THU0097 CHANGE IN SELF-REPORTED PAIN REFLECTS PSYCHOLOGICAL AND FUNCTIONAL STATE RATHER THAN INFLAMMATORY BURDEN IN UNITED STATES LATINOS WITH ESTABLISHED RHEUMATOID ARTHRITIS

G. Karpouzas, E. Hernandez, C. Cost, S. Ormseth. *Rheumatology, Harbor-UCLA Medical Center, Torrance, United States*

Background: Pain represents the cardinal complaint in patients with rheumatoid arthritis (RA). It may reflect inflammation, structural damage, or aberrant processing and regulatory mechanisms.
Objectives: We evaluated whether changes in pain reflect inflammatory burden variation or non-inflammatory factors in Latinos with established RA in the United States (US).
Methods: We evaluated 271 patients from a single academic center with complete data in parameters of interest on 2 visits, 12 months apart. Demographics, serologies, swollen and tender joint assessments, sedimentation rate, fatigue-VAS (visual analogue scale), pain-VAS, depression assessment (Patient Health Questionnaire-PHQ9), functional disability (Health Assessment Questionnaire, HAQ-DI), presence of erosions and irreversible articular damage (IAD, including subluxation, fusion, arthrodesis, or prosthesis) were recorded. Principal components factor analysis with varimax rotation determined latent variables of symptom change. Multinomial logistic regression modeling with forward stepwise entry determined parameters associated with clinically meaningful change in pain compared to no change
Results: Two factors met acceptance criteria (Eigenvalues $\geq$1) with values of 2.57 and 1.31 respectively (Table 1). Following rotation, factor 1 loadings comprised change in fatigue, pain, depression scores, and functional disability, representing non-inflammatory factors. Conversely, factor 2 encompassed changes in tender and swollen joints and ESR, representing inflammation. Clinically relevant improvement in pain significantly correlated with respective improvements in fatigue, depression, functional disability and tender joints (Table 2); worsening pain was negatively associated with change in disability or fatigue.

Table 1: Principal Component factor analysis with change variable loadings

	Factor 1*	Factor 2*
Fatigue change	0.814	-0.019
Pain change	0.757	0.216
PHQ9 change	0.716	0.024
HAQ-DI change	0.569	0.328
Swollen joint count change	0.095	0.828
Tender joint count change	0.238	0.696
Sedimentation Rate change	0.003	0.642
* Factor 1 explains 30.6% of variance and factor 2 explains 24.8%		

Table 2: Factors associated with clinically meaningful change in self-reported pain

	parameters	B	Std Error	p-value	OR	95% CI
Worsening	Intercept	-1.437	0.213	0.000		
	PHQ9 change	-0.011	0.034	0.752	0.989	0.925-1.058
	TJC change	-0.026	0.025	0.314	0.975	0.927-1.025
	HAQ-DI change	-1.254	0.358	0.000	0.285	0.142-0.575
	Fatigue change	-0.223	0.073	0.002	0.800	0.693-0.923
Improving	Intercept	-1.186	0.192	0.000		
	PHQ9 change	0.088	0.035	0.012	1.092	1.020-1.169
	TJC change	0.066	0.028	0.016	1.069	1.012-1.128
	HAQ-DI change	0.627	0.317	0.048	1.871	1.005-3.483
	Fatigue change	0.204	0.067	0.002	1.226	1.075-1.339
Reference category is no change						

Conclusions: In Latinos with established RA, change in pain reporting reflects alterations in non-inflammatory parameters such as fatigue, depression and functional disability rather than inflammation. Active screening and consideration of those factors may inform therapeutic interventions, balance patient and physician expectations, and optimize patient satisfaction and clinical outcomes.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6813

THU0098 THE NAILFOLD CAPILLAROSCOPY IN RHEUMATOID ARTHRITIS: QUANTITATIVE ANALYSIS AND CLINICAL AND SEROLOGICAL CORRELATION

G. Cuomo, E. Frongillo, L. Pirro, A. Del Mastro, C. Romano. *Dipartimento Assistenziale Integrato di Medicina Interna, UOC Medicina Interna - Università degli Studi della Campania - Luigi Vanvitelli, Napoli, Italy*

