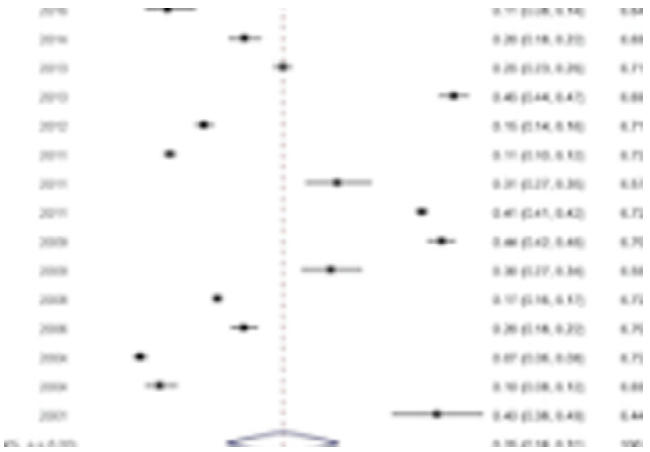

review, in particular, related to the sample size used in each study. Two facts must be accounted for, first the statistical difficulties associated to the estimation of small prevalence and the consequent heterogeneity of the estimates, and, second, the limited number of studies included in this meta-analysis. Nonetheless, there is evidence about big heterogeneity what can correspond to non-observed variables, in particular, life-styles, and environmental or genetic traits.

Disclosure of Interest: None declared

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FRI0710 MONOSODIUM URATE CRYSTAL DEPOSITION ASSOCIATED WITH THE CHANGE OF RADIOGRAPHIC GRADE AT THE SACROILIAC JOINT IN AXIAL SPA: A DUAL-ENERGY CT STUDY

J. Zhu[1], A. Aiwu Li[2], E. Jia[2], Y. Zhou[3], J. Xu[2], S. Chen[2], Y. Huang[2], X. Xiao[4], J. Li[2]. *[1]Department of Rheumatology, Nanfang Hospital, Southern Medical University; [2]Department of Internal Medicine of Traditional Chinese Medicine, College of Traditional Chinese Medicine, Southern Medical University; [3]Department of Obstetrics, Guangdong Women and Children Hospital; [4]Department of Radiology, Nanfang Hospital, Southern Medical University, Guangzhou, China*

Background: Previous studies have revealed that ankylosing spondylitis (AS), as the progenitor of axial spondyloarthritis (AxSpA), has been characterized by the insidiously progressive nature of sacroiliitis and spondylitis. Dual-energy computed tomography (DECT) has recently been used to analyse the deposition of monosodium urate (MSU) crystals with higher sensitivity and specificity. However, it remains unclear whether the existence of the MSU crystal deposits detected by DECT at the sacroiliac joint in patients with AxSpA also contributed to the existing structural damage.

Objectives: We performed this study to show the DECT MSU crystal deposits in AxSpA patients without coexisting gout and to ascertain whether the MSU crystal deposits at the sacroiliac joint in those patients increased the risk of the structural joint damage.

Methods: One hundred and eighty-six AxSpA patients without coexisting gout were recruited. The plain radiographs of the sacroiliac joint were obtained, along with the DECT scans at the pelvis and the clinical variables. All statistics based on the left or right sacroiliac joint damage grading (0–4) were calculated independently. Bivariate analysis and ordinal logistic regression was performed between the clinical features and radiographic grades at the sacroiliac joint.

Results: At painful joints or skeleton regions, large quantities of MSU crystal deposits were found in 186 patients with AxSpA, as depicted in green with DECT. The average MSU crystal volume at the left sacroiliac joint, the right sacroiliac joint, and the pelvis were 0.902±1.345, 1.074±1.878, and 5.272±9.044 cm^3, values which were correlated with serum uric acid concentrations (r=0.727, 0.740, 0.896; $p<0.001$). At the left and right sacroiliac joint, the presence of MSU crystal deposits (=11.451, 43.684; $p<0.01$) and the volumes of MSU crystals (Z=9.198, Z=34.607; $p<0.05$) were statistically different among groups divided by the ASDAS scores. In bivariate analysis, wide clinical variables were associated with the changes in sacroiliac joint damage. When others factors were adjusted in the ordinal logistic models, the AxSpA duration, total back pain, BASFI score, and volume of MSU crystallization were the risk factors for the radiographic grade at the left sacroiliac joint (AOR=1.187, 1.428, 3.837, 2.018; $p<0.05$). The same risk factors were obtained for the right sacroiliac joint, except for total back pain. Additionally, the simplified models excluded the repeated variables; the AxSpA duration, BASFI score, and the volume of MSU crystallization at both sides of sacroiliac joint served as risk factors for the radiographic grade (left-AOR=1.180, 3.800, 1.920; right-AOR=1.190, 3.034, 1.418; $p<0.01$).

Conclusions: Large quantities of MSU crystal deposits detected by DECT were found in AxSpA patients without coexisting gout. In addition to AxSpA duration and BASFI score, the MSU crystal deposits at the sacroiliac joint in those patients independently increased the risk of structural joint damage.

