SAT0137

CAROTID INTIMA-MEDIA THICKNESS AND ATHEROSCLEROTIC PLAQUE IN PATIENTS WITH REACTIVE AND RHEUMATOID ARTHRITIS

H. Palhuyeva¹, A. Litviakov¹, N. Podolinskaya¹. ¹Internal desiases, Vitebsk state medical university, Vitebsk, Belarus

Background: It is well-known that the leading cause of premature mortality in patients with rheumatoid arthritis (RA) is cardiovascular disease, myocardial infarction, heart failure, stroke.^{1,2} Another important group of rheumatic diseases that attract the attention in connection with possible proatherogenic effects are the seronegative spondyloarthropathies. Reactive arthritis (ReA) may involve the cardiovascular system, aortitis, myocarditis, pericarditis.^{3,4}

Objectives: to estimate atherosclerotic changes of arteries in patients with RA and ReA, to confront the revealed changes with clinical features of joint pathology, activity of inflammatory process.

Methods: We included 75 patients with RA (age 38,7±7,4, disease duration 8,3±5,4), 41 patients with chronic ReA (age 35,8±7,2 disease duration 6,4±4,5) and 29 healthy subjects, matched for age and gender, without a history of CVD. An ultrasound investigation of the arterial vassal with measurement of the intima-media thickness (IMT) of carotids was performed.

Results: It has been determined, that in RA group IMT was 0,8 mm (0,7–0,9), compared with 0,6 mm (0,6–0,7) in ReA and 0,6 mm (0,6–0,7) in control group. In RA group IMT positively correlate with the age, duration of disease, Ritchie index, C-reactive protein level. In ReA group disease duration, C-reactive protein level, Ritchie index are not associated with IMT.

In 22 (29,3%) patients with RA we found atherosclerotic plaques lesion in carotids, aorta, and vessels of the lower extremities. Only in 1 (2,4%) patient with PeA we found atherosclerotic plaques. Presence of atherosclerotic plaques associated with RA ($\chi^2=8,75$, $p<0,05$). In RA detection of atherosclerotic plaques associated with disease durations (12 years (10–15) in group with plaques and 5 years (3–8) in group without plaques). The presence of atherosclerotic plaques is associated with rheumatoid factor ($\chi^2=1,02$, $p>0,05$), and systemic manifestations of RA ($\chi^2=15,89$, $p<0,001$).

Conclusions: Patients with RA had an increase thickness of IMT and atherosclerotic plaques, which appear in various vascular regions. Long-term duration of ReA is not associated with development atherosclerotic lesion.

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SAT0138

A DELAY TO DIAGNOSIS, BUT NOT TO TREATMENT INITIATION, IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA) IS ASSOCIATED WITH ETHNIC GROUP AT ONE US ACADEMIC SITE

I. Castrejón¹, T. Pincus¹, J. Chua¹, N. Shakoore¹, S. Hassan¹, J. A. Block¹. ¹Rheumatology, Rush University Medical Center, Chicago, United States

Background: Disparities in the initiation of disease modifying antirheumatic drugs (DMARDs) therapy in ethnic minorities have been described in rheumatoid arthritis (RA)(1). These disparities are of particular concern in view of the emergence of early diagnosis and aggressive treatment as a cornerstone of management. Delays in diagnosis and treatment have been ascribed in part to lack of awareness, insidious onset, and atypical clinical presentation, but patient-dependent factors may be as important.

Objectives: To evaluate disparities in referral and initiation of treatment in RA patients at a USA academic rheumatology site.

Methods: We conducted a retrospective study and reviewed the medical records of patients with a primary diagnosis of RA seen at one USA academic setting (2011–2016). Among 642 RA patients, 50 received their initial evaluation by a rheumatologist during the observation period, and were naïve to any DMARD. Data extraction included time between first symptoms and initial visit to our rheumatology facility, demographics, family history, and laboratory tests. In addition, a Multidimensional-Health Assessment Questionnaire (MDHAQ) allowed us to calculate a RAPID3 score as the sum of 0–10 scores for a pain visual analogue scale

(VAS), patient global VAS, and physical function. The time to initiation and type of DMARD prescribed after the first visit was also collected. Statistical analyses were performed using Kruskal-Wallis for differences between medians and chi-squared tests for comparisons between proportions according to ethnicity groups.

