scores in RA patients treated with TCZ. PGA was the major limiting factor for not achieving ACR/EULAR Boolean remission criteria, and in this sub-group of patients the same positive correlation between higher PGA and fatigue scores was found, not present in the rest of the cohort. These results enhance the influence of fatigue in patients' perspectives of disease and reinforce the limitations of using PGA to define RA activity and remission. Furthermore, considering the influence of TCZ in fatigue mechanisms, by blocking IL-6 receptor, we still found high fatigue scores in this cohort, which can enhance the complex physiopathology of fatigue in chronic inflammatory diseases, and the role of several other cytokines (IL-1, TNF-α). This effect and comparison with RA patients treated with anti-TNF-α can be explored further in larger prospective studies.

Disclosure of Interest: None declared

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AB0239 DKK1 IS NOT ASSOCIATED WITH INFLAMMATORY ACTIVITY INDEXES IN RHEUMATOID ARTHRITIS, BUT WITH FUNCTIONAL DISABILITY RELATED TO THE LONG EVOLUTION OF THE DISEASE

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Background: Rheumatoid arthritis (RA) is a systemic chronic inflammatory disease characterized by joint destruction, deformity, lower functional status and decrease in life expectancy. Wnt signaling pathway recently it has been implicated in bone homeostasis. Studies suggest that overexpression of inhibitors of the way, like the Dickkopf 1 protein (DKK1) has been implicated in bone destruction

Objectives: To compare circulating levels of DKK1 in patients with RA to their disease activity and functional status

Methods: 379 consecutive patients with early and established RA were evaluated at the Hospital Militar Central in Bogota-Colombia, between March 2015 and November 2016. A complete medical history related to RA was obtained. Disease activity was evaluated by DAS28-CRP, CDAI, SDAI and RAPID3. functional status was measurement using MDHAQ and the Steinbrocker functional classification. DKK1 levels measured by ELISA using an Abcam® kit

Results: The mean age was 60,7±13,1 years, disease duration 13,1±10,9 years, 80,4% were female. Higher levels of DKK1 were not associated with higher disease activity by CDAI (p=0,70), SDAI (p=0,84), DAS28 with CRP (p=0,80) or RAPID3 (p=0,70). Interestingly Higher levels of DKK1 were significantly associated to greater disability and lower functional status according to the Steinbrocker functional grading (p=0.013) and with severe disability by MDHAQ (p=0.004), Table 1.

Other variables associated with joint destruction were osteoporosis, elevated rheumatoid factor, smoking, and hospitalization

Steinbrocker functional grading	n (%)	DKK1 (pg/mL) M±ds	P
Class I-II	286 (75,2)	4930,9±8061,5	0,013
Class III-IV	93 (24,5)	7930,6±10811,3	
MDHAQ			
Without or low disability	334 (88,0)	3192,0±2729,4	0,004
Moderate or severe disability	45 (12,0)	4445,67±2821,0	

Conclusions: Higher levels of DKK1 were found in patients with lower functional status. This association was not found in patients with greater disease activity according to CDAI, SDAI, DAS28 and RAPID3. This could be explaining by greater structural damage though more studies would be needed to explore this possibility

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AB0240 ASSOCIATION BETWEEN LEPTIN CONCENTRATIONS AND CARDIOVASCULAR RISK IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: It has been observed that leptin plays a role in the development of cardiovascular risk, independently associated with the development of atherosclerosis, as well as with traditional risk factors such as obesity and arterial hypertension, on the other hand, its participation in carbohydrate and lipid metabolism and in coagulation, makes leptin a promoter of the complications of obesity and therefore increase cardiovascular risk.

Objectives: Identify whether there is a relationship between serum leptin concentrations and cardiovascular risk assessed using the Framingham scale.

