responders ($p < 0.001$ and $p < 0.001$ respectively), nevertheless, non-responders showed a rising trend ($p = 0.086$ and $p = 0.051$ respectively). Binary logistic regression model revealed that baseline serum sICAM-1 levels had a positive effect on response to therapy. ROC curve analysis for predictive ability of baseline serum sICAM-1 showed an area under the curve (AUC) of 0.775 ($p = 0.010$).

Conclusions: Serum sICAM-1 and CXCL13 levels were elevated in RA patients, and they were higher in seropositive patients than in seronegative patients. Elevated baseline serum sICAM-1 levels were associated with favorable response to TNF- α inhibitor therapy. The decrease of serum sICAM-1 levels after treatment in responders was consistent with their therapeutic response. Thus, baseline serum sICAM-1 could be a predictive biomarker for TNF- α inhibitor therapy in RA patients. There was a lack of reliable evidence that baseline serum CXCL13 had predictive ability, possibly due to different mechanisms of action or small sample size.

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Rheumatoid arthritis - comorbidity and clinical aspects

SAT0117 HIGH URIC ACID AS A RISK FACTOR FOR CARDIOVASCULAR DISEASES IN RHEUMATOID ARTHRITIS PATIENTS

A. Al-Herz¹, A. Aldeji¹, K. Saleh², A. Al-Awadhi¹, W. Al-Kandari², E. Hasan¹, A. Ghanem³, M. Hussain¹, E. Nahar³, F. Abutiban⁴, A. Alenizi⁴, Y. Ali³, H. Alhajeri⁵, S. Hayat⁶, A. Khadrawy², A. Faza², K. Mokaddem¹, A. Zaman³, G. Mazloum⁵, Y. Bartella¹, S. Hamed¹, R. Alsouk⁴, A. Al-Saber⁶. ¹Rheumatology, Amiri Hospital, Kuwait; ²Farwania Hospital, Farwania; ³Mubarak Al-Kabeer Hospital, Hawalli; ⁴Jahra Hospital, Jahra; ⁵Mubarak Al-Kabeer Hospital; ⁶Department of Mathematics, Kuwait Technical College, Kuwait, Kuwait

Background: Rheumatoid arthritis (RA) patients have an increased risk of cardiovascular diseases (CVD). It is unclear whether an elevated serum uric acid (UA) further increases that risk.

Objectives: We study CVD and their risk factors in association with UA in RA patients.

Methods: Adult patients who satisfied the ACR classification criteria for RA from The Kuwait Registry for Rheumatic Diseases (KRRD) from four major hospitals were evaluated from February 2013 through May 2017. Patients with recorded UA were identified and CVD and their risk factors were studied in those patients. To optimize classifier number and prediction accuracy, hierarchical cluster analyses for multiple factors were performed, which indicated nine possible independent CVD risk factors. A binary logistic regression was conducted to examine their significant association with CVD and the independence of UA as a risk factor.

Results: A total of 564 RA patients with available UA were identified, 353 (62.6%) females. Mean age was 50.8 ± 11.5 years and disease duration 10.5 ± 2.9 years. Mean UA was 271 ± 78 $\mu\text{mol/L}$. Of those patients, 31 (5.5%) were reported to have CVD. UA was significantly correlated to the presence of CVD ($\chi^2 = 6.49$, $p = 0.011$). Logistic regression model indicated a 10% increase of CVD with every 10 $\mu\text{mol/L}$ increase in UA. A correlation matrix between UA and other risk factors showed a significant association between high uric acid and a younger age at RA diagnosis ($r = -0.262$), hyperlipidemia ($r = 0.191$) and diabetes mellitus ($r = 0.244$).

Conclusions: Our study suggests that UA may be an independent risk factor for CVD and is associated with the presence of other risk factors. UA should be measured and carefully approached in RA patients.

