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AB0147

OLDER AGE AT ONSET AND NOT DISEASE ACTIVITY IS ASSOCIATED WITH FUNCTIONAL DISABILITY AT RA DIAGNOSIS: RESULTS FROM AN EARLY ARTHRITIS COHORT

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Background: Rheumatoid Arthritis (RA) is a chronic inflammatory arthropathy that potentially leads to loss of function and disability early in the disease course. (1) Optimizing physical function is one of the primary goals of RA treatment (2). Several demographic, psychosocial and clinical factors may influence the impact of RA upon physical capacity, and understanding their relative contribution to disability at disease diagnosis is key to an effective treatment approach.

Objectives: To evaluate functional disability at the time of disease diagnosis and identify its demographic and clinical correlates in an early RA cohort.

Methods: We conducted a cross-sectional study based on a Rheumatology centre early arthritis cohort. Consecutive patients with early RA – less than 12 months duration– fulfilling ACR/EULAR 2010 and/or ACR 1987 RA classification criteria, were included. Variables were collected from patients' registries at the first rheumatology appointment after symptom's onset. Functional disability was assessed using the *Health Assessment Questionnaire- Disability Index* (HAQ-DI) (range 0 to 3, higher values indicating greater disability). Independent t-test, one way-ANOVA and Pearson's correlation coefficient were performed to evaluate differences between groups. Variables with p<0.1 were included in a stepwise multiple linear regression analysis to assess the independent association of variables with the HAQ-DI at baseline.

Results: We included 71 patients (63.4% female, mean age 57.2 ±2.01 years). Mean HAQ-DI score was 1.42±0.08. Sociodemographic and clinical variables are described in Table 1. There was a significant difference in HAQ-DI scores between rheumatoid factor (RF) positive (mean 1.24±0.11) and RF negative (1.61±0.113) patients. HAQ-DI was positively weakly correlated with age (r=0.48; p<0.001), CDAI (r=0.43; p=0.038), SDAI (r=0.49; p=0.015), and moderately with DAS28-3V (r=0.60; p<0.001) and DAS28-3V-CRP (r=0.60; p<0.001). The number of tender (r=0.35; p=0.024) and swollen joints (r=0.42; p= 0.005), ESR (r=0.46; p=0.001), CRP (r=0.35; p=0.018), HADS-depression (r=0.46; p=0.023) and educational level (r= -0.48; p=0.002) were also associated with HAQ-DI in univariate analyses. After multivariate regression analysis, age at disease diagnosis (β= 0.022 [95 CI 0.010 to 0.034]; p= 0.001) was the only independent predictor of HAQ-DI (R²= 0.46, p=0.001).

Table 1. Patients' baseline sociodemographic and clinical characteristics.

Age at diagnosis (years), mean (SD)	57.2±2.01
Educational level (years), mean (SD)	7.37±0.59
Employment: full-time, %	42.4
Employment: partial-time, %	3.00
Employment: retired, %	48.4
Employment: absenteeism in the last month, %	1.50
Unemployed, %	4.50
Disease duration at presentation (weeks), mean (SD)	20.4±1.70
Morning stiffness >30 minutes, %	83.0
RF positivity, %	47.9
ACPA positivity, %	53.5
Fibromyalgia, %	6.60
DAS28-3V, mean (SD)	4.72±0.17
CDAI, mean (SD)	29.2±2.28
SDAI, mean (SD)	32.4±2.42
PTGA, mean (SD)	66.8±3.73
PhGA, mean (SD)	54.7±3.08
Pain intensity (VAS), mean (SD)	67.7±3.75
EQ-5D score, mean (SD)	0.26±0.039
HADS-depression, mean (SD)	7.17±0.87

Legend: ACPA- anti-citrullinated protein antibodies; ESR- erythrocyte sedimentation rate; CRP- c-reactive protein; DAS- disease activity score; CDAI- clinical disease activity score; SDAI-simplified disease activity score; PTGA/ PhGA – patient's/physician's global assessment of general health; VAS- visual analogic scale; EQ-5D- EuroQoL 5-Dimensional Descriptive System; HADS-Hospital Anxiety and Depression Scale.