Methods: We studied patients with the diagnosis of rheumatoid arthritis (RA) according to the ACR/EULAR 2010 criteria; the leptin determination was through an enzyme immunoassay (ELISA) with the TECO® Test Kit. Cardiovascular risk was calculated using the modified Framingham score, as reported by EULAR, the result obtained was multiplied by 1.5. Were considered as risk values of <1% as low; 1–5% moderate and >5% high. Statistical analysis was performed using the SPSS 22.0 package. A p≤0.05 was considered a significant result. Categorical variables were compared with Chi square test. Continuous variables were compared with either the Student's T test or the Mann-Whitney non-parametric test, according the case.

Results: We studied 77 patients. The traditional CVR factors that presented the highest prevalence were age, hypoalphalipoproteinemia and obesity; With regard to the prevalence of non-traditional factors, hyperleptinemia, glucocorticoid use and positive RF were predominant. More than ¾ parts of the study population consumed methotrexate and hydroxychloroquine, which have been considered as CVR protective factors. Serum leptin concentrations and CVR factors were compared and found that there was a significant difference between higher leptin values and disease activity (p=0.047), obesity (p=0.038), positive rheumatoid factor (p=0.009), Tobacco (0.009) and metabolic syndrome (p=0.001). Likewise, a significant relationship was found between lower leptin concentrations and hydroxychloroquine consumption (p=0.023). Framingahm CVR was calculated and the result obtained was multiplied by 1.5. The 35.2% of the population studied had a low Framingahm RCV, 38.9% moderate and 25.9% presented a high risk. We compared the level of CVR and serum leptin concentrations, finding that the highest CVR were the leptin values.

Conclusions: There is a positive association between CVR and serum leptin concentrations. It is also significantly associated with traditional and non-traditional risk factors

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AB0241 RELATIONSHIP BETWEEN LEPTIN AND DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Increased concentrations of leptin have been observed during infectious processes and inflammation, in such a way that it plays a role in the inflammatory and the immune response

Objectives: Determine the association between serum leptin and disease activity measured through DAS-28 PCR.

Methods: Patients with the diagnosis of rheumatoid arthritis (RA) according to the ACR/EULAR 2010 criteria were studied. Leptin was determined by enzyme immunoassay (ELISA) with the TECO® Test Kit, the values higher than 17ng/mL were considered as hyperleptinemia. Disease activity was assessed by the DAS-28 PCR, classifying as remission <2.3, low activity ≥2.3 to <3.8, moderate activity as ≥3.8 to <4.9 and high activity ≥4.9. Statistical analysis was performed using the SPSS 22.0 package. A p≤0.05 was considered a significant result. A multivariate logistic regression model was used to determine the association between significant variables and leptin concentrations.

Results: 77 patients were studied, 93,5% were female. The activity of the disease was determined, finding that 40,3% of patients were in remission, 41,6% had low activity, 11,7% had moderate activity and 6,5% had high activity. The 46,8% had obesity, 32,5% were overweight, 18,2% had normal weight and 2,5% were underweight. The 37,7% of the patients studied had metabolic syndrome, being the main factor the presence of an altered abdominal perimeter. The 63,6% had positive rheumatoid factor. The 71,4% had leptin levels ≥17 ng/ml. A multivariate logistic regression was performed with leptin as dependent variable. The results show an independent association between higher concentrations of leptin and disease activity (OR 1,9; 95% CI 1,3–3,8; p=0,045), obesity (OR 3,63; 95% CI 1,1–11,9; p=0,033), the presence of metabolic syndrome (OR 2,74; 95% CI 1,7–10,4; p=0,038), and positive rheumatoid factor (OR 3,5; 95% IC 1,2–11,3; p=0,033). It was also found that at higher disease activity, there were higher concentrations of serum leptin. Patients with severe activity had higher leptin media than patients in remission

Conclusions: There is a positive relationship between the activity of the disease and the serum leptin concentration, likewise this hormone is related to other inflammatory processes such as metabolic syndrome and rheumatoid factor.

