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AB0225 WHAT FACTORS INFLUENCE RA PRESENTATION AT DIAGNOSIS?

Keywords: Rheumatoid arthritis, Prognostic factors, Epidemiology

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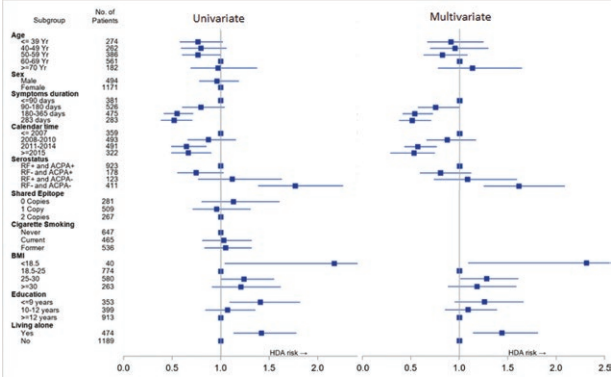
Background: Researchers have mostly focused in understanding which factors influence the risk of rheumatoid arthritis (RA) and its progression. However, little is known on the determinants of disease presentation at diagnosis. This is a fundamental prerequisite for studies focusing in understanding disease progression.
Objectives: To estimate the association between demographic and disease related factors and high disease activity (HDA) of RA at diagnosis by a rheumatologist.
Methods: Data from newly diagnosed RA patients between October 2004 and May 2018 from the Epidemiological Investigation of RA study (EIRA) will be included in these analyses. The outcome of interest is high disease activity, defined as having either DAS28 ESR >5.1 or DAS28 CRP>4.6. Patients without an HDA evaluation at baseline (defined as recorded in a visit between 40 days before and 75 days after EIRA inclusion) have been excluded from the analyses. Odds ratios (ORs) and their 95% confidence intervals (CIs) of HDA were estimated through a mixed model with region as random intercept, to account for between regions variations. The association between each of the factors and HDA was first evaluated with a univariate model. Then, only factors with a significant association were included in the multivariable model. Missing values were excluded in the univariate analyses, but included as separated category in the multivariable analysis.
Results: A total of 1665 patients were included in this study, of which 995 (60%) had HDA at diagnosis. In the univariate analyses, young age at diagnosis (50-59 years: OR=0.76 (0.59-1.00)), longer symptoms duration (>365 days: OR= 0.51 (0.37-0.7)), and diagnosis in more recent years (≥2015: OR= 0.66 (0.48-0.9)) were inversely associated with HDA, while being underweight (BMI <18.5: OR= 2.17 (1.04-4.51)), low education (≤9 years: OR= 1.41 (1.09-1.82)), living alone (OR= 1.42 (1.13-1.78)) and being seronegative (OR=1.78 (1.39-2.28)) had higher odds of HDA. Sex, shared epitope, and cigarette smoking were not associated with HDA at diagnosis. In the multivariable analyses, age and education were no longer associated with HDA.
Conclusion: In this study we observed that sex, symptoms duration, calendar time, living alone, serostatus were associated with high disease activity at diagnosis, while age, sex, education, shared epitope, and cigarette smoking were not.

Figure 1. Univariate (on the left) and multivariable (on the right) odds ratio of high disease activity. Abbreviations: BMI=body mass index, RF=rheumatoid factor, ACPA= anti-citrullinated protein antibody



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AB0226 PREDICTORS OF RESPONSE AFTER CESSATION OF JAKI THERAPY IN PATIENTS WITH RA