Results: Fifty new patients with RA were seen in the rheumatology outpatient clinic; 43% were White, 34% Black, and 23% Hispanic. The median delay to be seen by a rheumatologist was 7.2 months for White patients, 12 months for Black, and 11.9 months for Hispanic patients. There were no significant differences in time to initiation of DMARD according to ethnicity. Methotrexate was the DMARD most frequently prescribed, ranging from 86% in White patients to 60% in Hispanic patients. Disease severity according to RAPID3 scores was higher in Black and Hispanic groups, although laboratory tests did not differ between the 3 groups (Table).

Table 1. Patient characteristics by ethnicity

	White N=23	Black N=17	Hispanic N=10
Age, mean (SD)	55.5 (13.1)	52.6 (12.3)	49.7 (10.2)
Female, %	74%	88%	80%
Family History of RA, %	15%	9%	20%
Median disease duration (IQR) at the time of first rheumatology evaluation, months	7.2 (4.7, 23.9)	12.0 (7.7, 22.9)	11.9 (5.0, 47.9)*
Time to initiate DMARDs, months, median (IQR)	1.0 (0.5,1.8)	0.8 (0.6,1.6)	0.5 (0,0.7)
Methotrexate	86%	75%	60%
Rheumatoid Factor, %	50%	64%	75%
Anti-CCP, %	69%	64%	80%
ESR, mean (IQR)	15 (10, 25)	23.5 (17, 41)	38 (19, 46)
CRP, mean (IQR)	5 (5, 15)	5 (5, 5.8)	5 (5, 7)
RAPID3, mean (IQR)	12.9 (8.2, 16.9)	18.8 (14.6, 19.4)	18.5 (10.2, 21.5)*

Statistical significance in **bold** * $p<0.05$.

Conclusions: There is a considerable delay in initial referral to a rheumatologist, which appears to be more pronounced among Black and Hispanic patients. However, once seen in the clinic, initiation of DMARDs occurred within 1-month, regardless of ethnicity. These findings suggest that ethnic minorities are at risk of deleterious outcomes as a consequence of delayed presentation to a rheumatology setting.

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SAT0139

SUBCLINICAL IMPAIRMENT OF MYOCARDIAL FUNCTIONALITY DURING THE VERY EARLY STAGE OF INFLAMMATORY JOINT DISEASES

A. Lo Gullo¹, J. Rodríguez-Carrio^{2,3,*}, F. Savarino¹, C. O. Aragona¹, G. Dattilo¹, C. Zito¹, A. Suárez^{2,3}, S. Loddio¹, M. Atteritano¹, A. Saitta¹, G. Mandraffino¹.

¹Department of Clinical and Experimental Medicine, University of Messina, Messina, Italy, ²Area of Immunology, University of Oviedo, ³Instituto de Investigación Sanitaria del Principado de Asturias (ISPA), Oviedo, Spain

Background: cardiovascular (CV) disease morbidity is increased in inflammatory joint diseases (IJD), as rheumatoid (RA) and psoriatic arthritis (PsA). Whereas accelerated subclinical atherosclerosis and endothelial dysfunction have been widely studied, less attention has been paid to myocardial function. RA patients with established disease who develop heart failure often have impaired left ventricular (LV) diastolic functionality with preserved LV ejection fraction (EF) and present fewer signs than non-RA patients. Then, additional and more sensitive screening tools as myocardial strain imaging are needed. In this sense, speckle-tracking echocardiography (STE) has been demonstrated to be suitable for detecting impaired systolic function. Although CV risk is increased at disease onset, whether abnormal myocardial functionality could be found already in the early phase of IJD remains unknown.

Objectives: to evaluate the myocardial functionality by STE in recent onset RA and PsA patients and its associations with clinical features.

