descriptive comparisons, differences in proportions were determined by Fisher's exact test, and ANOVA determined differences in means for continuous variables. Multivariate linear models estimated the effect of RA on AMH. In women with RA, the effect of RA medication use on AMH and anovulation was explored.

Results: There were 75 RA patients (83% Caucasian, 4% Hispanic, 77% with at least a college education) and 75 controls (64% Caucasian, 5% Hispanic, 88% with at least a college education). The majority of RA patients were married (60%), compared to 31% of controls. The mean age of both RA patients and controls was 32 years. Mean AMH in RA patients was 3.0 (SD: 2.6) compared to 3.9 (SD: 3.9) in controls (p-value: 0.1). In linear regression models adjusted for age, hormonal contraceptives and race (nonwhite vs. white), RA patients had a lower AMH than healthy controls (β: -1.05; 95% CI: -2.09, -0.005; p=0.05). There was no observed difference in the proportion of RA patients and controls with anovulation (19% in RA and 21% in controls). Infertility was reported by 12% of RA patients and 7% of controls (p=0.4).

Among RA patients, 81% reported having ever used methotrexate (MTX). The mean AMH for MTX users was 2.8 (SD: 2.4) compared to 4.0 (SD: 3.1) in never users (p=0.1). In linear regression models adjusted for age, hormonal contraceptives and race, RA patients who had ever taken MTX had a lower AMH than those who had never taken MTX (β: -1.49; 95% CI: -2.83, -0.15; p=0.03). However, when the cumulative dose of MTX was analyzed, there was no effect of cumulative MTX and AMH. Ever use of prednisone or NSAIDs did not appear to affect AMH levels in RA patients. Methotrexate, prednisone, and NSAIDs use did not have an observed effect on anovulation.

Conclusions: In this cross-sectional study, women with RA appeared to have a lower AMH level than healthy controls, suggesting ovarian reserve may be lower in these patients. In RA patients, previous use of methotrexate was associated with lower AMH, although no dose response of cumulative methotrexate exposure was observed. We did not observe a difference in anovulation between RA patients and controls. This suggests women with RA may have reduced fertility for reasons other than anovulation.

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FRI0158 CAROTID ENLARGEMENT, BRACHIAL ARTERY FLOW-MEDIATED VASODILATATION AND SERUM LEVELS OF VON WILLEBRAND FACTOR IN RHEUMATOID ARTHRITIS

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Background:

In rheumatoid arthritis (RA), higher mortality is mainly due to cardiovascular disease, as a consequence of accelerated atherosclerosis found in this diseases (1). Finding methods for assessing vascular dysfunction during the early stages of the disease is important, particularly in patient groups at high CV risk (2).

The use of noninvasive imaging techniques may help identify high-risk individuals who may benefit from active therapy to prevent clinical disease. Two of them, brachial ultrasonography to determine the presence of endothelial dysfunction and carotid ultrasonography to assess carotid intima-media wall thickness (IMT) have been found to be useful in the assessment of the cardiovascular risk of patients with RA (3). Prothrombotic markers have been shown to be able to predict cardiovascular risk in patients with RA (4).

Objectives: The first aim of the study was to investigate whether early signs of atherosclerosis and endothelial dysfunction, as measured by IMT and brachial artery flow-mediated (FMD) vasodilatation, were present in patients with RA compared with controls. The second aim was to analyze correlation between serum levels of vWf and IMT and FMD in patients with RA.

Methods: Fifty-two patients with RA and 30 matched healthy controls without clinically evident CV disease were studied. Brachial and carotid ultrasonography was performed to determine FMD and IMT, respectively. We also assayed immunological, inflammatory and metabolic laboratory markers.

Results: IMT was significantly higher in RA patients (1.00±0.16 mm) patients than in controls (0.89±0.13 mm) (P=0.001). FMD% was significantly lower in RA (9.16±7.03) as compared to controls (12.60±5.49) (p=0.005). It showed statistically higher values of vWF in the RA patients compared to the control group (p=0.01).

Patients with RA is divided into two groups according to the value of the IMT, below 9mm and 0.9mm and above. vWFact is statistical significantly higher in the group with thicker IMT (p=0.046), as well as the percentage of men (p=0.030). Other parameters did not show statistical significance in relation to the value of the IMT.