Keywords: bDMARD, Rheumatoid arthritis, Remission

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Background: In a previous study based on data from the Belgian register "Tool for Administrative Reimbursement Drug Information Sharing" (TARDIS)[1], IL6 inhibitors showed a better clinical response after JAKi cessation compared to other b/tsDMARDs. However, considerable baseline differences in demographic and clinical variables, and previous exposure to advanced therapies were found between treatment groups, which could have influenced our results.
Objectives: We aimed to find predictors of short-term response after cessation of JAKi therapy in patients with RA.
Methods: Patients were selected from TARDIS for this analysis if they had stopped JAKi therapy and initiated a subsequent therapy between register inception and December 2021. Patients were grouped per subsequent therapy: TNFi, Abatacept, IL6 inhibition or JAKi. Rituximab was excluded as patients are reimbursed on RA flare in Belgium. Linear and logistic regression models were constructed to establish predictors of clinical response. DAS28 change between baseline and first follow-up, DAS28 remission (DAS28<2.6) and DAS28 low disease activity (LDA, DAS28≤3.2) at first follow-up were taken as dependent variables. Following variables were inserted in the models: age, disease duration, b/tsDMARD naive, treatment group and baseline values for HAQ, swollen/tender joint count, PGA, ESR, and CRP. Final models included only variables reaching statistical significance of 0.05 (by backwards elimination).
Results: In total, 193 RA patients, who had stopped JAKi therapy and had complete baseline and follow-up data, could be included. Table 1 shows baseline demographic and clinical characteristics. TNFi, Abatacept, IL6 inhibition or JAKi therapy was initiated in 33% (63/193), 11% (20/193), 18% (34/193) and 39% (76/193) of patients respectively. Remission and LDA were reached in 42% (81/193) and 63% (122/193) of patients respectively. Common predictors for achieving remission and LDA were baseline HAQ and not receiving abatacept (Figure 1). Variables positively associated with a higher DAS28 change were baseline PGA (Relative Risk (RR) 0.02 (0.01, 0.03)), TJC (0.06 (0.01, 0.12), SJC (RR 0.10 (0.03, 0.16)) and CRP (RR 0.02(0.01, 0.03)), while baseline HAQ (RR -0.60 (-0.88, -0.31) and not receiving abatacept (RR -0.70 (-1.25, -0.15)) were negatively correlated with DAS28 change in the adjusted multivariate linear regression model.

Table 1. Patient characteristics at the start of next treatment after failing the first JAKi therapy

	Total population
Number	193
Age (mean ±SD, years)	57 ±13
Disease duration (mean ±SD, years)	10 ±8
ESR (mean ±SD, mm/hour)	24 ±18
CRP (mean ±SD, mg/L)	11 ±18
SJC28 (mean ±SD)	6 ±5
TJC28 (mean ±SD)	8 ±5
DAS28 (mean ±SD, years)	4.6 ±1.1
HAQ-DI (mean ±SD, 0-3)*	1.3 ±0.7
PGA (mean ±SD, 0-100)	64 ±20
Used JAKi as first line advanced therapy	76/193 (39%)

Legend: Number given are mean ± SD or number, proportion. TNFi = tumour necrosis factor inhibitor, JAKi = Janus Kinase inhibitor, HAQ= health assessment questionnaire, PGA= Patient Global assessment; CRP= C-reactive protein; ESR= erythrocyte sedimentation rate; TJC= tender joint count; SJC= Swollen joint Count; DAS28 = disease activity score based on the 28joints. *Missing HAQ(0-3) scores were imputed by regression using age and HAQ(0-60) scores, the sum of the scores (0-3) on all (20) individual HAQ questions.

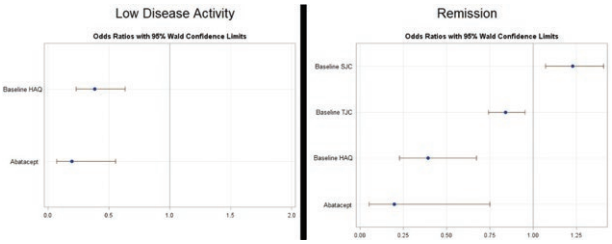

Figure 1. Predictors of remission or LDA

Conclusion: This explorative analysis reveals that after adjustment, patients who have worse functionality and receive abatacept compared to other b/ts DMARD show worse clinical outcomes in the short-term. This treatment effect should be further explored, but caution is warranted as the sample size was relatively small and indication bias cannot be excluded.

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AB0227 EARLY RHEUMATOID ARTHRITIS DIAGNOSIS: PRIMARY CARE PHYSICIAN'S PERSPECTIVE AND NEEDS

Keywords: Education, Rheumatoid arthritis

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Background: Primary care physicians (PCPs) play a crucial role in early recognition and rapid referral of patients with inflammatory arthritis to improve early management and patient outcomes. However, there is limited information on perceived barriers for referral and areas of improvement [1]. The purpose of this study is to explore the perspective and needs of PCPs to guide a specialist's referral program.

Objectives: To explore the perspective and needs of primary care physicians (PCPs) to guide a specialist's referral program at an academic rheumatology center in Madrid and to identify areas of improvement to facilitate early referral for early rheumatoid arthritis.

Methods: A PCPs-rheumatology early referral program (REUCARE) has been initiated at our area in January 2022 with 257 PCPs participating. Up to May 2022, 88 patients have been referred, however only 24 (27%) fulfil inclusion criteria. In order to improve the referral strategy, a survey has been developed in collaboration with primary care investigators to explore areas of improvement. The survey included 5 domains covering: PCPs demographics, previous knowledge about RA, level of confidence, factors and potential barriers influencing referral and interest on rheumatological training. Data were captured using four-point Likert scales, yes/no question or free text, and were analyzed descriptively.

Results: E-mail invitations were sent to 257 PCPs through their primary care center coordinator and completed by 26 (10% response rate). More respondents were women (76%) in practice for over more than 20 years who reported having 30-40 patients per day and only 1-5 patients diagnosed of RA in the last year. The majority (83%) reported additional rheumatological training besides medical school, however they were no familiar with the incidence and prevalence of the disease. Around 67% were aware of the importance of early diagnosis and treatment, however they felt not very confident making the initial diagnostic (61% "somehow confident" and 35% "not confident"). Main reasons for referral were clinical presentation (65%), positive rheumatoid factor (46%) and elevation of acute phase reactants (46%). Most PCPs considered the waiting time for rheumatology prolonged (65%) and very prolonged (22%) and reported insufficient feedback information from rheumatologists (60%). Main reasons for delay from PCPs perspective were nonspecific initial symptoms of the disease (48%) followed by rheumatology long waiting list (39%) (Figure 1).

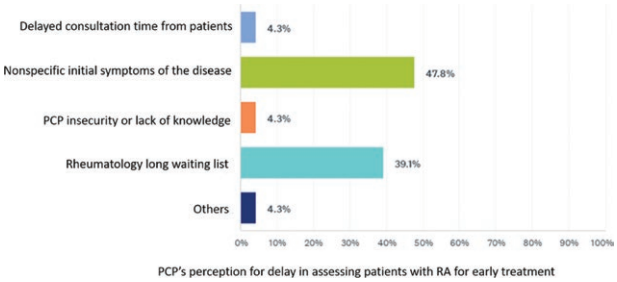

Figure 1.

Although 77% indicated using additional resources to improve their knowledge in RA, all participants stated that they would be interested in receiving more information on early diagnosis, being the preferred resources a specific e-consult (87%), updated mini guidelines (78%) and face-to face meetings with rheumatologists.

Conclusion: Most PCPs are aware of the importance of early diagnosis and management of RA but feel uncomfortable making the initial diagnosis. Non-specific initial symptoms and long waiting lists for rheumatology are the main reasons for delay from PCPs perspective. Resources to improve referral, including e-consult and specific guidelines, are in need as part of the actual referral program.

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Disclosure of Interests: None Declared.

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AB0228 UTILITY OF SERUM KL-6 IN PATIENTS WITH STABLE OR SLOWLY DECLINING LUNG FUNCTION IN RA-ILD

Keywords: Rheumatoid arthritis, Lungs, Biomarkers

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Background: Interstitial lung disease (ILD) is a severe extra-articular manifestation of rheumatoid arthritis (RA). Previously, we stratified the patients with rheumatoid arthritis-associated interstitial lung disease (RA-ILD) into four distinctive groups according to their change of percent predicted forced vital capacity using trajectory analysis: persistently improving, stable, slowly declining, and rapidly declining.[1] Till October 2020, a total of twelve patients died, of which eight patients died even though they belonged to either stable or slowly declining groups. Therefore, it advantages additional biomarkers benefits to anticipate poor prognosis.

Objectives: To analyze whether serum Kreb von den Lungen 6 (KL-6) predicts mortality among patients with stable or slowly declining % FVC pred. trajectory group.