DOI: 10.1136/annrheumdis-2019-eular.7655

AB1259

EVALUATION OF ENALAPRIL ON ARTERIAL STIFFNESS IN RHEUMATOID ARTHRITIS IN A RANDOMISED CLINICAL TRIAL

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Background: This is the first study where suboptimal doses of enalapril proved to be successful for the reduction of arterial stiffness in a clinical trial of rheumatoid arthritis (RA) patients.

Objectives: The aim of this study was to analyze the effect of enalapril on arterial stiffness through the evaluation of subclinical parameters in RA patients without traditional cardiovascular risk factors or previous comorbidities.

Methods: Fifty three patients were enrolled in a clinical, randomized, closed-label trial. The subjects were randomly assigned into two groups: One receiving 5 mg of enalapril (27) and 5 mg of placebo (26), both twice a day. Clinical assessment included a structured questionnaire to gather demographic and clinical variables, including disease duration, treatment, disease activity, laboratory, anthropometric measurements and determination of cardiovascular parameters [carotid femoral pulse wave velocity (cfPWV) (1), cardio-ankle vascular index (CAVI) (2), carotid intima media thickness (cIMT), carotid artery distensibility (3), Young's incremental elastic modulus (Einc)]. The whole set of evaluations were analyzed at the baseline and at the end of 12 weeks of intervention.

Results: A significant reduction in delta CAVI of 0.21 in the enalapril intervention group was found. In contrast, an increase of 0.39 was observed in the placebo group. The delta CAVI reduction was not influenced by age or peripheral systolic blood pressure (pSBP).

Conclusion: Enalapril seems to be effective in CAVI reduction in RA patients. The effect of enalapril intervention on arterial stiffness translated to the clinical context, might be interpreted as a reduction of 6.4 years of arterial aging.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8241

AB1260

CHARACTERISTICS OF METABOLIC SYNDROME IN AN ASIAN COHORT OF PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Metabolic syndrome (MS), the concurrence of hypertension, abdominal obesity, dyslipidemia and glucose intolerance, is an important risk factor for type II diabetes mellitus (T2DM) and cardiovascular disease

(CVD). CVD is a leading cause of morbidity and mortality in patients with rheumatoid arthritis (RA). Studies in RA suggest that inflammation and glucocorticoid use predispose to MS, and that MS is associated with active disease.

Objectives: To investigate the prevalence and characteristics of MS in our cohort of RA patients.

Methods: A total of 409 patients who fulfilled the 1987 ACR criteria for RA and with complete data for classification of MS were included. MS was defined according to the Adult Treatment Panel III report of the National Cholesterol Education Programme (NCEP/ATP III). Information related to demographics, disease onset, serologies, disease activity and treatment was collected. Independent t-test or Mann-Whitney U test was used to compare continuous quantitative data, while Pearson Chi-square or Fisher Exact test for categorical data. Logistic regression was used to identify factors associated with MS. All the statistical tests were two sided, and p value <0.05 was considered as statistically significant.

Results: Fifty-two patients (12.7%) fulfilled the criteria for MS. Most of the patients in the cohort were female (85.3%) and non-smokers (84.6%). The mean age was 60.5±11.09 years and mean BMI 23.67±5.06. The patients with MS were significantly older (age 64.21±8.63 vs 59.96±11.32, p=0.010). The mean disease duration was 14.09±9.74 years. Rheumatoid factor and anti-cyclic citrullinated peptide antibody were present in 80.0% and 95.1% respectively. 4.4% of them had a history of CVD or stroke/transient ischaemic attack but the prevalence was the same in patients with and without MS. Comparing the two groups, there was no significant difference in the history of ever-smoking (15.4% vs 15.4%, p=0.699), disease duration (16.44±10.11 vs 13.72±9.66 years, p=0.060), cumulative glucocorticoid use (p=0.649), DAS28 score (2.12±1.09 vs 2.11±1.24, p=0.458) and HAQ score (0.13 vs 0.13, p=0.767). There was also no significant difference in the use of methotrexate, leflunomide or biologics. The commonest MS criteria fulfilled were hypertension (88.5%) and dyslipidaemia (84.6%). 46.2% of the patients with MS had T2DM. Males were less likely to have MS than females [adj. OR (95%CI): 0.039 (0.005, 0.292), p=0.002].

Conclusion: MS is found in 12.7% of our RA patients and they were significantly older than those without MS. In our study, MS does not have a significant association with RA disease activity, disease duration, glucocorticoid usage or disease modifying anti-rheumatic treatment.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3070

AB1261

CADMIUM TOXICITY AS A PROBABLE CAUSE OF OSTEOPENIA IN ADOLESCENTS AND ITS RELATION TO BAD DIETARY HABITS

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Background: Cadmium is a naturally occurring minor element; it has been recognized as an occupational health hazard for many decades. Water and food are the main source of environmental cadmium exposure in non-smokers in most parts of the world. Cadmium accumulates gradually in the human body, where it gives rise to a number of adverse health effects and especially to kidney and bone. Several studies have addressed a possible association between long-term low-level environmental cadmium exposure and osteoporosis. Osteoporosis is a large and escalating public health problem.

Objectives: This study was conducted to assess the bone mineral status in secondary school students in Egypt and to measure cadmium level in their blood and urine and possible relationship between cadmium retention and bone mineral abnormalities as well as its consumption from some food and drinks commonly utilized by those students.

Methods: Two hundred secondary school students from different secondary schools in Egypt were included in this study (100 males, and 100 females). Bone mineral status was assessed in the 200 students by Quantitative Ultrasonography (QUS) of the calcaneus using the ultrasound bone densitometer unit PEGASUS PRESTIGE, OSTEOMED, FRANCE. Students with abnormal bone mineral status (T score < -1) were considered osteopenic, data obtained from this osteopenic group were compared