Disclosure of Interest: None declared

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FRI0711 DISCORDANCE OF THE FRAMINGHAM CARDIOVASCULAR RISK SCORE AND THE 2013 AMERICAN COLLEGE OF CARDIOLOGY/AMERICAN HEART ASSOCIATION RISK SCORE IN SYSTEMIC LUPUS ERYTHEMATOSUS AND RHEUMATOID ARTHRITIS

K. Jafri[1], A. Ogdie[2], P. Katz[1], J. Yazdany[1], G. Schmajuk[1,3]. *[1]Rheumatology, University of California, San Francisco, San Francisco; [2]Rheumatology, University of Pennsylvania, Philadelphia; [3]Rheumatology, Veterans Affairs Medical Center, San Francisco, United States*

Background: Systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) are associated with an increased risk of cardiovascular (CV) disease, and multipliers to traditional 10-year CV risk scores, such as a EULAR-recommended 1.5 multiplier in RA, have been proposed to capture this increased CV risk. The discordance between CV risk assessment by the Framingham risk score, a modified Framingham risk score (with a 1.5 multiplier), and the more recent 2013 American College of Cardiology/American Heart Association (ACC/AHA) risk score has not been well-studied in patients with rheumatic diseases.

Objectives: To determine the proportion of discordant 10-year Framingham risk scores and 2013 ACC/AHA risk scores in subjects with SLE and RA, both with and without a 1.5 multiplier to the Framingham risk score, and to assess demographic, CV, and rheumatologic clinical characteristics associated with discordant risk scores.

Methods: A cross-sectional study was conducted using SLE and RA subjects drawn from the University of California, San Francisco, Arthritis, Body Composition, and Disability project. 10-year Framingham risk scores, modified Framingham risk scores (with a 1.5 multiplier), and 2013 ACC/AHA risk scores were calculated. As per Adult Treatment Panel-III (ATP-III) recommendations, a subject with a Framingham risk score (or modified Framingham risk score)$\geq$10% was defined as high-risk by that score, whereas a subject with a Framingham risk score (or modified Framingham risk score)$<$10% was defined as low-risk. A subject with a 2013 ACC/AHA risk score$\geq$7.5% was defined as high-risk by that score, whereas a subject with a 2013 ACC/AHA risk score$<$7.5% was defined as low-risk. A subject with a discordant risk score was defined as one who had a Framingham risk score (or modified Framingham risk score) that characterized him/her as low-risk and a 2013 ACC/AHA risk score that characterized him/her as high risk. Associations of demographic, CV, and rheumatologic characteristics with discordant risk scores were analyzed using chi-squared tests for categorical variables and using independent t-tests for continuous variables.

Results: 11 (7.0%) of the 157 SLE subjects and 11 (11.5%) of the 96 RA subjects had discordant CV risk scores with low Framingham risk scores but high ACC/AHA risk scores. When the 1.5 multiplier was applied to the Framingham risk score, the number of subjects with discordant risk scores did not significantly change. Rheumatologic disease duration, CRP levels, African-American race, diabetes, current use of anti-hypertensive medication, higher age, and higher systolic blood pressure were all significantly associated with discordant risk scores.

Conclusions: Approximately 10% of SLE and RA subjects had discordant 10-year CV risk scores with low Framingham risk scores but high ACC/AHA risk scores, even when a 1.5 multiplier was applied to the Framingham risk score. Prospective studies are needed to address the ability of different CV risk assessment tools, such as the 2013 ACC/AHA risk score, Framingham risk score, and modified risk scores, to predict CV events in rheumatologic patients, especially those with risk factors associated with discordant risk scores.

Disclosure of Interest: None declared

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FRI0712 DRIVERS OF UNREFRESHING SLEEP IN PEOPLE WITH MUSCULOSKELETAL PAIN

K.L. Druce, J. McBeth. *Arthritis Research UK Centre for Epidemiology, The University of Manchester, Manchester, United Kingdom*

Background: Waking feeling unrefreshed is associated with poor health outcomes including an increased risk of cardiovascular death. Pain is a robust predictor of waking feeling unrefreshed. Pain is a complex disorder and it is not clear whether the pain itself, or associated somatic symptoms, mental health conditions and lifestyle factors, predicts waking unrefreshed.

Objectives: To investigate whether reporting pain was an independent predictor of waking unrefreshed among people with musculoskeletal pain.

Methods: Participants in a population study completed the Estimation of Sleep Problems Scale (ESPS), which indicates the number of days in the past month participants have experienced unrefreshing sleep, problems with sleep onset, maintenance and night awakenings. Pain assessments (body map and duration $>$3 months) were used to classify participants as having no pain, acute pain, chronic pain and CWP (ACR criteria: pain lasting $\geq$3 months in the axial skeleton and contralateral body quadrants). Participants also reported demographics (date of birth, sex, English Index of Multiple Deprivation); somatic symptoms (Chalder Fatigue Scale (CFQ 11) and Inflammatory Bowel Syndrome (IBS)); mental health (Hospital Anxiety and Depression (HAD) scale); disability (Stanford Health Assessment Questionnaire (HAQ)) and lifestyle factors (average number