Positive (or outward) vessel remodelling has been postulated to explain the finding of atherosclerosis that does not encroach on the arterial lumen. Positive remodelling index and presence of low attenuation noncalcified plaque (<30 Hounsfield units) are characteristic vessel changes in unstable coronary plaques.

Objectives: We sought to characterise noncalcified plaque lesions in patients with systemic lupus erythematosus and to identify high risk lesions.

Methods: A total of 66 patients who meet the American College of Rheumatology classification criteria for SLE were included in the study. Of these, 30 patients had two studies. All patients underwent coronary CT angiography. Coronary plaque area was measured by manual tracing for the difference between the area within the external elastic membrane and the area of the vessel lumen at the site of maximal luminal narrowing as observed on a cross-sectional coronary CT angiography image. Each noncalcified plaque detected within the vessel wall was evaluated with the minimum CT density and vascular remodelling index (RI). Total low density plaque volume per patient and low density/high density noncalcified plaque ratio were then compared by patient characteristics which included age, sex, ethnicity, BMI, smoking, SLEDAI, PGA, anti-dsDNA, low complement, current prednisone, current hydroxychloroquine, current NSAID use, history of cardiovascular event, hypertension, lupus anticoagulant, antidiolipin, hypercholesterolemia, and methotrexate use.

Results: All patients had at least one plaque with a positive remodelling index (>10%), and 83.1% (n=271) of total identified plaques had a positive remodelling index. Low density noncalcified plaque volume was associated with age ($p<0.01$) and body mass index ($p<0.01$). African Americans had significantly more ($p<0.05$) low density noncalcified plaque compared to patients of other ethnicities. The low density/high density noncalcified plaque ratio did not correlate with any patient characteristics and was on average 46% (SD=10). There were only cardiovascular events in the studied group and there were no differences in remodelling index or low density noncalcified plaque observed in this group, but the number of events was small.

Conclusions: Positive remodelling index and low attenuation noncalcified plaques are characteristic vessel changes seen in unstable coronary plaques. They are common in patients with lupus and are significantly more likely to be seen among African American patients, patients with a BMI>30, and the elderly (age over 60).

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7309

FRI0364

CLINICAL AND DIAGNOSTIC SIGNIFICANCE OF IMMUNOGLOBULIN A RHEUMATOID FACTOR IN PRIMARY SJOGREN'S SYNDROME

H.-R. Kim, K.-A. Lee, S.-H. Lee. Konkuk University Medical Center, Seoul, Korea, Republic Of

Background: Rheumatoid factors (RFs) are among the autoantibodies associated with Primary Sjogren's syndrome (pSS). Although measurement of non-IgM RFs is not performed routinely in clinical practice due to technical difficulties, RFs can belong to any isotype. A few studies have suggested the prognostic value of non-IgM RFs in pSS. However, few studies evaluated the clinical and diagnostic value of non-IgM RF in pSS.

Objectives: This present study aimed to answer the question on whether the RF isotype has a potential diagnostic value for the detection of pSS, particularly for distinguishing pSS from idiopathic sicca syndrome. In addition, we assessed whether IgA RF may serve as a prognostic factor by evaluating their association with clinical and serological characteristics.

Methods: RF levels were measured in 85 and 38 patients with pSS and idiopathic sicca syndrome, respectively, using the ELISA and analysed with respect to clinical and laboratory disease characteristics. ROC curves were used to determine and compare the diagnostic accuracy of IgA RF with other diagnostic tests.

Results: Serum levels of IgA RF were significantly higher in patients with pSS than in those with idiopathic sicca syndrome. IgA RF showed a sensitivity, specificity, positive, and negative predictive value of 90.7%, 78.9%, 89.5%, and 81.1%, respectively, for pSS diagnosis. IgA RF was associated with xerostomia; abnormal Schirmer's test; severe sialoscintigraphic grade; low unstimulated salivary flow rate (USFR); antinuclear antibody and anti Ro/SSA positivity; high IgG and IgM/G RF levels; and low C3 levels in patients with pSS. IgA RF titres had positive correlations with sialoscintigraphic grade and IgG and IgM/G RF levels and had negative correlations with USFR, Schirmer's test value, and C3 levels (figure 1).

Conclusions: Our findings confirmed the potential of IgA RF to distinguish pSS from idiopathic sicca syndrome. The presence of IgA RF in patients with pSS was associated with significantly worse exocrine function and active serologic profile. No association between IgA RF and extra-glandular manifestations was noted.

REFERENCES:

- [1] Rischmuller M, Tieu J, Lester S. Primary Sjogren's syndrome. Best practice & research Clinical rheumatology 2016;30(1):189–220.
- [2] Ingegnoli F, Castelli R, Gualtierotti R. Rheumatoid factors: clinical applications. Disease markers 2013;35(6):727–34.

Acknowledgements: This work was funded by the Konkuk University Medical Centre Research Grant 2016.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2866

FRI0365

FACTORS ASSOCIATED WITH LEFT VENTRICULAR DIASTOLIC DYSFUNCTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

I.-W. Baek¹, K.-J. Kim², Y.-J. Park², W.-U. Kim³, C.-S. Cho⁴. ¹Division of Rheumatology, Yeouido St. Mary's Hospital, The Catholic University of Korea, Seoul; ²St. Vincent's Hospital, The Catholic University of Korea, Suwon; ³Seoul St. Mary's Hospital, The Catholic University of Korea; ⁴Yeouido St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea, Republic Of

Objectives: Myocardial damage is common and often silent in patients with systemic lupus erythematosus (SLE). In this study, we investigated the clinical parameters associated with left ventricular diastolic dysfunction in SLE patients using algorithms of 2016 American Society of Echocardiography/European Association of Cardiovascular Imaging (ASE/EACVI) recommendations.

Methods: Sixty consecutive SLE patients and 38 controls matched for age and sex who were free of clinical cardiovascular disease were enrolled. Left ventricular diastolic dysfunction was assessed by echocardiography using 2016 ASE/EACVI guidelines. The demographic, clinical and laboratory data were obtained from medical records.

Results: Diastolic dysfunction was more common in SLE patients compared with controls (38.3% versus 13.2%, $p=0.011$), while LV ejection fraction was not different between groups. When patients were divided into 2 groups according to the presence of diastolic dysfunction, patients with diastolic dysfunction had higher prevalence of hypertension ($p<0.001$), dyslipidemia ($p=0.031$) and chronic kidney disease ($p=0.045$), but there was no difference between groups with regard to other organ involvement or autoantibody profile. Importantly, patients with diastolic dysfunction showed significantly higher SLICC/ACR damage index ($p=0.001$) and C-reactive protein levels ($p=0.005$). In multivariate regression analysis, hypertension (OR=16.6, 95% CI=3.466–79.479, $p<0.001$), higher SLICC/ACR damage index (OR=1.68, 95% CI=1.039–2.720, $p=0.034$), and CRP level (OR=1.12, 95% CI=1.004–1.254, $p=0.042$) was independently associated with diastolic dysfunction in SLE patients.

Conclusions: Diastolic dysfunction is more common in SLE patients, and overall inflammatory burden reflected by SLICC/ACR damage index as well as conventional cardiovascular risk factors are associated with development of diastolic dysfunction in SLE patients.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5128