$p < 0.001$). The SLEDAI value rose with increasing values of all the parameters except C3 complement. Using the standard multiple regression analysis, the impact of anti-dsDNA, anti-nukleosome, anti-C1q antibodies, complement C3, and serum and urinary MCP1 on SLEDAI was evaluated. The studied model was able to explain 26.60% of disease activity index variance (corrected $r^2 = 0.246$, $F = 4.755$, $p < 0.001$). As the statistically significant risk factors, serum MCP1 (Beta=0.257, $p = 0.040$) and urinary MCP1 (Beta=0.326, $p = 0.008$) could be singled out. Serum MCP1 increased SLEDAI values and explains their variance with 4.80%. The impact of urinary MCP1 was stronger. SLEDAI values increased with elevated urinary MCP1. This parameter was able to explain 8.10% of SLEDAI variance.

Conclusions: The study showed that anti-dsDNA, anti-nukleosome and anti-C1q antibodies were associated with SLE disease activity, but the association was strongest with serum and urinary MCP1.

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FRI0390 IMPAIRED OVARIAN RESERVE IN PATIENTS AFFECTED BY SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE-CONTROL STUDY

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Background: Systemic lupus erythematosus (SLE) is an autoimmune disease showing a strong predilection for reproductive age women (female/male ratio 9:1). This is in part due to the effects exerted by sexual hormones on immune system. The term ovarian reserve has been used traditionally to describe the number and quality of oocytes in women. This is assessed by detection of FSH, AMH and Estradiol (E2) and by ultrasonographic (US) evaluation of antral follicular bilateral count (AFC), as recommended by the Society of Reproductive Medicine. The evaluation of AFC should be conducted in the early follicular phase of the menstrual cycle. An AFC lower than 3–4 follicles is highly specific (73%–97%) of poor ovarian function. Data from the literature about ovarian reserve in SLE showed contrasting results.

Objectives: We aimed at assessing ovarian reserve in a SLE cohort, by US determination of AFC and by analysing serum levels of AMH, FSH, E2.

Methods: In this case control study, we enrolled consecutive SLE patients in reproductive age (<45 years), fulfilled the 1997 ACR revised criteria, not treated by gonadotoxic chemotherapy agents. Moreover, we enrolled age-matched healthy women (HS). Clinical and laboratory data were collected in a standardised, computerised and electronically filled form, including demographics, past medical history with date of diagnosis, autoantibody profile, comorbidities, previous and concomitant treatments. We assessed the disease activity and chronic damage by using SLEDAI-2K and SDI, respectively. In order to assess AFC, patients and HS underwent to transvaginal US evaluation by a single operator (Samsung Elite USS-WS8EL4U/WR) between the 2nd and 7th day of the menstrual cycle. At the same day of the US assessment, we obtained sample of peripheral venous blood from patients and HS to evaluate FSH, AMH and E2 dosages (ELISA kit CLOUD-CLONE Corp., My Bioscience, USA).

Results: Nineteen SLE patients (median age 35 years, IQR 6.0; mean disease duration $\pm$ SD 12.2 $\pm$ 7.7 months) and 8 HS were evaluated. A mean $\pm$ SD SLEDAI-2K of 2.5 $\pm$ 1.5 was registered; 3 patients had a chronic damage (SDI=1). FSH values were significantly higher in SLE patients compared with HS [SLE: median (IQR) 35;⁵ HS: median (IQR) 3 (1.5); $p = 0.01$]. Concerning the AFC, we found significantly lower values in SLE patients than in HS [SLE: median (IQR) 13;¹¹ HS: median (IQR) 22.5 (10.5); $p = 0.03$]. The Spearman analysis demonstrated a negative correlation between AFC and BMI ($r = -0.5$, $p = 0.02$), FSH ($r = -0.5$, $p = 0.04$) and age ($r = -0.5$, $p = 0.02$) (figure 1).

AFC: antral follicular bilateral count; BMI: body mass index; FSH: follicle-stimulating hormone

Abstract FRI0390 – Figure 1

AFC: antral follicular bilateral count; **BMI:** body mass index; **FSH:** follicle-stimulating hormone

Conclusions: The preservation of fertility is a crucial point in SLE patients and the evaluation of ovarian reserve should be included in the patients' management in order to assess ovarian function. Moving from these premises, in the present study we demonstrated an impaired ovarian reserve in SLE patients in terms of AFC values and a negative correlation with hormonal and some demographic features.

Disclosure of Interest: None declared

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FRI0391 THE RELATIONSHIP BETWEEN OESTROGEN RECEPTORS AND HYPERURICEMIA IN YOUNG FEMALE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: We have found that the incidence of hyperuricemia of young female systemic lupus erythematosus (SLE) patients was higher than that of healthy young women^[1]. Why the high level of oestrogen didn't show protection in uric acid (UA) level of fertile female SLE patients? There few reports yet.