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AB0242 EVALUATION OF VARIANTS IN MIR-146A, MIR-196A-2 AND MIR-499 AND THEIR ASSOCIATION WITH SUSCEPTIBILITY FOR RHEUMATOID ARTHRITIS AND ITS EXTRA-ARTICULAR MANIFESTATIONS

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Background: The miRNAs, small non-coding RNA, regulate the genetic expression to posttranscriptional level, inhibiting the translation. The role of miRNAs in the evolution of RA is not clear.
Objectives: To evaluate the variants rs 2910164G/C in *miR-146a*, rs11614913C/T in *miR-196a-2* and rs3746444A/G in *miR-499* and their association with susceptibility and severiry to Rheumatoid arthritis (RA) and its extra-articular manifestations (EAM)
Methods: 133 cases with RA were included (ACR/EULAR criteria 2010) and 430 healthy controls. There were evaluated EAM (rheumatoid nodules [RN], Raynaud phenomenon [RP], cutaneous vasculitis (CV), episcleritis, scleritis, peripheral ulcerative keratitis [PUK], multiple mononeuritis [MM] and multiple polyneuritis [MP]) and levels of ESR, CRP, RF and CCP. It was performed genotyping of singe nucleotide polymorphisms (SNPs) rs2910164G/C in *miR-146a*, rs11614913C/T of *miR-196a-2* and rs3746444A/G of *miR-499*. The descriptive and inferential statistical analysis was performed with the software SPSS and Finetti.
Results: Patients with RA, women 126 (94.7%); age Me 48.9 (IQR 40–58); patients with EAM 23 (17.2%; women 22 [95.6%]; RN 14 [60.8%], RP 4 [17.3%], CV 1 [4.3%], episcleritis 1 [4.3%], PUK 1 [4.3%], MM 1 [4.3%], MP 1 [4.3%]); ESR Me 37 (IQR 22–45), CRP Me 0.11 (IQR 0.03–0.27); positive RF 125 patients (93.9%, high positive 106 [79.7%], low positive 19 [14.3%]; EAM with high positive RF, 100%), positive CCP 70 (52.6%, high positive 48.9%, low positive 3.8%; EAM high positive 94.1%, negative 5.9%). The alleles and genotypic frequencies did not show statistically significant difference between cases and the healthy controls ($p>0.05$). It was identified statistical difference between the patients with and without EAM in CPR (p=0.032). The genotypic and allelic frequencies and association analysis of *miRNAs* in patients with and without EAM are shown in table 1

Table 1. Analysis of the genotypic and alleles frequencies of the SNPs rs2010164G-C from *miR-146a*, rs11614913C/T from *miR-196a-2* and rs3746444A/G from *miR-499* in patients with RA with and without EAM

Genotype	Patients without EAM		Patients with EAM		OR	CI 95%	p
rs2010164G/C Genotype	n	%	n	%			
GG	54	(49.1)	9	(39.1)	–	–	–
GC	47	(42.7)	11	(47.8)	1.40	0.54-3.68	0.49
CC	9	(8.2)	3	(13.0)	2.00	0.45-8.83	0.35
Allele							
G	155	(70.4)	29	(63.0)	–	–	–
C	65	(29.6)	17	(37.0)	1.34	0.72-2.71	0.32
rs11614913C/T Genotype							
CC	42	(38.2)	2	(8.7)	–	–	–
CT	55	(50.0)	14	(60.9)	5.34	1.15-24.81	0.02
TT	13	(11.8)	7	(30.4)	11.31	2.09-61.29	0.001
Allele							
C	139	(63.2)	18	(39.1)	–	–	–
T	81	(36.8)	28	(60.9)	2.67	1.39-5.12	0.002
rs3746444A/G Genotype							
AA	100	(90.9)	21	(91.3)	–	–	–
AG	9	(8.2)	2	(8.7)	1.06	0.21-5.26	0.94
GG	1	(0.9)	0	(0.0)	1.56	0.06-39.6	0.65
Allele							
A	209	(95.0)	44	(95.6)	–	–	–
G	11	(5.0)	2	(4.4)	0.86	0.18-4.03	1.03

