<0.05$), IL-17 ($r=-0.60$; $p<0.01$) in patients of both groups. The increase in adiponectin concentration in group II patients was associated with the duration of administration of methotrexate ($r=0.49$; $p<0.05$) and glucocorticosteroids ($r=0.71$; $p<0.001$). Direct correlations were found between the level of leptin and BMI ($r=0.48$; $p<0.05$), NC ($r=0.48$; $p<0.05$), LDL ($r=0.54$; $p<0.05$) and TAG ($r=0.45$; $p<0.05$), CRP ($r=0.49$; $p<0.05$) and IL-17 ($r=0.52$; $p<0.05$) in group I patients.

Conclusion: There is a significant increase in the production of adipocytokines in RA with subclinical atherosclerosis. Correlations of levels of adipocytokines with metabolic and inflammatory markers of atherosclerosis, on the one hand,

indicate the influence of adipose tissue on systemic inflammation and, on the other hand, confirm the involvement of proinflammatory cytokines in the development of atherosclerotic vascular damage in patients with RA.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.2853

POS0559 SPECKLE TRACKING BETTER DETECTS SUBCLINICAL MYOCARDIAL DYSFUNCTION IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: The risk of developing cardiovascular complications and death in rheumatoid arthritis (RA) is 50% higher than in the total population. These clinical events depend from risk factors for cardiovascular diseases, chronic inflammation and inflammatory myocardial infiltration. A new method for detecting early myocardial dysfunction is echocardiography using speckle tracking echocardiography.

Objectives: to determine the frequency of myocardial dysfunction (lower global longitudinal epicardial strain of left ventricular (LV), diastolic dysfunction of left ventricle (LVDD)) using standard and novel echocardiographic methods in patients (pts) with RA prior to therapy with bDMARDs, examine its relationship with markers of inflammation.

Methods: a total of 28 pts with a valid diagnosis of RA (ACR/EULAR, 2010): 23 f (82%) / 5 m (18%) were included, median (Me) age - 56 [interquartile range (IR) 34;65] years, Me RA duration-14.5 [IR 7;87] months; all pts with RA demonstrated a high disease activity (Me DAS28 6.06, [IR 5.4;6.6]), seropositive for IgM RF (88%) and/or ACCP (84%) without any experience of administration of bDMARDs. The control group consisted of 10 healthy subjects, which were matched by sex and age. All pts were assessed for traditional risk factors for cardiovascular disease (ESC guidelines, 2011), echocardiography, tissue Doppler imaging, and the speckle tracking assessment of left ventricle longitudinal strain. DD was allocated according to the ESC guidelines for the diagnosis and treatment of heart failure (2018). Arterial hypertension was detected in 5 pts with RA.

Results: In pts with RA LVDD was more often detected (8 (31%) vs 0%, $p=0.05$) than in controls. The values of E LV (0.77 [0.62;0.94] ms vs 1.25 [1.03;1.51] ms, $p=0.0001$) were lower than in control group. Speckle-tracking method detected lower global longitudinal epicardial strain [-16.5 [-18.9; -13.6]° vs -21.58 [-22.1; -20.4]°, $p=0.0001$). 17(61%) RA pts showed a decrease global longitudinal epicardial strain. There were no between-group differences in left ventricular ejection fraction, LV sizes, LV myocardial mass index in RA pts with controls. There were correlations between the global longitudinal epicardial strain and DAS28 ($r=0.9$, $p<0.02$), tender joint score ($r=0.6$, $p<0.02$), radiological stage ($r=0.6$, $p<0.008$); the presence of systemic manifestations ($r=0.5$, $p<0.03$).

Conclusion: In pts with RA frequently (61%) were detected lower global longitudinal epicardial strain, which are associated with a high activity of the inflammatory process. Speckle-tracking echocardiography is better at detecting early myocardial dysfunction than tissue Doppler.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.2870

POS0560 CO-MORBIDITIES MAY NOT CHANGE TREATMENT CHARACTERISTICS OF THE RHEUMATOID ARTHRITIS PATIENTS

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Background: Several co-morbidities may usually accompany rheumatoid arthritis (RA)(1). These can have direct or indirect implications for the severity of rheumatoid arthritis, the doctors' decision of disease-modifying treatment, and the functional disability of RA patients.

Objectives: It has been previously shown that various co-morbidities can have negative effects on the functional status, quality of life and life expectancy of RA patients individually (2). Here, we evaluated the effect of weight of all co-morbidities on treatment of RA patients and functional disability. Our hypothesis "The functional status of RA patients with moderate and severe co-morbidities is impaired compared to patients with mild co-morbidities, and the treatment characteristics of RA are different between these groups"