Objectives: To investigate the relationship between UA level and the levels of oestrogen, oestrogen receptors, antibodies to oestrogen receptors.

Methods: This was a cross-sectional study of 62 fertile female SLE patients that were divided into two groups including a high UA group (n=27) and a normal UA group (n=35). Serum UA levels, kidney index, SLE disease indicators and levels of oestrogen, oestrogen receptors, antibodies to oestrogen receptors were determined. Multiple linear regression analysis was applied to analyse the associations of UA levels with clinical features and levels of oestrogen, oestrogen receptors and antibodies to oestrogen receptors.

Results: 1. The mean ages of the two groups were (28.62 $\pm$ 7.89) years and (28.82 $\pm$ 8.28) years respectively, with no significantly different ($t = 0.096$, $p = 0.924$). There was no SLE patients manifested renal failure (CRE level higher than 120 μ mol/l). All the SLE patients were at the onset of disease.

2. The mean UA levels of the high UA group and the normal UA group were (531.74 $\pm$ 134.05) μ mol/L and (238.86 $\pm$ 61.32) μ mol/L respectively, with significant difference ($t = -11.48$, $p < 0.001$).

3. In the high UA group, the levels of CRE, LDL, cystatin, urine protein and were dramatically higher than those were found in the normal UA group ($t = -3.617$, -3.319 , -2.782 , -2.979 , and $p = 0.001$, 0.002 , 0.007 , 0.004 , respectively), and oestrogen receptor β level were significantly lower than that of the normal group ($t = 2.138$, $p = 0.037$). The positive rate of urine blood of the high UA group were significantly higher than that of the normal UA subgroup ($\chi^2 = 6.213$, $p = 0.012$).

4. Multiple linear regression analysis revealed there were significant relationships between UA level and CRE, oestrogen receptor β , and urine protein, urine blood.

Abstract FRI0391 – Table 1. Independently-Associated Clinical Biomarkers with Serological UA levels in fertile SLE female patients

Variable	Unstandardized Coefficients	Standardised Coefficients		t	P	95% CI
	B	SEM				
CRE	1.145	0.462	0.263	2.478	0.016	0.223–2.068
oestrogen receptor β urine protein	–2.758	0.933	0.239	2.299	0.033	3.132–44.38
UBLD	2.906	1.042	0.286	2.788	0.019	0.825–4.986
Constant	56.426	28.058	0.216	2.011	0.048	0.422–112.43
	177.283	42.179		4.203	0.001	93.09–216.47

Conclusions: Hyperuricemia in young female SLE patients indicated the renal damage, and low level of oestrogen receptor β may contribute to hyperuricemia.

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FRI0392 THE RELATIONSHIP BETWEEN SALIVARY FLOW RATES, ORAL HEALTH ASSESSMENT AND ULTRASONOGRAPHIC SCORING OF THE MAJOR SALIVARY GLANDS IN SJOGREN SYNDROME

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Background: Salivary flow rates (SFR) and oral health were known to be frequently impaired in Sjogren's syndrome (SjS) due to chronic inflammation and destruction of the salivary glands. Ultrasonography (USG) of major salivary glands (SG-USG) is a non-invasive widely used tool to evaluate salivary glands in SjS.

Objectives: The aim of the study was to assess the relationships between SFRs, oral health and USG changes of major salivary glands in patients with primary SjS.

Methods: Fifty-nine SjS patients (F/M:57/2) with the mean age of 52.2±11.5 years. The duration of follow-up period of 9.±7.1 years fulfilling ACR-EULAR classification criteria (2002) were included. Major salivary glands (bilateral parotis and submandibular glands) were scored according to two different scoring systems which are Hocevar A.(0–48) and Milic VD. (0–12). Oral health was assessed by indices. Measurements of whole unstimulated and stimulated SFRs were carried out in patients between 9 a.m. and 10 a.m in the morning. Oral health related quality of life (OHRQoL) as a patient reported outcome measure was evaluated by using Oral health impact profile (OHIP-14). High scores indicated poor OHRQoL status. Pathologic findings in oral health (GM) and USG images (NI) were evaluated by two authors as double-blind.

Results: Unstimulated SFR (0.2±0.2 ml/min) was correlated with stimulated SFR (1.1±0.7 ml/min) in the whole group ($r=0.8$ $p=0.000$). Moderate correlations were seen between unstimulated and stimulated whole SFRs and scores of hypoechoic areas in bilateral parotid and submandibular glands ($p<0.05$). Scores of Hocevar, Milic and OHIP-14 were found to be poor in patients with unstimulated SFR ≤ 0.1 ml/minute compared to those of others ($p<0.05$) (table 1). In addition, the number of extracted teeth (8.6±7.5) was correlated with the number of carious teeth ($r=0.3$, $p=0.036$).