Background: Nailfold videocapillaroscopy (NVC) abnormalities have been reported in patients with Rheumatoid Arthritis (RA). Nevertheless only few studies evaluated the grades of the detected alterations (1,2). In 1994, Hachulla et al., showed microvascular permeability alterations in RA, to confirming the existence of a microangiopathy (3). In addition, Meyer et al. showed modifications of the normal blood flow velocity and microvascular dysfunction in RA (4).
Objectives: The aim of this study was to evaluate, in RA patients and healthy controls (HC), the microcirculatory abnormalities through NVC, applying a qualitative and quantitative method. We also correlated abnormalities with clinical and immunological features
Methods: Thirty-five HC (35 females, 7 males, median age 55, range 32–70) and 70 RA patients (61 females, median age 58 years, range 30–75; median disease duration 12 years, range 1–20) consecutively admitted to our outpatient clinic, were examined. All patients underwent a full clinical-serological characterization. Both patients and controls underwent NVC, with optical probes of 200X (VideoCap 2.5). We excluded patients who showed conditions known to compromise microcirculation, such as diabetes, hypertension, overlap with other connective tissue diseases or certain pharmacological treatments. The following NVC parameters were evaluated with a semiquantitative method: capillary enlargement (ectasias), microhemorrhages, mean capillary density, capillary tortuosity (5).
Results: NVC alterations were detected in 55 of 70 (68.6%) RA patients: 40 (57%) patient showed ectasic capillaries; 21 (30%) decrease of the mean capillary density; 12 (17%) microhemorrhages; 46 (65.7%) capillary tortuosity. No patient had megacapillaries and/or neoangiogenic abnormalities.
A statistically significant difference between HC and RA patients was found for the detection of ectasias ($p<0,0001$) and for the decrease of the mean capillary density ($p<0,001$).
No differences emerged in RA patients between NVC pattern and/or immunological (ANA, ACPA, Rheumatoid Factor) and/or serological profile (ESR, CRP, lipid profile).
Nevertheless we found a correlation between NVC abnormalities (microhrmorrhages) and activity disease evaluated by DAS28 (p=0.0037)
Conclusions: Our study confirms the presence of a sub-clinical microvascular involvement in RA patients either with or without microvascular clinical manifestations.
In our opinion capillaroscopy can be considered a valid technique in inflammatory joint diseases to analyze microvascular circulation. Moreover, the correlation of NVC specific alteration with disease activity suggests the importance of these features in the assessment of RA patients.
References:
[1] Granier F, et al. Arthristi Rheum 1996.
[2] Nagy and Czirjiak. J Eur Acad Derm Venerol 2004.
[3] Hachulla et al, J Rheumatol 1994.
[4] Meyer. Rheumato Int 2007.
[5] Ingegnoli et al,Seminar Arthitis Rheum 2009.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6829

THU0099 THE 2010 CLASSIFICATION CRITERIA AND A MORE AGGRESSIVE TREATMENT STRATEGY IMPROVE CLINICAL OUTCOMES IN SEROPOSITIVE BUT NOT SERONEGATIVE RHEUMATOID ARTHRITIS

G. Crepaldi, S. Bugatti, F. Benaglio, G. Sakellariou, A. Manzo, C. Montecucco, R. Caporali. *Department of Rheumatology, IRCCS Policlinico San Matteo Foundation, Pavia, Italy*

Background: Current guidelines recommend an early and intensive treatment in patients diagnosed with rheumatoid arthritis (RA), and the 2010 ACR/EULAR Classification Criteria were developed with the aim of allowing earlier diagnosis and treatment (1,2). Recent studies highlighted some differences in disease activity between seropositive and seronegative RA patients at disease onset (3).
Objectives: To investigate whether the application of the 2010 ACR/EULAR Classification Criteria and a more aggressive treatment strategy improve clinical outcomes in patients with early RA irrespective of the autoantibody status.
Methods: 584 early, treatment-naïve RA patients were recruited in the years 2005–2014. RA diagnosis was made according to the ACR 1987 criteria in 2005–2010 (n=360, cohort 1987), and to the 2010 ACR/EULAR criteria in 2011–2014 (n=224, cohort 2010). Patients were classified in autoantibody (Ab)-negative (negative rheumatoid factor (RF) and/or anticitrullinated peptide antibody (ACPA) and Ab-positive (RF and/or ACPA positive). Methotrexate (MTX) was used at the initial dosage of 10 mg/week in cohort 1987, and 15 mg/week in cohort 2010, and progressively increased if low disease activity (LDA) (DAS28$\leq$3.2) was not met. The frequency and predictors of LDA and clinical remission (DAS28$<$2.6) over 6 months were assessed by Cox regression.
Results: In Ab-negative patients, LDA and clinical remission were achieved in 62.8% and 37.2% of the cases, and the 2010 cohort did not show significantly improved outcomes (HR [95% CI] 0.86 [0.611.23] for LDA; 1.04 [0.651.69] for remission) (Figure 1A,B). In contrast, in Ab-positive patients, the application of the 2010 classification criteria and higher dosages of MTX were associated with increased frequency of LDA after adjustment for confounders (age, sex, prednisone, baseline DAS28; HR [95% CI] 1.39 [1.012]) (Figure 1C). Clinical remission was achieved in 41.3% of the cases, compared to 29.6% in the 1987 cohort (p=0.17) (Figure 1D).
Conclusions: Early diagnosis and a more aggressive treatment strategy with MTX lead to significantly improved outcomes in autoantibody positive RA. The management of seronegative patients remains suboptimal.
References:
[1] Smolen JS et al. Treating rheumatoid arthritis to target: 2014 update of the recommendations of an international task force. Ann Rheum Dis 2016.
[2] Aletaha D et al. 2010 rheumatoid arthritis classification criteria: an ACR/EULAR collaborative initiative. Ann Rheum Dis 2010.
[3] Nordberg LB et al. Patients with seronegative RA have more inflammatory activity compared with patients with seropositive RA in an inception cohort of DMARD naive patients classified according to 2010 ACR/EULAR criteria. Ann Rheum Dis 2017.