Objectives: The aim of this study was to estimate the proportion of EAMs in southern Chinese patients with IJDs and to explore the risk factors.

Methods: This was a retrospective cohort study of a total 1135 IJDs patients, including 788 rheumatoid arthritis (RA) patients, 307 ankylosing spondylitis (AS) patients and 40 psoriatic arthritis (PsA) patients. Demographic data, disease characteristics, laboratory blood tests, medical imaging, and the presence of EAMs were recorded.

Results: We found 459 (40.44%) of them presented with EAMs: 30.84% had cardiovascular; 7.67% had pulmonary, 5.29% had osteoporosis/low bone mineral density, 2.29% had ocular, 0.79% had gastrointestinal and 0.26% had renal involvements. Multivariate logistic regression showed older age (OR: 1.05, $P<0.001$) and higher anti-cyclic citrullinated peptide antibody (anti-CCP) levels (OR: 1.003, $P=0.011$) were independent risks of EAMs in RA patients. In AS group, older age (OR: 1.07, $P<0.001$) and higher disease activity (OR: 2.06, $P<0.001$), were independent risks of EAMs. As in PsA group, longer disease duration (OR: 1.01, $P=0.046$) and higher disease activity (OR: 1.15, $P=0.011$) were independent risks.

Conclusion: These results suggested the high prevalence of EAMs, and it is important to regularly screen on EAMs, as it influences treatment decision and impacts on patients' quality of life.

REFERENCES

- [1] Agca R, Heslinga SC, van Halm VP, Nurmohamed MT. Atherosclerotic cardiovascular disease in patients with chronic inflammatory joint disorders. *Heart* 2016;102:790-5.
- [2] Carmen Stolwijk AvT, José Dionisio Castillo-Ortiz AB. relevance of extra-articular manifestations in patients with ankylosing spondylitis: a systematic review and meta-analysis. *Ann Rheum Dis* 2015;74:65-73.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.5259

AB0311 HEMOSTASIS IN AFRICAN BLACK COMPARED TO WHITE PATIENTS WITH RHEUMATOID ARTHRITIS

Chanel Robinson¹, Linda Tsang¹, Ahmed Solomon², Angela Woodiwiss¹, Gavin Norton¹, Hon-Chun Hsu¹, Mervyn Mer³, Aletta Millen¹, Patrick Desseine^{1,2}.
¹University of the Witwatersrand, Cardiovascular Pathophysiology and Genomics Research Unit, School of Physiology, Faculty of Health Sciences, Johannesburg, South Africa; ²University of the Witwatersrand, Department of Rheumatology, Charlotte Maxeke Johannesburg Academic Hospital, Faculty of Health Sciences, Johannesburg, South Africa; ³University of the Witwatersrand, Department of Medicine, Division of Critical Care and Pulmonology, Charlotte Maxeke Johannesburg Academic Hospital, Faculty of Health Sciences, Johannesburg, South Africa

Background: Aberrant hemostasis is implicated in the increased CVD risk experienced by patients with rheumatoid arthritis (RA) (1). Large circulating concentrations of plasminogen activator inhibitor-1 (PAI-1) predict cardiovascular event rates (2). PAI-1 levels are markedly smaller in American and African black populations than in those of European descent (3,4). Whether this protection persists in black persons who have RA is unknown.

Objectives: This study compared hemostasis factors among African black and white RA patients

Methods: PAI-1, tissue factor pathway inhibitor (TFPI) and tissue plasminogen activator (t-PA) levels were measured by ELISA in 236 (114 black; 122 white) African RA patients. Data were analysed in mixed regression models.

Results: In age and sex adjusted analysis, PAI-1 concentrations were larger in black compared to white patients with RA (median (interquartile range (IQR))=12.4 (3.1-28.7) versus 5.4 (1.5-25.0) ng/ml, $p=0.006$). In all patients, body mass index (BMI) (β (SE)=0.022 (0.007), $p=0.003$), waist circumference (β (SE)=0.007 (0.003), $p=0.04$) and tetracycline use (β (SE)=0.291 (0.133), $p=0.03$) were associated with logarithmically transformed PAI-1 levels. Population grouping did not influence these relationships (interaction $p>0.8$) but impacted rheumatoid factor (RF) positivity- and azathioprine use-PAI-1 level associations (interaction $p=0.03$ and 0.004, respectively). In stratified analysis, RF positivity was associated with PAI-1 levels in white (β (SE)=0.344 (0.139), $p=0.01$) but not black patients (β (SE)=-0.102 (0.143), $p=0.5$), and azathioprine use was associated with PAI-1 levels in black ($\beta=0.400$ (0.155), $p=0.01$) but not white patients (β (SE)=0.305 (0.184), $p=0.1$). In age, sex, BMI, RF positivity and azathioprine and tetracycline use adjusted analysis, black population origin remained associated with PAI-1 levels (β (SE)=0.175 (0.091), $p=0.05$). In age and sex adjusted analysis, TFPI and t-PA levels did not differ in black compared to white RA patients (median (IQR)=221.0 (149.8-410.5)

versus 225.0 (130.4-357.2) pg/ml, $p=0.6$, and 6.7 (4.9-9.1) versus 7.4 (4.4-10.0) pg/ml, $p=0.3$).