Disclosure of Interest: None declared

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SAT0118 ASSOCIATION OF RENIN-ANGIOTENSIN SYSTEM IMBALANCE WITH SUBCLINICAL ATHEROSCLEROSIS AND DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS

N. F. T. Braz¹, M. R. C. Pinto², É. L. M. Vieira¹, A. L. Teixeira¹, A. C. S. Silva¹, A. M. Kakehasi³. ¹Interdisciplinary Laboratory of Medical Investigation, Federal University Of Minas Gerais; ²Rheumatology Unit, Clinic Hospital; ³Locomotor System Department, Federal University of Minas Gerais, Belo Horizonte, Brazil

Background: Rheumatoid arthritis (RA) is an independent risk factor for cardiovascular disease (CVD). The renin-angiotensin system (RAS) is a hormonal cascade with important role in hydroelectrolytic homeostasis, blood pressure and regulation of cardiovascular remodeling. Angiotensin II (Ang II) acts as a proinflammatory mediator (1).

Objectives: To investigate the association of serum levels of RAS components with the presence of subclinical atherosclerosis using carotid ultrasonography in women with RA.

Methods: Women with RA according to ACR/EULAR 2010 or ACR 1987 criteria and without clinical ischemic CVD were included. Disease activity was assessed using the DAS28. The presence of atherosclerotic plaques and the thickness of the medium-intimal complex (EMI) of the arterial wall in the common carotid artery were evaluated by ultrasonography. Serum levels of angiotensin (Ang) II, Ang-(1-7), angiotensin converting enzyme (ECA) and ECA II were determined by enzyme immunoassay.

Results: 50 women with RA, mean age 48.2 years (± 7.32), mean duration of disease of 15.35 years (± 8.56), DAS28 of 4.02 (± 1.41) and CDAI of 14.23 (± 11.53) were included. Seven patients presented altered EMI, eight had atherosclerotic plaque. The prevalence of risk factors for CVD was: 12% of smoking, 12% of family history of premature CVD, 46% of arterial hypertension, 10% of diabetes, 62% of dyslipidemia, 94% of abdominal obesity and 46% of metabolic syndrome. The control group consisted of 30 healthy women, mean age of 46.3 years (± 7.72). RA patients had a higher serum concentration of Ang II ($p < 0.01$), Ang-(1-7) ($p < 0.01$), and ACE ($p < 0.01$) than the control group (table 1). There was a negative correlation between ECA II and EMI ($p = 0.041$, $\rho = -0.290$). EMI correlated positively with age ($p = 0.022$, $\rho = 0.324$), disease duration ($p = 0.012$, $\rho = 0.315$) and overall Framingham risk ($p = 0.008$, $\rho = 0.368$) and Ang II correlated positively with DAS28 ($p = 0.034$, $\rho = 0.301$) and CDAI ($p = 0.040$, $\rho = 0.291$).

Table 1. Comparison between plasma concentrations of SRA biomarkers in patients with rheumatoid arthritis (RA) and the control group (CG).

RAS Biomarkers (pg/mL)	RA (n = 50) Mean $\pm$ SD	CG (n = 30) Mean $\pm$ SD	p value
Ang II	407.60 $\pm$ 278.68	198.77 $\pm$ 105.48	<0.01 ^a
Ang-(1-7)	162.06 $\pm$ 234.58	36.94 $\pm$ 61.36	<0.01 ^a
ACE	266.21 $\pm$ 103.64	222.69 $\pm$ 147.61	<0.01 ^a
ACE II	71.86 $\pm$ 27.32	153.57 $\pm$ 225.04	0.17 ^a

RA = rheumatoid arthritis; CG = control group; SD = standard deviation; Ang = angiotensin, ACE = angiotensin converting enzyme. ^aMann-Whitney Test.

Conclusions: Imbalance of RAS components, especially Ang II and ECA II, may be associated to CVD in RA patients. Ultrasonography of the carotid arteries can identify patients that could benefit from ECA blockade.

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SAT0119 PHYSICAL ACTIVITY IN TUNISIAN ADULTS WITH RHEUMATOID ARTHRITIS

A. feki¹, A. fazaa¹, S. miladi¹, K. ouenniche¹, S. kassab¹, S. chekili¹, K. ben abdelghani¹, A. laatar¹. ¹Rheumatology, Mongi Slim Hospital - La Marsa, Tunis, Tunisia

Background: Physical activity (PA) is associated with multiple health-related benefits among the general population and adults with chronic diseases like