Abstract FRI0392 – Table 1. Salivary Flow Rates, OHIP-14 and SG-USG Scores of SjS Patients

	Salivary Flow Rates (SFR)		P
	≤ 0.1 ml/minute (n=17)	>0.1 ml/minute (n=39)	
Hocevar-total score	24.8±8.9	16.4±8.8	P=0.003
Milic-total score	7.4±2.2	4.9±2.3	P=0.001
OHIP-14 score	36.4±15.2	15.1±8.3	P=0.001

Conclusions: Unstimulated and stimulated SFRs were found correlated with the structural changes of major salivary glands. Tooth loss and poor OHRQoL were shown in patients due to reduced salivary outputs. USG images of salivary glands

could give insight to physicians about oral health and OHRQoL as outcome measure in patients with SjS.

Disclosure of Interest: None declared

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FRI0393 MATERNAL AND FETAL OUTCOMES IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic Lupus Erythematosus (SLE) is associated with an increased risk of adverse pregnancy outcomes.

Objectives: We aim to evaluate the maternal and fetal outcomes in SLE pregnancies in a single tertiary referral centre.

Methods: We retrospectively analysed 75 pregnancies in 45 patients with SLE over a 16 year period from 2000 to 2016. All patients fulfilled the 1997 American College of Rheumatology (ACR) criteria or the Systemic Lupus International Collaborating Clinics (SLICC) criteria for diagnosis of SLE.

Results: In our multi-ethnic cohort, there were 65% Chinese, 23% Malays and 7% Indians. The mean age was 32 years old and majority (55%) were nulliparous. The mean SLE disease duration was 5.9 years. Baseline SLE manifestations were predominantly haematological (73%), arthritis (71%) and renal (57%). There were 33 pregnancies (44%) with anti-Ro (SS-A) antibody positivity. There were 9 pregnancies (12%) with SLE and antiphospholipid syndrome. In our cohort, the majority of the patients were on prednisolone (76%). Half of the patients (48%) were on hydroxychloroquine or chloroquine and 27% were on azathioprine. In the subgroup of patients with SLE and antiphospholipid syndrome, 67% (6/9 pregnancies) were treated with therapeutic clexane and 33% (3 pregnancies) with the combination of prophylactic clexane and aspirin. The mean SELENA-SLEDAI score at the booking visit was 4.0.

In our cohort, the live birth rate was 75%. More than half of the deliveries were via Caesarean section (57%). There were maternal and fetal complications in 61% of the pregnancies. Pregnancy losses occurred in 16 pregnancies with the majority (87%) being early pregnancy losses that occurred prior to 13 weeks gestation. There were 13 pregnancies (17%) with intrauterine growth restriction and 18 pregnancies (24%) with preterm delivery. In the subgroup of the preterm births, 2 were extremely preterm birth (<28 weeks gestation) and 2 were very preterm birth (28 weeks to <32 weeks gestation). There were no cases of congenital heart block or neonatal lupus. There was one neonatal death.

SLE flares occurred in 25 pregnancies (33%). The most common organ involvement were haematological (44%), renal (40%), mucocutaneous (28%) and arthritis (16%). Pre-eclampsia occurred in 2 pregnancies (2%). There were 3 cases of a first presentation of lupus nephritis in pregnancy. In the subgroup of SLE pregnancies with antiphospholipid syndrome, there were higher SLE flare rates (44%) and more adverse pregnancy outcomes with 3 pregnancies (33%) that resulted in miscarriages, 2 pregnancies (22%) with preterm delivery and one pregnancy (11%) complicated by pre-eclampsia (table 1). There were 7% of pregnancies with a post-partum SLE flare.

Abstract FRI0393 – Table 1. Comparison of maternal and fetal outcomes between SLE pregnancies and SLE with antiphospholipid (APS) pregnancies

Adverse pregnancy outcomes	SLE pregnancies (n=75)	SLE with APS pregnancies (n=9)
SLE flares, n(%)	25 (33.33%)	4 (44.44%)
Pre-eclampsia, n(%)	2 (2.67%)	1 (11.1%)
Miscarriages, n(%)	15 (20%)	3 (33.33%)
Early pregnancy loss ($<13/40$), n(%)	14 (18.67%)	3 (33.33%)
Late pregnancy loss ($\geq 13/40$), n(%)	1 (1.33%)	0
Preterm delivery, n(%)	18 (24%)	2 (22.22%)
Neonatal death, n(%)	1 (1.33%)	1 (11.1%)

Conclusions: In our multi-ethnic cohort, more than half of the patients experienced an adverse pregnancy outcome. SLE flares in pregnancy occurred in a third of the cohort with the most common organ manifestation being haematological and renal flares. SLE pregnancies with antiphospholipid syndrome appeared to be associated with a higher risk of SLE flares and adverse pregnancy outcomes.

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