O: Odds Ratio, CI: confidence interval, EAM: extra articular manifestations

Conclusions: None of the evaluated variants in *miRNAs* are associated with susceptibility for RA, however, the SNP re11614913C/T licated in *miR-196a-2* is associated with EAM.
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AB0243 SERUM LEVELS OF ANGIOGENIC AND PROINFLAMMATORY CYTOKINES TO DISCRIMINATE BETWEEN 6 SETS OF REMISSION CRITERIA IN RA

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Background: The ideal definition of remission in RA remains to be agreed. Angiogenic factors and proinflammatory cytokines are key in RA pathogenesis.
Objectives: The aim of this study was to analyse serum levels differences of angiogenic and inflammatory biomarkers between SDAI, CDAI, ACR, DAS28 and sonographic remission in patients with (RA).
Methods: We selected patients with RA in clinical remission (DAS28-ESR<2.6 for >6 months). PDUS of knees and hands was performed. Serum levels of biomarkers of inflammation/angiogenesis were determined by Quantibody® Human Array. Patients were classified according to 6 sets of remission criteria: SDAI (<3.3), CDAI (<2.8), ACR, DAS28-ESR (<2.6), Doppler (score Doppler=0) and UdAS (ultrasound defined active synovitis:no joints with SH$\geq$2+PD)
Results: 60 patients with RA were collected. 76% female, aged (mean) 53 years; disease duration 110 months. 47 (76%) csDMARDs, and 27 (45%) biological therapies. At baseline, 67% of patients had PD signal and 48% fulfilled criteria for previously defined UdAS. Although patients in sonographic remission had lower levels of inflammatory biomarkers such as IL-6, IL-17 or IL-23, no significant differences were found between the 6 sets of remission criteria. Angiogenic biomarkers such as CXCL6 (0.039), ENA78 (0.007), SDF1 (0.047) and VEGF-R1 (0.025) were significantly lower in patients fulfilling CDAI remission. Patients with no PD signal (0.009) and no UdAS (0.006) had significantly lower levels of bFGF.
Conclusions: RA patients in CDAI remission had significantly-lower levels of angiogenic cytokines. However, no differences in serum levels of proinflammatory cytokines were found between the 6 sets of remission criteria.
Disclosure of Interest: None declared
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AB0244 MICROWAVE RADIOMETRY-DERIVED THERMAL CHANGES OF SMALL JOINTS AS POTENTIAL ADDITIONAL BIOMARKER IN RHEUMATOID ARTHRITIS: A PROSPECTIVE STUDY

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Background: Microwave Radiometry (MR) is a rapid, non-invasive method that detects in-depth tissue temperatures. Using joint ultrasound as reference method, in a proof-of-concept study, we have found that an increased temperature at the knee joint detected by MR in the absence of relevant clinical signs reflects the presence of subclinical synovial inflammation in rheumatoid arthritis (RA) (1).
Objectives: To test the hypothesis that temperature of small joints assessed by MR correlates to global disease activity levels in RA, a disease in which small joints are primarily affected.
Methods: Ten patients with active, untreated RA underwent clinical and laboratory assessments, joint ultrasound and MR of hand and foot small joints (RTM 01 RES microwave computer based system, Bolton, UK) at baseline, as well as 15, 30 and 90 days after treatment onset. Twenty aged-matched healthy individuals served as controls.
Results: Using 1248 separate MR-derived recordings from RA patients we created several thermo-scores involving different small joint combinations and compared them with clinical and ultrasound data. The best performing thermo-score involved the sum of temperatures of 16 small joints (2nd-5th metacarpal and proximal inter-phalangeal joints, bilaterally). This thermo-score correlated positively to DAS28 disease activity score (p=0.001), tender joint count (p=0.002), swollen joint count (p=0.001), patient's visual analogue scale ($p<0.001$), CRP