Conclusion: Older age at disease onset is associated with greater functional impairment at diagnosis, assessed by HAQ-DI, in this cohort of early RA patients, irrespective of disease activity and other clinical variables. This result suggests that older newly diagnosed RA patients may deserve special attention regarding physical function.

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AB0148

CHARACTERISTICS OF RHEUMATOID ARTHRITIS PATIENTS WITH HIP INVOLVEMENT

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Background: Rheumatoid arthritis (RA) is an autoimmune inflammatory disease that affects both small and large joints. Hip involvement is an evolutionary turning point in RA and significantly alters the patient's quality of life.

Objectives: This study aimed to assess characteristics of RA patients with hip involvement.

Methods: It was a cross-sectional study, including patients with RA (according to 2010 ACR/European League Against Rheumatism (EULAR) criteria). We divided patients into two groups: G0 patients without hip involvement, G1 patients with hip involvement. Hip involvement was defined with a limited movement during examination with abnormalities on standard radiographs. We collected the following data: age, the disease activity score (DAS28), the inflammatory biomarkers C-reactive protein (CRP) and Erythrocyte sedimentation rate (ESR), Rheumatoid Factor (RF), and Anti Citrullinated Peptides Antibodies (ACPA), and SHARP score (A scoring system used to assess the radiological changes in patients with RA. It describes erosions and narrowing of the joint space of 27 small joints of the hands, including the carpal bones and feet).

Results: Among the 224 patients included, 25 had hip involvement (11%). The male / female sex-ratio was higher in G1 (0.66 vs 0.22, p=0.017). Patients in G1 were younger at disease onset (44,16±16,11 years vs 51.9±13.9 years, p= 0.022) and had a longer disease duration (12,28 ± 11,49 years vs 6,2010 ± 6,45 years, p=0.02). They had also higher HAQ(1,7692 vs 1,3054, p=0.05). SHARP score was higher in G1 (176.32 vs. 106.88, p=0.011). Atlantoaxial subluxation was more common in G1 (32% vs 14%, p=0.035). When comparing the groups we did not find any significant difference regarding age (56.12 ± 11.88 years vs 58,24±12,26 years, p=0.341), disease activity (DAS28-ESR:5.41 vs. 5.65, p=0.380; DAS28-CRP: 5.19 vs. 5.51, p=0.290), ESR (53.88 vs. 46.95, p=0.237), CRP:23,8894 vs 22,89, p=0.975), and in the serological profile (RF; G1:68% vs G0: 70.8%, p=0.817, ACPA; G1: 60% vs G0:69%, p=0.366).

Conclusion: Patients with hip involvement were commonly male, were younger at disease onset and had more functional impairment based on the HAQ score. C1-C2 dislocation was also more common in this group. The SHARP score was also significantly higher in G1, which shows a severe and destructive disease.

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AB0149

CHARACTERISATION OF RHEUMATOID ARTHRITIS PROGRESSION IN AN EARLY UNDIFFERENTIATED ARTHRITIS COHORT

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Background: Since the publication of 2010 ACR/ELUAR classification criteria for Rheumatoid Arthritis (RA), identification of patients with RA at early stages of the disease has improved. Nevertheless, up to 56% of patients are diagnosed with undifferentiated arthritis (UA) at the first visit to Rheumatology Departments, of which about 20-30% will progress to RA. For this reason, Early Arthritis Clinics (EAC) have been progressively implemented in Rheumatology departments in order to identify and have a tight follow-up of these patients.

Objectives: a) To analyze the progression rate from UA to RA in a cohort of EAC. b) To identify differences in clinical features at baseline that characterize the progression to RA of these patients.

