

escalate in RA populations, weight loss may be increasingly important to improve not only physical health, disease activity, and response to treatment, but also pain, fatigue, and PF.

References:

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FRI0172 PREVALENCE AND FEATURES OF THE “MASKED” ARTERIAL HYPERTENSION IN WOMEN WITH RHEUMATOID ARTHRITIS WITHOUT CARDIOVASCULAR DISEASES BASED TO AMBULATORY BLOOD PRESSURE MONITORING

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Background: Cardiovascular (CV) events are the main reason of increased mortality at patients with rheumatoid arthritis (RA). Arterial hypertension (AH) takes a leading position among CV risk factors in RA. Ambulatory blood pressure monitoring (ABPM) has to be executed for persons with high cardiovascular risk and can be used for evaluation of “masked” arterial hypertension (MAH), according to the current recommendations.

Objectives: to estimate the frequency of identification and peculiarities of the MAH according to ambulatory blood pressure monitoring in women with RA without CV diseases.

Methods: The study included 36 women with RA (ACR 1987 and/or EULAR/ACR 2010 criteria) without CV diseases and AH (according to the anamnesis and 3-fold “office” blood pressure (BP) measurement). Mean age of RA patients was 55±7.15 years; mean duration of RA was 10 [3; 17] years, mean DAS 28 – 5.25 [4.6; 5.7]. As controls were involved 39 women with RA and AH (mean age 58.3±6.08 years; mean duration of RA - 8 [4;14] years, mean DAS 28- 5.08 [4.04; 5.85]) and 30 women with AH without inflammatory joint diseases (mean age 55.9±6.2). Exclusion criteria were smoking, diabetes mellitus, symptomatic AH (except controls), cardiovascular diseases.

ABPM was measured using the BPlab with the program VASOTENSE (Russian). Criteria for MAH were out-of-office BP ≥135/85 mmHg and/or average daily out-of-office BP ≥130/80 mmHg according to ABPM and considering optimal office BP.

The anamnesis, laboratory and instrumental methods of inspection were considered. Statistical analyze was performed with STATISTICA 7.0 (State Soft, USA).

Results: According to ABPM 24 of the 36 (66.6%) RA patients had optimal BP, 12 (33.3%) patients had the MAH phenomenon.

The patients with RA + AH and AH patients had the comparable levels of a daily BP [132.1/80.7 and 126.9/78.0 mmHg respectively, $p>0.05$].

The RA patients with MAH had statistically significant differences of BP in day and night hours [137.58/87 mmHg and 137/84 mmHg, respectively] compared to the RA + AH patients [132.1/80.7 mmHg and 128.3/73.8 mmHg, respectively, $p=0.004$] and AH patients [126.9/78 and 118/68.5 mmHg, respectively, $p=0.001$], what it is can be bound to absence of anti-hypertensive therapy at RA patients with MAH.

Nocturnal systolic BP correlated with ESR (Spearman's $r=0.64$, $p<0.05$). Daily diastolic BP interrelated with SCORE/EULAR ($r=0.86$, $p<0.05$) and arterial stiffness index ($r=0.86$, $p<0.05$) in RA patients with MAH; nocturnal systolic BP correlated with C-reactive protein ($r=0.36$, $p<0.05$) in RA+AH patients.

More than 60% of the RA+AH patients and RA+MAH had high variability of BP. High variability of nocturnal systolic BP occurred at 34.3% and 44.4% of RA+AH and RA+MAH patients, respectively.

In RA patients were found correlations between indices of a BP variability, duration of RA ($r=0.33$, $p<0.05$); C-reactive protein ($r=0.36$, $p<0.05$); daily diastolic BP ($r=0.35$, $p<0.05$); pulse BP ($r=0.31$, $p<0.05$); and frequency of non-steroidal anti-inflammatory drugs intake ($r=0.42$, $p<0.05$).

Conclusions: In RA patients AH can proceed subclinically. Activity of RA and increased arterial stiffness can predict the masked arterial hypertension's development in RA patients.

ABPM measurement can be use full in early evaluation of AH and optimization of RA treatment.