Conclusion: PAI-1 concentrations are substantially larger in African black compared to white patients with RA.

REFERENCES

- [1] Van den Hoeve IAM, Sattar N, Nurmohamed MT. Thromboembolic and cardiovascular risk in rheumatoid arthritis: role of the haemostatic system. *Ann Rheum Dis* 2014;73:954-7.
- [2] Jung RG, Motazedian P, Ramirez FD, et al. Association between plasminogen activator-1 and cardiovascular events: a systematic review and meta-analysis. *Thrombosis J* (2018) 16:12.
- [3] Festa A, D'Agostino R, Rich SS, et al. Promoter (4G/5G) plasminogen activator inhibitor-1 genotype and plasminogen activator inhibitor-1 levels in blacks, Hispanics and non-Hispanic whites. The Insulin Resistance Atherosclerosis Study. *Circulation* 2003;107:2422-7.
- [4] De Lange Z, Rijken DC, Hoekstra T, et al. In black South Africans from rural and urban communities, the 4G/5G PAI-1 polymorphism influences PAI-1 activity, but not plasma clot lysis time. *PLoS One* 2013;8 (12): e83151.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.7586

AB0312 CARDIOVASCULAR RISK FACTOR'S BEHAVIOR AND CARDIOVASCULAR RISK IN HISPANIC EARLY RHEUMATOID ARTHRITIS PATIENTS: A COHORT STUDY

Irazú Contreras-Yáñez, Guillermo Guaracha-Basáñez, Virginia Dr. Pascual. Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Immunology and Rheumatology, Mexico City, Mexico

Background: Rheumatoid arthritis (RA) patients present an increased risk of cardiovascular (CV) morbidity and mortality compared to the general population¹. Patients from Latin-America exhibit younger age, female preponderance, less severe disease and dyslipidemia, which are relevant when assessing CV risk². In order to impact CV morbidity/mortality, control of reversible CV-risk factors need to be achieved³. Cohorts allow prospective evaluation of long-term outcomes. In 2004 we initiated an early RA cohort. Up to June 2018, the cohort comprised 185 RA patients with prospective assessments of CV risk and at least one year of follow-up.

Objectives: To monitor CV risk-factor's behavior during the first year of follow-up and to identify if traditional CV risk scores predict major CV events (MACE) in our population.

Methods: Once enrolled patients had complete rheumatic evaluations at regular intervals. Baseline CV-risk factor's assessments included age, gender, ethnicity, physical activity and history of first-degree relatives with premature heart disease. CV-risk factors assessments at baseline and at least 6 months apart included blood pressure, serum total cholesterol (CHO) and HDL cholesterol (Castelli ratio CHO/HDL was derived), serum glucose (GLU, in mg/dL), body mass index (BMI), CRP (in mg/dL) and (at least) the following comorbidities: Hypertension (HT), and HT treatment, diabetes mellitus (DM), advanced chronic kidney failure (CKF) and atrial fibrillation (AF). Smoking status was assessed at baseline and last follow-up. Incident MACE were defined according to standard definitions⁴. Cox regression's model identified predictors of incidental MACE. Patients gave written informed consent.

Results: At cohort entry, the 185 patients (all Hispanic) which data were analyzed were primarily middle-aged females (87.6%) and had 5.3 months (3.3-7.1) of disease duration. Most prevalent CV risk factors were CRP >1 mg/dL (90%), Castelli ratio > 3 (84%) and low HDL levels (74%). During the first year of follow-up, smoking status, systolic blood pressure ≥ 140 mm Hg, diastolic blood pressure ≥ 90 mm Hg, low HDL, Castelli ratio > 3, high CRP and patients with active disease progressively decreased; meanwhile, the opposite figure was true for BMI ≥ 30 kg/m² and patients on corticosteroids. At 12 months of follow-up, number of patients with incident CV risk factor was higher for Castelli-ratio > 3 (23%), low HDL (16.3%), high CHO (10.6%), BMI ≥ 30 kg/m² (10%), CRP >1 mg/dL (7.5%) and age ≥ 45 years old (3.3%).

During the first year of follow-up, 45.8% of the patients had age between 40-79 years old, required to apply American Heart Association (AHA) criteria; these identified 12 patients with high CV-risk.

Up to June 2018, the cohort had 1358 patient/years follow-up and 6 patients had incidental MACE after (median, IQR) 6.5 years of follow-up (3.3-9.5). High CV-risk score at baseline failed to predict incidental MACE. Meanwhile, BMI ≥ 30 kg/m² was a predictor of incidental MACE in our population.