Methods: Prospective study from a cohort of EAC between 2010 and 2018. Patients diagnosed with UA at first consultation were included and with

a follow-up of 2-years. Final diagnosis was assessed at the end of study period defining two groups: RA progression (RA-group) vs no progression (non-RA-group). Baseline characteristics were recorded for both groups: sex, age, smoking habit, duration of symptoms, morning stiffness, tender joint count (TJC), swollen joint count (SJC), Rheumatoid Factor (RF), Anti-Citrullinated-Peptide-Antibodies (ACPA), DAS-28, erythrocyte sedimentation rate (ESR), C-Reactive Protein (CRP), Pain visual analogue scale (VAS). Differences in sociodemographic, clinical and serological features between groups were analyzed using T-test, chi-square test and U-Mann Whitney depending on the nature of variables.

Results: A total of 228 patients with UA were included, of which 54 (23.3%) progressed to RA (patients characteristics are shown in table 1). Regarding serological characterization, we found that in our cohort, 44.4% of patients who developed RA had FR and ACPA positivity, 13% RF positive, 7.4% ACPA positive. In contrast 35% patients were seronegative. From non-RA group, 73% of patients were seronegative, 18% RF positive, 4.5% ACPA positive and 4.5% double positive.

Table 1.

Variable	Total (n=228)	RA (n=54)	Non-RA (n=174)	p-value
Female sex n(%)	165 (71.7)	42 (77.8)	121 (69.5)	0.31*
Age (mean SD)	51.47 (16.46)	52.9 (16.15)	51.26 (16.61)	0.53 [§]
Smoking habit n (%)				0.12*
-smokers	49 (21.2)	14 (25.9)	33 (19)	
-ex-smokers	52 (22.5)	15 (27.8)	37 (21.3)	
-non-smokers	113 (48.9)	19 (35.2)	93 (53.4)	
Duration of symptoms (weeks) (median IQR)	8 (4-19)	12 (8-24)	8 (4-16)	0.006[¶]
Morning stiffness >60min n (%)	53 (22.9)	15 (27.8)	38 (21.8)	0.26*
Patient health assessment (median IQR)	39 (16-68)	58 (22-75)	34 (14-64)	0.01[¶]
Pain (VAS) (median IQR)	45 (18-68.2)	54 (30-71)	39 (14.5-67.5)	0.02[¶]
Tender Joint Count (median IQR)	2 (1-6)	4 (1-9)	2 (1-6)	0.04[¶]
Swollen Joint Count (median IQR)	2 (1-4)	3 (1-6)	2 (1-4)	0.01[¶]
Baseline DAS28 (mean SD)	3.97 (1.39)	4.44 (1.54)	3.82 (1.33)	0.006[§]
HAQ (median IQR)	0.75 (0.25-1.5)	1.12 (0.37-1.56)	0.62 (0.12-1.37)	0.06 [¶]
CRP (mean SD)	2.2 (8.01)	1.39 (3.25)	2.3 (8.9)	0.44 [§]
ESR (mean SD)	23.74 (19.5)	24.62 (16.22)	22.8 (19.3)	0.54 [§]
RF n (%)	70 (30.3)	31 (57.4)	39 (22.4)	<0.001*
ACPA n (%)	44 (19)	28 (51.9)	16 (9.2)	<0.001*

No differences between age at onset, sex and smoking habit were found. Duration of symptoms until first visit to Rheumatology Department was longer RA-group. Regarding joint involvement, TCJ and SCJ were higher in RA-group at baseline and also VAS pain and patients' global health assessment.

Conclusion: One out of four patients diagnosed with early UA are at risk of RA development within the following 2 years. This fact implies that these patients benefit from EAC in order to have a tight control of the disease and have the chance of starting treatment as soon as possible.

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AB0150

ACPA-STATUS AND RHEUMATOID ARTHRITIS: MUCH MORE TO BE REVEALED!

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Background: Anti-citrullinated protein antibodies (ACPA) are commonly associated with Rheumatoid arthritis (RA). RA is, therefore, classified as immunopositive or immunonegative, with disparate mechanisms in predisposition.

Objectives: Our study aimed to determine the baseline characteristics and differences of ACPA-positive and ACPA-negative RA.

