Abstract FRI0361 – Table 1. frequency of APOs, pPROM and PE in the 134 analysed pregnancies

	N (%)
N of live birth	120 (90%)
N of APOs	39 (29%)
Premature miscarriage (<10th w)	9 (7%)
Intrauterine fetal death (>10th w)	5 (4%)
<i>with PE</i>	<i>1 (20%)</i>
Perinatal death (<30th day of life)	1 (1%)
<i>with PE</i>	<i>1 (100%)</i>
All preterm birth (<37th w)	24 (18%)
Preterm birth (<34th w)	3 (2%)
<i>with pPROM</i>	<i>2 (67%)</i>
Preterm birth (34th-36th w)	21 (16%)
<i>with pPROM</i>	<i>7 (33%)</i>
<i>with PE</i>	<i>2 (10%)</i>

Abstract FRI0361 – Table 2. frequency of preterm birth and pPROM among the 120 live birth, according to exposure (or not) to corticosteroids >35 mg/week during the three trimesters

	CS >35w*	CS 0 or <35mg/w*	p*	CS >35w**	CS 0 or <35mg/w**	p**	CS >35w***	CS 0 or <35mg/w***	p***
N of pregnancies	39	81	-	48	72	-	41	79	-
All preterm birth (<37th w)	14 (36%)	10 (12%)	0.006	15 (31%)	9 (13%)	0.023	14 (34%)	10 (13%)	0.011
Preterm birth (<34th w)	2 (5%)	1 (1%)	0.246	3 (6%)	0 (0%)	0.616	3 (7%)	0 (0%)	0.038
Preterm birth (34th-36th w)	12 (31%)	9 (11%)	0.017	12 (25%)	9 (14%)	0.128	11 (27%)	10 (13%)	0.092
pPROM	8 (21%)	1 (1%)	0.001	8 (17%)	1 (1%)	0.003	8 (20%)	1 (1%)	0.001

* 1 st trimester; ** 2nd trimester; *** 3rd trimester

Conclusions: Use of IS seems to be associated with premature miscarriages; this could reflect their use in patients with a more severe disease phenotype. The exposure to CS in doses greater than 35 mg/w in the 1 st trimester seems to be associated with preterm birth at 34th-36th w, while in the 3rd trimester with severe preterm birth (<34 th w), that could be related to the strong association observed between CS use and pPROM.

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FRI0362

PREVALENCE, RISK FACTORS, AND IMPACT ON MORTALITY OF NEUROPSYCHIATRIC LUPUS: A LARGE PROSPECTIVE SINGLE-CENTRE STUDY

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Background: Neuropsychiatric involvement is one of the most serious involvement of SLE and generally associated with a worse prognosis. However, previous reports about the prevalence and risk factors of neuropsychiatric systemic lupus erythematosus (NPSLE) have yielded inconsistent findings. Also, there are only few studies of the prognosis of NPSLE, especially in a large prospective cohort.

Objectives: To identify the prevalence, risk profiles, and impact on mortality of NPSLE.

Methods: Patients from the Hanyang BAE lupus cohort were registered and followed from 1998 to 2015. Demographics, autoantibodies, SLEDAI-2K and SLICC/ACR damage index were collected at baseline and then annually. Patients registered within 12 months of SLE development were grouped as the inception cohort and analysed separately to elucidate the clinical features at disease onset. NP manifestations were defined using the ACR 19 case definitions and Ainala NPSLE that did not include minor NP events¹. Mortality data were derived by linking data from the Korean National Statistics Office.

Results: The prevalence of NPSLE by ACR 19 case definition was 38.3%, and 19.3% by Ainala criteria. Higher SLEDAI, APLA positivity, absence of anti-dsDNA antibody at SLE diagnosis and fewer years of education increased NPSLE risk.

Patients with any NPSLE manifestation had a three-fold increased risk of mortality (HR 3.09, p=0.04), and patients with focal CNS NPSLE showed nearly an eight-fold increased risk of mortality in SLE patients (HR=7.83, p<0.01). Among the 216 patients with Ainala NPSLE, sixty-four (29.6%) had multiple events. The two most common symptom combinations were seizure with CVA (18 patients) and seizure with psychosis (8 patients).

Abstract FRI0362 – Table 1. Risk factors for the development of NPSLE in the inception cohort (N=388).

	NPSLE (n=88)	Non-NPSLE (n=300)	P	Adjusted OR (95% CI)	P
Demographics					
Age at SLE diagnosis	28.2 ±11.6	29.3±11.3	0.42	0.99 (0.97–1.01)	0.45
Female sex	81 (92.1)	270 (90.0)	0.71	1.88 (0.71–4.96)	0.20
SLEDAI at diagnosis, NP manifestations excluded ^a	4.7 ±4.5	3.8±3.3	0.10	1.08 (1.01–1.16)	0.02*
SDI at diagnosis, NP manifestations excluded ^b	0.2 ±0.4	0.1±0.4	0.43	1.23 (0.72–2.11)	0.45
HTN	5 (5.8)	16 (5.4)	1.00	1.14 (0.38–3.37)	0.82
Education (years)	12.2 ±3.1	13.0±3.3	0.05*	0.92 (0.85–1.00)	0.04*
Anti-dsDNA antibody positivity	61 (69.3)	238 (79.3)	0.07	0.43 (0.24–0.78)	<0.01*
APLA positivity	40 (45.5)	96 (32.0)	0.03*	1.72 (1.03–2.87)	0.04*

*Values are number (percentage) or mean ±standard deviation. a. SLEDAI was calculated using the remaining items except CVA, seizure, organic brain syndrome, psychosis, visual disturbance, cranial nerve disorder. b.SDI was calculated using the remaining items except CVA, myelopathy, seizure, psychosis, cognitive impairment, carinal neuropathy, and peripheral neuropathy.

Abstract FRI0362 – Figure 1. Kaplan-Meier survival curves for NPSLE and non-NPSLE patients; Inception cohort and all analysed patients.

Conclusions: Higher SLEDAI, APLA positivity, absence of anti-dsDNA antibody at SLE diagnosis and fewer years of education are risk factors for development of NPSLE. Presence of NPSLE, especially focal CNS NPSLE, increased the risk of mortality in SLE patients.

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FRI0363

POSITIVE REMODELLING INDEX AND LOW ATTENUATION NON-CALCIFIED CORONARY PLAQUES: MARKERS OF VULNERABLE CORONARY PLAQUES IN SYSTEMIC LUPUS?

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Background: Accelerated atherosclerosis leading to premature coronary artery disease remains the major cause of late death in SLE. Coronary plaques with a large necrotic/lipid core and/or a thin fibrous cap are prone to rupture, leading to acute coronary events. In coronary CT angiography, plaque lipid content correlates with lower CT attenuation values when compared with fibrotic tissue.

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

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FRI0364

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

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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.

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FRI0365

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

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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.

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