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FRI0173 CORRELATION BETWEEN ASSYMETRIC DIMETHYLARGININE AND HOMOCYSTEINE LEVELS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Elizabeth Hospital Birmingham, Mindelsohn Way, Birmingham; ⁴School of Sport, Health and Exercise Sciences, Bangor University, George Building, Bangor; ⁵Arthritis Research UK Epidemiology Unit, University of Manchester, Manchester, United Kingdom

Background: Rheumatoid Arthritis is a chronic inflammatory condition associated with increased cardiovascular disease (CVD) morbidity and mortality due to high coronary and cerebral atherosclerotic burden. Asymmetric dimethylarginine (ADMA) – the most potent endogenous inhibitor of nitric oxide synthase – is an emerging marker of endothelial dysfunction and CVD in several conditions such as coronary artery disease and diabetes mellitus. ADMA levels are higher in RA patients compared to controls suggesting a role in the development of atherosclerosis. In addition ADMA is involved in the metabolism of homocysteine (Hcy) which is considered a novel, non-traditional CVD risk factor contributing to excess CVD risk in this population.

Objectives: The aim of our study was to determine whether asymmetric dimethylarginine (ADMA) levels are associated with Hcy and methylenetetrahydrofolate reductase (MTHFR) C677T (rs1801133) gene variants in patients with RA.

Methods: Serum ADMA and Hcy levels were measured in 201 RA individuals [155 (77.1%) females, median age 67 years (interquartile range 59–73)]. The MTHFR C677T polymorphism was assessed by using the LightCycler™ System. Initially, ADMA was compared across the categories of MTHFR using a one-way analysis of variance (ANOVA), followed by a multivariate model, which accounted for Hcy, age, erythrocyte sedimentation rate (ESR), and homeostatic model assessment (HOMA).

Results: In univariable analysis, ADMA differed significantly across the categories of MTHFR ($p=0.037$). Patients with the MTHFR 677TT genotype had the highest ADMA levels, with a mean of 0.62 (SE =0.03), significantly higher than either those patients carrying the MTHFR 677CT (0.55, SE =0.01) or the MTHFR 677CC (0.55, SE=0.01) genotype ($p=0.042$) in both cases. In the multivariable model, Hcy ($p=0.022$) and ESR ($p<0.001$) were found to have significant positive associations with ADMA but the relationship between MTHFR gene variants and ADMA was found to be non-significant ($p=0.102$).

Conclusions: The results of our study indicate an association between ADMA and Hcy in patients with RA without any genetic background as no relationship was established between ADMA and MTHFR gene variants. Abnormal metabolism of Hcy and dimethylarginines may interfere with each other resulting in endothelial dysfunction and accelerated atherosclerosis in RA individuals.

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FRI0174 A POPULATION BASED COHORT STUDY OF RHEUMATOID ARTHRITIS-ASSOCIATED INTERSTITIAL LUNG DISEASE: COMORBIDITY AND MORTALITY

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Background: Interstitial lung disease (ILD) is an important reason for excess mortality among patients with rheumatoid arthritis.

Objectives: The aim of this study was to compare mortality risks in patients with rheumatoid arthritis-associated interstitial lung disease (RA-ILD) and patients with RA without ILD.

Methods: The study was conducted in Denmark, using nationwide, prospectively collected data from the national medical registries. Among patients with RA, diagnosed between 2004 and 2016, 679 patients with RA-ILD were matched for age, gender, and age at RA diagnosis with 11,722 patients with RA but without ILD. Mortality risks were assessed using Kaplan-Meier survival curves, and hazard rate ratios (HRR) for death were estimated using Cox proportional hazards regression models.

Results: The number of prevalent RA patients more than doubled from 15,352 to 35,362 individuals during the study period. RA-ILD was seen in 2.2% of incident RA patients. 34.0% of RA-ILD cases were diagnosed within one year prior to and one year after the RA diagnosis. One-year mortality was 13.9% in RA-ILD and 3.8% in non-ILD RA, three-year mortality was 28.0% and 10.9%, and five-year mortality was 39.0% and 18.2%, respectively. The HRRs for death were two to 10 times increased for RA-ILD compared with non-ILD RA, irrespective of follow-up period. Stratified analysis showed that the HRR for death was highest in the first months after the diagnosis of RA-ILD was made, especially in patients diagnosed with RA before diagnosis of ILD. HRR was higher in males and in patients without comorbidity as assessed by the Charlson Comorbidity Index.