Methods: We conducted a cross-sectional study including 224 patients with RA. All patients fulfilled the 2010 American College of Rheumatology/European League Against Rheumatism RA classification criteria. The patients were divided according to their ACPA status into two groups: ACPA-positive group (G1) and ACPA-negative group (G2). We compared clinical, radiological, and laboratory findings between the two groups, as well as extra-articular manifestations, comorbidities including fractures and osteoporosis. The Fracture Risk Assessment Tool (FRAX) was used to estimate the 10-year probability of major osteoporotic fracture (MOF) and also hip fracture (FH).

Results: Of the 224 patients, 31.6% were negative for ACPA (n=71). Female predominance was found in both groups with a sex ratio of 0.25 (p=0.203). ACPA-negative subjects were younger (57±11 versus 59±12 years) (p=0.305).

The initial presentation of RA was different between the two groups without reaching statistical significance. In the ACPA-negative group, alteration of general condition was more frequent (16.9% in G2 versus 13.7% in G1) (p=0.533), with a tendency to oligo-articular onset (18.5% in G2 versus 6.7% in G1) (p=0.737). ACPA-positivity was more associated with an acute start of symptoms (10.4% in G1 versus 8.4% in G2) (p=0.639).

There was no significant difference in the mean DAS28-VS (5.2±1.1 in G2 versus 5.5±1.3 in G1) and DAS28-CRP levels (5±1 in G2 versus 5.3±1.2 in G1) (p=0.069 and p=0.098 respectively).

ACPA-positive RA was, however, significantly associated with more structural joint damage: erosions (55.9±53 in G1 versus 78±36 in G2, p=0.01), joint space narrowing (50.4±45.5 in G1 versus 33.1±36.6 in G2, p=0.003), Sharp/van der Heijde radiographic score (126.6±103.2 in G1 versus 88.8±81.5 in G2, p=0.004). ACPA-positive RA patients had more atlantoaxial dislocation: 20.2% in G1 versus 7% in G2 (p=0.012). There was no significant difference in hip involvement (9.8% in G1 versus 14% G2) (p=0.344).

There were no significant differences in extra-articular manifestations between the two groups: Rheumatoid nodules (10.4% in G1 versus 18.3% in G2) (p=0.891), Sjögren's syndrome (16.3% in G1 versus 16.9% in G2) (p=0.715), amyloidosis (0.6% in G1) (p=1), pulmonary fibrosis (5.8% in G1 versus 4.2% in G2) (p=0.757), neurological signs (4.5% in G1 versus 5.6% in G2) (p=0.733), anaemia (5.8% in G1 versus 1.4% in G2) (p=0.175).

When analyzing comorbidities, no significant differences were found: diabetes (10.4% in G1 versus 18.3% in G2) (p=0.103), cardiovascular diseases (19.6% in G1) (p=1), neurological diseases (0.06% in G1 versus 1.4% in G2) (p=0.534), dysthyroidism (2.6% in G1 versus 5.6% in G2) (p=0.267), dyslipidemia (3.2% in G1 versus 4.2% in G2) (p=0.711), cancer (1.3% in G1) (p=1). There were neither significant differences in the prevalence of fracture (21.5% in G1 versus 18.3% in G2) (p=0.574), and osteoporosis (23.6% in G1 versus 29.5% in G2) (p=0.347), between the two groups. However, ACPA-positive patients presented with a significantly higher FRAX score of MOF (2±2.8 in G1 versus 1.2±1 in G2) (p=0.006), and FRAX score of FH (0.9±1.8 in G1 versus 0.3±0.5 in G2) (p=0.003).

Conclusion: ACPA status appears to influence both the clinical presentation and radiological progression of RA patients. ACPA-positive patients present with an acute start of symptoms, with more structural damages and atlantoaxial dislocation. Comorbidities, including osteoporosis, does not seem affected by ACPA status. However, regardless of osteoporosis, ACPA-positivity is associated with a higher probability of major osteoporotic and hip fractures. Further research is needed to clarify this relationship.

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