Diagnostics (Not pharmaceutical, diagnostics company), Cem Gabay Grant/research support from: Roche, Pfizer, AB2 Bio Ltd, Consultant for: Roche, Pfizer, Lilly, AbbVie, Sanofi, Regeneron, Bristol-Myers Squibb, Novartis, UCB, AB2 Bio Ltd, Debiopharm
DOI: 10.1136/annrheumdis-2019-eular.2035

AB0275 RHEUMATOID ARTHRITIS IN HISPANIC PATIENTS: DEMOGRAPHIC AND BASELINE CLINICAL CHARACTERISTICS IN AN EARLY REFERRAL COHORT IN MEXICO VERSUS ROUTINE CARE IN THE UNITED STATES

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Background: Hispanics are the largest minority group in the United States (US) and his percentage is expected to increase (28.6% by 2060)¹, being Mexicans the largest group (67.9%). RA patients from Latin-America have distinctive features from White patients. The literature highlights a younger age at presentation and a different clinical expression compared with White² but few data for Hispanic patients in US are available.

Objectives: We compared baseline demographic, clinical features and disease management among Hispanic RA patients from two well characterized cohorts, in the USA and Mexico city.

Methods: An early arthritis clinic (EAC) was established at Site 1 (Mexico City); patients with recent-onset RA (<1 year of symptoms) had a standardized assessment and received "treat to target" treatment. At Site 2 (US), a "routine care" cohort was initiated in 2011, and all patients completed a multidimensional health assessment questionnaire (MDHAQ) as part of their routine care. Patients from both sites had baseline complete evaluation including sociodemographic data, patient-reported outcomes (PROs) (patient global assessment, pain-VAS, HAQ/MHAQ, RAPID3), laboratory data, and tender joint counts. Initial treatment was noted. Data from both sites were compared and appropriate statistics was used.

Results: 201 patients from site 1 and 179 from site 2 were included (table 1); among them, 105 (52%) and 37 (19%), respectively, were DMARDs-naïve at baseline. Patients from site 2 were older and had longer disease duration, however demographic characteristics did not differ. Naïve-DMARDs patients from site 2 scored significantly higher pain-VAS and tender joint counts, and had higher ESR values ($p \leq 0.05$, Mann Withney); a similar tendency was seen for other PROs. Time to DMARDs initiation was shorter in the EAC.

Table. Demographic and clinical characteristics at first rheumatology visit for RA patients. All data as median (IQR) unless otherwise indicated. * $p \leq 0.003$. NA, not applicable

	Site 1: Mexico-Early Arthritis Clinic		Site 2: US-RA Routine Care	
	Patients on DMARD N=96	DMARD Naïve N=105	Patients on DMARD N=142	DMARD Naïve N=37
DEMOGRAPHICS				
Age, years, mean (SD)	38.6 (13)	38.8 (12.9)	55.7 (15.4)	45.5 (12.6)
Female, %	87.5%	93%	87%	83%
Yrs of formal education	12 (9, 16)	12 (9, 14)	12 (9, 14)	12 (9.5, 14)
Symptom duration-first visit, mo	5.6 (3.9, 7.9)	4.7 (2.9, 6.5)	NA	22.7 (3.0, 47.9)
% treated as early RA (<6m)	59.4	70	NA	34
PROs				
Pain (0-10)	4.2 (2.4, 6)	6.2 (3.8, 7.8)	6 (2.7, 8)	8 (6, 8.5)
Patient global assessment (0-10)	4.4 (2.3, 6.8)	6.7 (3.9, 8.2)	5.5 (2.5, 8)	7.5 (4, 8.5)
Tender Joint Counts (TJC28 or self-reported RADAI48)	11 (6, 18)	14 (9, 20)	12 (3, 24)	20 (7, 32)
RAPID3 (0-30)	11.0 (6.8-16.3)	15.5 (10.3-19.1)	13.6 (6, 20)	15.3 (10, 21.5)
Physical Function-MHAQ (0-10)	2.2 (1-4)	3 (1.3-4.3)	3.0 (0.6, 4.2)	2.4 (1.2, 4.8)
SEROLOGIC DATA				
RF, %	82	82	75	72
ACPA, %	84	86	67	81
ESR, mm/hr	21.5 (11, 48)	23 (12.5, 38)	NA	35.5 (14, 55)

CRP, mg/dl	0.68 (0.22, 2.22)	0.67 (0.27, 2.48)	NA	0.69 (0.54, 1.23)
TREATMENT				
MTX, %	89	93	NA	63*
Other DMARDs, %	59	66	NA	44*
Prednisone, %	47	59	NA	80*
Mean dose (SD), mg	7.5 (2.3)	7.7 (3.5)		9.3 (3.4)
Time to initiate DMARD, mo	NA	0.2 (0-0.4)	NA	0.7 (0.4, 1.4)*

Conclusion: Hispanic patients with RA from different regions in America may differ in their initial presentation. Naïve DMARDs patients belonging to an early RA cohort had shorter presentation to rheumatology resulting in earlier treatment initiation, which has been associated to better outcomes. EACs facilitate the identification of patients with recent-onset disease and help provide early access to effective therapies.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.980

AB0276 IS PREDICTION OF CLINICAL RESPONSE TO METHOTREXATE IN INDIVIDUAL RHEUMATOID ARTHRITIS PATIENTS POSSIBLE? RESULTS OF A SYSTEMATIC LITERATURE REVIEW

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Objectives: To identify, by a systematic literature review, predictors of clinical response to methotrexate (MTX) treatment in rheumatoid arthritis (RA) patients, which would facilitate personalised treatment.

Methods: PubMed and Embase databases were searched for original articles. Additionally, congress abstracts of European League Against Rheumatism (EULAR) and American College of Rheumatology (ACR) annual meetings of the past 2 years were screened. Articles describing baseline predictors of clinical response to MTX after 3 to 6 months were included, since this reflects the time span used to determine treatment effectiveness and decide on treatment changes in treat-to-target recommendations.

Results: 30 articles were included, containing 100 different predictors and 11 predictive models, but only 19 predictors and 2 predictive models were studied in multiple similar RA cohorts. Of these 19 predictors, 4 were described in multiple articles sharing details on statistical analyses and response outcomes, allowing pooling of the predictive values of these 4 factors (Figure 1). Conflicting non-statistically significant associations between age and response were found (Figure 1a).¹⁻⁴ Female gender was found to be a predictor of non-response in two studies (OR (odds ratio) 0.55 and 0.54), but these findings could not be replicated in two other studies (Figure 1b).¹⁻⁴ In two studies, smoking predicted non-response (adjusted OR 0.35 and 0.60), but this was inconsistent over all response criteria assessed (Figure 1c).^{3,5} Higher disease activity score was a predictor of response in two studies (adjusted OR 1.12 and 2.7), conflicting and non-statistically significant predictive values were found in two other studies (Figure 1d).^{2-4,6} Rheumatoid factor positivity predicted non-response in two studies (adjusted hazard ratio 0.61, adjusted OR 0.4), although this was not found in three other studies.^{2-4,7,8} Heterogeneity between studies prohibited pooling of predictive values. Additionally, a validated epigenetic model was found: area under the receiver operating characteristic curve 0.90 in the development cohort and 0.91 in a validation cohort.⁹

Conclusion: No predictors were identified reliably predicting clinical response to MTX after 3 to 6 months in the individual patient: clinical predictors were weak. However, a promising epigenetic model was found that needs further validation. Future studies on prediction of response to MTX should focus on combining clinical characteristics with genetic and other laboratory biomarkers and on predicting outcome after 3 to 6 months of treatment, to get closer to personalised medicine.

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