Methods: STE was used to assess the myocardial functionality in patients with very early RA (n=41) (2010 EULAR/ACR criteria) and PsA (n=35) (CASPAR criteria) without traditional CV risk factors, and 58 matched healthy controls (HC). Global longitudinal and circumferential strain (GLS and GCS) were estimated.

Results: RA patients exhibited impaired GLS ($-18.13 \pm 1.36\%$) and GCS ($-20.15 \pm 1.34\%$) compared to HC ($-23.25 \pm 1.80\%$, $p < 0.001$ and $-24.50 \pm 0.70\%$, $p < 0.001$; respectively), GLS being also altered in PsA ($-21.57 \pm 2.59\%$, $p = 0.020$ vs HC). No differences in LV mass index, posterior wall thickness, LV DD, E/A index or EF were found among groups (all $p > 0.050$). DAS28 was correlated to GLS ($r = 0.908$, $p < 0.001$) and GCS ($r = 0.868$, $p < 0.001$) in RA. These findings were further confirmed by multivariate regression analyses adjusted for age, gender, BMI, CRP, ESR, SBP, DBP and duration of the symptoms, DAS28 being the only independent predictor of GLS ($p < 0.001$) and GCS ($p = 0.002$). Principal Component Analyses retrieved equivalent results. Although GCS was not significantly different in PsA compared to HC, a positive correlation with DAS28 ($r = 0.438$, $p = 0.008$) was observed. Consequently, GLS and GCS were impaired in PsA patients with high disease activity (DAS28 > 2.9) compared to HC (GLS: $p = 0.066$ and GCS: $p = 0.007$).

Conclusions: a subclinical myocardial dysfunction can be observed in IJD patients with preserved LV function and without traditional CV risk factors. The subclinical impairment of the myocardial function was found to be a very early event in IJD. Disease activity was the main predictor of myocardial strain impairment. Strain imaging by STE may detect early myocardial dysfunction in IJD.

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SAT0140

RISK OF VENOUS THROMBOEMBOLISM IN RHEUMATOID ARTHRITIS PATIENTS TREATED WITH BIOLOGIC AND NON-BIOLOGIC DMARDS

J. C. Maro¹, T. Menzin¹, K. Hornbuckle², J. T. Giles³, A. Kavanaugh⁴, T. Dörner⁵, D. Martin⁶, T. Huang¹, C. A. Salinas². ¹Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston, ²Eli Lilly and Company, Indianapolis, ³Columbia University, New York, ⁴UC San Diego School of Medicine, La Jolla, United States, ⁵Charité Universitätsmedizin Berlin, Berlin, Germany, ⁶U.S. Food and Drug Administration, Silver Spring, United States

Background: Individuals with rheumatoid arthritis (RA) have an increased risk of venous thromboembolism (VTE), including pulmonary embolism (PE) and deep vein thrombosis (DVT), compared with non-RA populations based on several recent studies^{1,2}. However, information is sparse on the risk of VTE among patients receiving treatment with specific disease-modifying antirheumatic drugs (DMARDs) or categories of therapies.

Objectives: To estimate the incidence of VTE among patients receiving routine clinical care for RA, specifically during treatment with conventional (c) and biologic (b) DMARDs.

Methods: Incidence rates were estimated in a retrospective cohort study of patients with RA (defined as at least two International Classification of Disease, Ninth Revision, Clinical Modification [ICD-9-CM] Diagnostic codes) enrolled in US health insurance plans between October 1, 2010 to September 30, 2015 and participating in the Innovation in Medical Evidence Development and Surveillance (IMEDS) program. These data are formatted into the U.S. Food and Drug Administration's Sentinel Common Data Model and Sentinel's publicly available standardized analysis tools were used to estimate the incidence rates of VTE following initiation of cDMARDs or bDMARDs. Patients were required to be new users of the study drug class, with no evidence of use in the 365 days preceding initiation and were not allowed to re-enter the cohort. Patients were required to demonstrate continuous use of the study drug class to be considered at risk for VTE. VTE was defined based on ICD-9-CM codes, but patients diagnosed in outpatient settings were also required to have evidence of oral anticoagulant dispensing within 31 days of the event. PE and DVT ICD-9-CM codes were also disaggregated to produce separate incidence rates.

Results: During treatment with cDMARDs (i.e., methotrexate or leflunomide) or bDMARDs (i.e., abatacept, adalimumab, certolizumab pegol, etanercept, golimumab, infliximab, rituximab, and tocilizumab), patients experienced VTE at a crude incidence rate of 1.49 (95% CI 1.30, 1.71) per 100 person-years (PY) and 0.98 (95% CI 0.83, 1.14) per 100 PY, respectively. For each study drug class, age was an important risk factor for VTE, with increasing age associated with higher rates of VTE; for example, during treatment with bDMARDs incidence rate (IR)_{18-49 years}=0.69, IR_{50-59 years}=0.65, IR_{60-64 years}=0.94, and IR_{65+ years}=2.11 per 100 PY (figure 1). Men also had higher incidence rates of VTE than women. In the analyses of PE and DVT, DVT incidence rates were higher than PE incidence rates, and similar incidence rate trends overall and across age strata for cDMARD and bDMARD cohorts were noted.

Figure 1 Incidence of VTE among patients with RA treated with cDMARDs and bDMARDs, overall and by age. (Data displayed as incidence rates with 95% confidence intervals.)

Conclusions: Venous thromboembolism is an important clinical concern among patients with RA and incidence rates vary by age and sex during routine clinical treatment with DMARDs.

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SAT0141

TRENDS IN THE INCIDENCE OF LYMPHOMAS AND LEUKEMIAS IN PATIENTS WITH RHEUMATOID ARTHRITIS IN SPAIN: AN OBSERVATIONAL COHORT STUDY OF HOSPITAL DISCHARGES FROM 1999 TO 2015 (TREND-AR STUDY)

J. L. Morell Hita¹, R. Mazzucchelli², E. Perez Fernandez³, J. Quiros², C. Macía Villa⁴, N. Crespi⁵, M. Peña², C. Barbadillo⁶, M. Espinosa⁶, H. Godoy⁶, M. Fernandez Prada⁷, M. Galindo⁸, A. Garcia Vellido⁹, O. Guzon Illescas², A. Herranz¹⁰, C. Martinez Prada¹¹, C. Morado Quiñoa¹¹, V. Villaverde¹². ¹Rheumatology, Hospital Universitario Ramón y Cajal, ²Rheumatology, ³Hospital Universitario Fundación Alcorcón, ⁴Rheumatology, Hospital Universitario Severo Ochoa, ⁵CS La Rivota, ⁶Rheumatology, Hospital Universitario Puerta de Hierro, Madrid, ⁷Rheumatology, Hospital Universitario Guadalajara, Guadalajara, ⁸Rheumatology, Hospital Universitario Doce de Octubre, ⁹Rheumatology, Hospital Universitario La Princesa, ¹⁰Rheumatology, Hospital del Henares, ¹¹Rheumatology, Hospital Universitario Clínico San Carlos, ¹²Rheumatology, Hospital Universitario Móstoles, Madrid, Spain

Background: Oncohematological diseases have an increased incidence in Rheumatoid Arthritis (RA) patients. However, their trend in RA in Spain is unknown

Objectives: To analyze the incidence and trend of hospital admissions for lymphomas and leukemias in RA patients in Spain from 1999–2015

Methods: We performed an observational retrospective population study analyzing the spanish administrative database that includes a Minimum Basic Data Set (MBDS) of hospital admissions of RA patients from 1999–2015. We selected MBDSs for lymphomas and leukemias. Cases were identified by the presence in primary/secondary diagnosis of ICD9 codes. The population at risk was estimated with a prevalence of RA of 0.5% (0.8% women and 0.2% men). Crude and adjusted rates were calculated, and the trend was analyzed using the Generalized Linear Model with the year as the analysis variable. SPSS version 20 (Chicago, IL) was used

Results: 338.343 RA hospital admissions were detected, being 3561 (1,1%) lymphomas (61,5% women, 38,5% men) and 1664 (0,5%) leukemias (52,3% women,