SAT0417

PREDICTIVE VALUE OF FETAL UMBILICAL ARTERY DOPPLER IN PRETERM BIRTH IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Pregnancies in women with systemic lupus erythematosus (SLE) resulted in an increase of preterm birth. The predictive value of fetal umbilical artery Doppler examinations for adverse pregnancy outcomes has been reported, while not widely be assessed in SLE pregnant women.

Objectives: To examine the predictive value of the fetal umbilical artery Doppler on preterm birth in pregnant women with SLE.

Methods: A fetal Doppler ultrasound examination was performed on all fetuses during the third trimester (28–36 weeks of gestation). The Doppler flow parameters of umbilical arteries were recorded, including pulsatility parameter (PI), resistance index (RI), the peak value of umbilical arteries at end-systole (Vmax, also abbreviate as S) and the peak value of umbilical arteries at end-diastole (Vmin, also abbreviate as D). The value of S/D was automatically calculated. The clinical data from 160 live births of SLE patients were analysed retrospectively.

Results: The mean age of SLE patients at pregnancy was (29.7±3.7) years old (20–37). Totally, 52 patients (32.5%) were preterm births and 76 (47.5%) were fullterm births without any other adverse pregnancy outcomes. The rate of preterm birth before 34 weeks was 26.9% and the number changed to 73.1% for those preterm deliveries after 34 weeks. Iatrogenic preterm birth was the most common cause of preterm birth (30 cases), followed by spontaneous preterm birth (12 cases) and preterm premature rupture of membranes (10 cases). The pulsatility index (PI), resistance index (RI) as well as S/D value of SLE patients with pre-term delivery was higher than that of patients with full-term delivery ($p<0.05$). The area below the ROC curve for PI, RI and S/D was 0.6 (95%CI 0.5–0.7), 0.7 (95%CI 0.6–0.8) and 0.6 (95%CI 0.5–0.7), respectively. PI with cut-off value of 1.0 indicated the highest risk of preterm birth, with sensitivity of 34.6% and specificity of 84.2%. Regarding 0.7 as the cut-off value for RI to predict preterm birth, the sensitivity was 50.0% and the specificity was 81.6%. The optimal cut-off value for S/D was 2.8, at which sensitivity (50.0%) and specificity (81.6%) had the best combination.

Conclusions: Pregnancies in lupus still had an increased risk of preterm birth. Umbilical artery Doppler was a useful monitoring measure for preterm birth in lupus pregnancies.

Disclosure of Interest: None declared

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SAT0418

CAN THE AUTOMATED NEUROPSYCHOLOGICAL ASSESSMENT METRICS (ANAM) PREDICT COGNITIVE IMPAIRMENT COMPARED TO A COMPREHENSIVE NEUROPSYCHOLOGICAL BATTERY IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)?

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Background: The diagnosis of cognitive impairment (CI) is often delayed requiring use of a comprehensive battery (CB). The Automated Neuropsychological Assessment Metrics (ANAM) is a computerised tool that can be used to screen for CI.

Objectives: To determine the ability of ANAM (v4) GNS Battery to predict CI in patients with systemic lupus erythematosus (SLE).

Methods: SLE patients (n=98), aged 18–65 years, attending a single centre between July 2016–April 2017 were recruited. Participants were administered the ANAM and CB on the same day. ANAM throughput scores were used to provide an estimate of cognitive efficiency. Patient scores on the ANAM and CB were compared to a normative sample of age and gender-matched healthy controls. The CB evaluates the following major cognitive domains: manual motor speed and dexterity, simple attention and processing speed, visual-spatial construction, verbal fluency, learning and memory (visuospatial and memory), and executive

functioning (untimed and timed). ANAM evaluates the following major cognitive domains: attention and processing speed, memory, visual-spatial processing, executive functioning, abstract language function and fine motor processing. CI was operationalized on the CB and ANAM as a z-score of ≤ -1.5 on ≥ 2 domains or a z-score ≤ -2.0 on ≥ 1 domains, or either.

The performance of ANAM was compared against the CB using different CI definitions. Descriptive analysis was used to determine prevalence, sensitivity (Sn), specificity (Sp), Positive Predictive Value (PPV) and Negative Predictive Value (NPV).

Results: Of the 98 patients (90.8% female), the mean age at SLE diagnosis was 28.5±10.2 and disease duration at enrolment was 15.5±10.0 years. Prevalence of CI using CB ranged between 40.0%–44.8% ($z\leq -1.5$ in ≥ 2 domains and $z\leq -2.0$ in ≥ 1 domains, respectively) and 55.2% for either. Prevalence of CI using the ANAM ranged between 30.8%–39.3% ($z\leq -1.5$ in ≥ 2 domains and $z\leq -2.0$ in ≥ 1 domains, respectively) and 43.0% for either.

ANAM Sn/Sp was 52/73% and PPV/NPV was 70/55% [based on $z\leq -1.5$ in ≥ 2 domains or $z\leq -2.0$ in ≥ 1 domains for ANAM and CB (corresponding for A+B and E+F in table 1)].

Abstract SAT0418 – Table 1. Performance of ANAM against the CB

	Definitions of CI	Comprehensive Battery (CB)		
		$z\leq -1.5$ in ≥ 2 domains	$z\leq -2.0$ in ≥ 1 domains	
		E Sn/Sp PPV/NPV	F Sn/Sp PPV/NPV	E+F Sn/ Sp PPV/ NPV
ANAM	$z\leq -1.5$ in ≥ 2 domains	A 45/81% 62/68%	37/76% 55/61%	37/80% 69/51%
	$z\leq -2.0$ in ≥ 1 domains	B 55/76% 61/71%	49/72% 58/65%	50/80% 75/57%
		A 55/69%	51/67%	52/73%
		+B 55/69%	55/64%	70/55%

Sn sensitivity; Sp specificity; PPV Positive Predictive Value/NPV Negative Predictive Value

Conclusions: ANAM is a promising tool for the assessment of CI in SLE. Future studies are required to determine if the sensitivity of the ANAM can be improved against the current CB.

Disclosure of Interest: None declared

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RENAL AND OVERALL SURVIVAL ANALYSIS IN A COHORT OF PATIENTS WITH LUPUS NEPHRITIS WITH UP TO 40 YEARS OF FOLLOW UP

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Background: Although the prognosis has improved in the last decades, Lupus patients still have a 3-fold increase in mortality, compared with the general population. Lupus nephritis (LN) is one of the most severe manifestations of this complex systemic disease, occurring in up to 60% of patients.

Objectives: 1) To obtain the overall and renal survival curves for a LN cohort; 2) To investigate factors affecting survival; 3) To identify the causes of death in this cohort.

Methods: Single-centre retrospective observational study, including all patients with biopsy-proven LN, followed at UCLH Rheumatology department from 1975 to 2017. Individual clinical files were reviewed to obtain demographic, clinical, laboratory and pathological data. We also recorded data on treatment with corticosteroids, immunosuppressants and antimalarials. We analysed overall survival and renal survival through the Kaplan-Meier method. COX regression analyses were conducted to investigate possible predictors of shorter survival. Significance level was defined at 0.05.

Results: 209 patients were included (table 1). Cumulative survival at 5, 10, 15 and 20 years after the diagnosis of LN was 92%, 86%, 81% and 76%, respectively. Main causes of death were infection (29%), malignancy (21%) and cardiovascular (21%). Regarding progression to end-stage renal disease (ESRD), cumulative renal survival at 5, 10, 15 and 20 years was 94%, 86%, 79% and 72%, respectively. Table 2 shows the predictors of shorter survival identified for this