Conclusions: In patients with RA, increased serum levels of vWF and impaired FMD and IMT, indicating endothelial dysfunction and accelerated atherosclerosis. IMT measurement is the first candidate to evaluate against conventional evaluation of cardiovascular risk in prospective studies.

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FRI0159 INFECTION AND MALIGNANCY ARE NOW THE MAJOR CAUSES OF DEATH IN AGGRESSIVELY TREATED RHEUMATOID ARTHRITIS PATIENTS

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Background: Patients with rheumatoid arthritis (RA) have an increased mortality compared to the general population. Previous studies have shown that this is attributable to cardiovascular and respiratory disease. Over recent years earlier and more aggressive treatment with higher dosage of methotrexate and the earlier use of biologic drugs has improved disease outcomes. The effect on cause of death is unknown. In this retrospective cohort study we found the major cause of death was infection followed by malignancy and found no correlation with seropositivity or gender.

Objectives: To analyse the causes of death in RA patients treated with aggressive disease modifying anti rheumatic drugs (DMARD) and Biologic therapies in Berkshire, UK.

Methods: Patients with RA who died between 2010 and 2016 were identified using the DAWN software DMARD monitoring database. A cohort of 3106 patients with RA are monitored using DAWN software in Berkshire, UK. The causes of death were identified from medical records, general practice records or the local coroners office.

Results: 198 patients on DAWN monitoring died during the 6 year study period. Treatment details and cause of death was identified for 131 RA patients. 71% were seropositive for rheumatoid factor and 61% were female.

91 patients (69%) were treated with methotrexate, 28 hydroxychloroquine (21%), 14 sulphasalazine (21%) and 7 with leflunomide (5%). The majority of patients (81) were on monotherapy (61%), 32 were on 2 DMARDS (24%) and only one was on triple therapy.

4 patients with RA who died were on biologic monotherapy, 10 were treated with biologic and combination DMARD. The most commonly prescribed biologics were etanercept (35%) and rituximab (35%).

The leading causes of death in this cohort were pneumonia (39 patients 29%), cerebrovascular disease (16 patients 12%), septicaemia (11 patients 8%) and lung cancer (6 patients 4%).

Infection accounted for 57 patients' deaths (43%) followed by malignancy in 24 patients (18%). Cerebrovascular disease (20 patients, 15%) and cardiovascular disease (13 patients, 9%) were less frequent causes of death in our cohort.

Comorbidity data for the cohort was recorded premortem. 49 patients (37%) had cardiovascular disease of any kind. 25% had respiratory disease and 23% had an endocrine comorbidity (predominantly diabetes).

Conclusions: In our large cohort of aggressively treated RA patients, infection followed by malignancy and not cardiovascular disease, was the leading cause of death. Larger prospective studies will be required to see if cumulative drug toxicity of more aggressive early treatment improves outcome from RA but changes mortality from comorbidities over time.

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FRI0160 EVALUATION OF INFLAMMATORY CARDIOVASCULAR (CV) RISK FACTORS IN PRE- AND POST-MENOPAUSAL FEMALE PATIENTS WITH RHEUMATOID ARTHRITIS (RA)

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Objectives: To assess inflammatory factors and peripheral vessels involvement as markers of cardiovascular risk in female patients with RA

Methods: 105 female patients who fulfill ACR/EULAR 2010 criteria were examined. Laboratory assessments consisted of biochemistry and hematology analysis, measuring of CRP level, rheumatoid factor, anti-CCP level, total cholesterol, HDL, LDL, thyroglobulin, apoliprotein, A1, apoliprotein B, uric acid, HbA1c, microalbuminuria. DAS28 was used in characterizing RA activity. CV risk was defined per mSCORE. Tibial artery and carotid artery ultrasonography examination included the measurement of cIMT in 3 points, detection of focal plaques in the extracranial carotid tree, blood flow velocity and morphology of the intima was performed

Results: 83.3% reproductive age patients were without CV risk, 11.1% experienced middle level and 5.6% low level of CV risk on mSCOR. In 96.1% postmenopausal patients moderate, high and very high CV risk was detected. According to multiple logistic regression analysis we identified CV risk factors: