disease. The SWE may be a useful tool for elucidation of early stage pathological changes of the SG when salivary gland functions are not impaired in SS.

Disclosure of Interest: None declared

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FRI0381 ARE THE ANTIPHOSPHOLIPID ANTIBODIES A "NEW" INDEPENDENT RISK FACTOR FOR ACCELERATED ATHEROSCLEROSIS

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Background: The physiological function of phospholipids and their protein co-factors, which are aPL target, are well known. Beta 2 glycoprotein 1 is an important transport molecule that binds negatively charged particles to free circulation, including various lipoproteins, such as LDL. In this context, β 2GPI plays the role of protein co-factor of low density lipoprotein and is a key factor affecting serum levels of free LDL and total cholesterol, respectively. Its physiological function is suppressed by antibodies against it.

Objectives: We investigated the incidence of atherosclerosis in patients with antiphospholipid syndrome compared with systemic lupus erythematosus without aPL and healthy controls at pre-treatment sites.

Methods: We examined 219 people divided in three groups – APS (136), SLE,⁴² healthy controls.⁴¹

We performed an ultrasound examination of the carotid arteries, measuring intima-media thickness as well and evaluate the vessel wall for atherosclerotic plaques.

We performed calcium score on the coronary arteries, aorta and aortic valve as well.

Results: Between our groups we do not find statistically significant difference for BMI.

Comparative analysis for LDL-cholesterol showed higher APS median values (3.13 mmol/L) compared to other groups. Using the Kruskal-Wallis test, we have a statistically significant result for a direct correlation with the antiphospholipid syndrome ($p=0.001$). Patients with APS shows higher levels for LDL.

With the Kruskal-Wallis analysis, we found a statistically significant difference in IMT between the study groups for left ($p=0.005$) and right ($p=0.014$) carotid arteries.

With Mann-Whitney analysis, we do not detect statistically significant differences in IMT values between patients with primary antiphospholipid syndrome and those with secondary.

We investigated the frequency distribution of atherosclerotic plaques in individuals in the groups. In the right carotid artery, plaque was found in 18 (31.6%) patients with APS, 3 (7.3%) cases were recorded in healthy controls, and in the SLE group there were no reported cases. We establish a statistically significant correlation of carotid plaques in APS patients ($p\leq 0.001$).

In our study group of patients with APS is characterised by the highest incidence of positive CaScore, and its maximum values are significantly higher than the other two groups. The maximum Agatston score for patients with antiphospholipid syndrome is 908 HU, with SLE being 2.1 HU, with healthy controls – 233HU.

We investigate the levels of anti-ox LDL antibodies and we found that there is a correlation between the levels of aPL and anti-oxLDL.

Conclusions: The conclusion from our study is that the aPL could be considered for independent risk factor for accelerated atherosclerosis. The aPL are responsible for dyslipidemia in some cases blocking the transport molecules like β 2GPI.

Disclosure of Interest: None declared

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FRI0382 A STUDY OF MCP1 AND LIPOCALIN AS URINARY BIOMARKERS IN LUPUS NEPHRITIS

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Background: Currently, major efforts have been undertaken to identify biomarkers that can predict impending lupus renal flare, development of chronic kidney disease or reflect renal histology at the time of the flare.

Objectives: This study aims to assess the correlation of urinary biomarkers MCP1 and NGAL with the disease activity in lupus nephritis.

Methods: This was a prospective study conducted in a tertiary care centre. 60 patients with SLE were recruited. They were divided into 3 groups, one with Active Lupus Nephritis ($n=22$), another with Inactive Lupus Nephritis ($n=20$) and a third formed of SLE patients with no renal involvement ($n=18$). For comparison another group of age and sex matched controls was taken ($n=20$). Disease activity was correlated with disease activity indices, baseline characteristics and biopsy. Urinary MCP1 and NGAL were measured. Statistical analysis using SPSS11.5 was

done to find the correlation between levels of urinary biomarkers and disease activity.

Results: In patients with active LN, both UMCP1/Cr and UNGAL/Cr were significantly elevated (92.78, 76.11 pg/ml, $p<0.001$). In both control group and SLE without renal involvement the values of UMCP1/Cr and UNGAL/Cr were normal (24.44, 22.22 pg/ml in control and 24.3, 22.80 pg/ml in SLE without renal involvement). In patients with inactive LN the values of UMCP1/Cr and UNGAL/Cr were observed to be significantly higher than control (44.18, 38.45 pg/ml, $p<0.005$) and lower than those of active LN. Values of UMCP1/Cr and UNGAL/Cr were found to be in close correlation with mean rSLEDAI scores of active LN¹⁰ and inactive LN (3.6).

Conclusions: Levels of urinary biomarkers UMCP1 and UNGAL were significantly elevated in active lupus nephritis and found to have excellent correlation with disease activity index and rSLEDAI scores.

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FRI0383 CHANGES IN WHITE MATTER MICROSTRUCTURE CORRELATE WITH SF-36 MENTAL COMPONENT SUBSCORE IN INFLAMMATORY NPSLE

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Background: The diagnosis and treatment of neuropsychiatric systemic lupus erythematosus (NPSLE) is challenging due to the lack of a diagnostic gold standard and controlled trials. Immunosuppressive therapy is prescribed for immune-mediated NPSLE manifestations, despite little evidence supporting its effectiveness. There is increasing evidence for the value of magnetization transfer imaging (MTI) in NPSLE. Recent research has demonstrated that white matter (WM) magnetic transfer ratio histogram peak height (MTR-HPH), a derived-MTI index, is a valuable radiological biomarker for the diagnosis and follow-up in inflammatory NPSLE.¹ It remains unknown whether the changes in WM MTR-HPH also correlate with the change in health-related quality of life (QoL) in these patients.

Objectives: To analyse the correlation between change in WM MTR-HPH and change in QoL in different subsets of NPSLE (inflammatory, ischaemic, non-NPSLE).

Methods: Patients that visited the Leiden University Medical Centre (LUMC) NPSLE clinic between 2007 and 2015 were included in this study. The attribution process of NP events to SLE and one of its underlying pathogenic mechanisms (ischaemic or inflammatory) was established by multidisciplinary consensus. All patients underwent MRI examination at two different time points and filled in the Short-Form 36 (SF-36). Summary scores were deducted from the SF-36, leading to a Physical Component subscore (PCS) and a Mental Component subscore (MCS) for QoL. Spearman rank correlation coefficient (SR) was used to correlate WM MTR-HPH and the overall difference in change between visits in MCS and PCS. Data was analysed per patient and per event.

Results: A total of 15 patients (mean age 39.5 ± 14.1 years, 93% female) were included. Thirty-one NPSLE events were present, of which 68% were inflammatory, 13% ischaemic and 19% non-NPSLE events. Average time between visits was 2.9 ± 1.5 years. The per patient analysis showed statistical significant correlation between WM MTR-HPH and MCS change ($SR=0.62$; $p=0.01$) and no effect on PCS change ($SR=0.09$; $p=0.76$). The per event analysis showed a significant correlation between change in WM MTR-HPH and MCS in inflammatory events ($SR=0.56$; $p=0.01$), but not in ischaemic ($p=0.20$) or non-NPSLE events ($p=0.65$). No correlation was observed between change in WM MTR-HPH and PCS in any of the subsets ($p=0.21$, $p=0.40$ and $p=0.91$ respectively).

Conclusions: We are the first to demonstrate a correlation between a radiological biomarker and change in the mental component of QoL in inflammatory NPSLE patients. Our study supplies evidence for the use of immunosuppressive therapy in inflammatory NPSLE and supports the use of this radiological biomarker as an outcome measure for future trials in NPSLE.

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FRI0384 PRIMARY SJÖGREN'S SYNDROME STRATIFIED BASED ON THE SEVERITY OF PATIENT-REPORTED FATIGUE

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Background: fatigue is one of the most common symptoms reported by patients affected by primary Sjögren's syndrome (pSS), and a major contributor to impaired quality of life.

Objectives: to analyse the clinical, serological and histological features of pSS patients stratified according to the severity of their self-reported fatigue.

Methods: among pSS patients undergoing clinical evaluation in our Sjögren's Clinic in a six-months period (January-June 2017), 86 consecutive unselected patients, fulfilling the latest ACR/EULAR pSS classification criteria, accepted to report their degree of fatigue on a 10 cm VAS (range 0–100) and to complete the ESSPRI questionnaire. Four subgroups of fatigue severity were defined, as previously published¹: no fatigue (VAS=0); low fatigue (VAS=1–24); moderate fatigue (VAS=25–74); high fatigue (VAS=75–100). For each subgroup demographic, serological, histological features and ESSDAI score were collected, as well as the prevalence of pSS-related lymphoma, fibromyalgia (FM), autoimmune thyroiditis, and anaemia.

Results: fatigue was reported by the 87.2% (n=75) of pSS patients, distributed in subgroups as following: 25.3% (n=19) with low fatigue, 58.7% (n=44) with moderate fatigue and 16% (n=12) with high fatigue. Lymphoma was significantly (p=0.0133) more frequent in the pSS subgroup with high fatigue (33.4%, by considering active lymphoma cases; 50%, by considering also the cases with lymphoma in remission). FM patients were a minority (4.7% ; n=4), and never complained of high fatigue, all of them reporting moderate fatigue. A significant correlation was finally found between fatigue severity and ESSPRI (p<0.0001), but not with ESSDAI (p=0.31). No significant age or sex difference was observed between subgroups. Also autoimmune thyroiditis, anaemia, anti-SSA and/or anti-SSB positivity, rheumatoid factor positivity, and cryoglobulinemia showed no significant difference between subgroups.

Conclusions: when fatigue is better stratified in pSS, it appears that it is usually moderate or severe, rather than mild. Furthermore, it is unrelated to FM. Overall, fatigue appears as a consequence of pSS itself. Of note, severe fatigue was related in this study with the most important complication influencing patient survival in pSS, i.e., lymphoma. Further studies are needed to disclose the pathogenetic events leading to fatigue in pSS, and investigation of lymphoma in pSS might be also helpful to this end.

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FRI0385 CLINICAL CHARACTERISTIC FEATURES OF BRAINSTEM ENCEPHALITIS IN NEUROPSYCHIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Neuropsychiatric manifestation in systemic lupus erythematosus (NPSLE) is one of the most serious complications of the disease. The American College of Rheumatology (ACR) developed standardised nomenclature and case definitions for neuropsychiatric involvement in SLE (NPSLE) in 1999. Although myelopathy is included in the ACR nomenclature, no space is provided for the brainstem encephalitis. Moreover, it is still unclear whether the brainstem encephalitis is an independent clinical entity in NPSLE.

Objectives: The present study was designed in order to disclose the clinical characteristic features of the brainstem encephalitis in NPSLE.

Methods: We prospectively collected the patients who presented brainstem lesions from 2005 to 2015. The diagnosis of the brainstem encephalitis was made by the elevation of cerebrospinal fluid (CSF) IL-6, Magnetic Resonance Imaging and response to steroid. Serum autoantibodies, including anti-ribosomal P protein antibodies (anti-P), anti-NMDA receptor NR2 antibodies (anti-NR2), anti-Sm antibodies and anti-aquaporin 4 antibodies (anti-AQP4) and anti-cardiolipin antibodies (anti-CL), were measured by ELISA.

Results: Seven patients presented the brainstem encephalitis during the period of 10 years. All the patients showed the elevation of CSF IL-6 (8.3–2716 pg/ml, median 377 pg/ml), whereas CSF cell count was elevated in 6 patients. The most common clinical symptoms were headache (4 patients), vertigo (3 patients) and consciousness disturbance (3 patients). All the patients showed high intensity lesions in FLAIR images on MRI. Notably, 5 of the 7 patients also showed the high intensities periventricular regions, including cerebral aqueduct and the 4th ventricle (figure 1). Anti-NR2 and anti-P were positive in 7 patients and 6 patients, respectively. By contrast, anti-CL, anti-Sm and anti-AQP4 were positive in 4 patients, 3 patients and 1 patient, respectively. Six patients recovered after steroid therapy, while 1 patient died due to severe brainstem damages at the onset.

Cerebral aqueduct

The 4th ventricle

Conclusions: These results indicate that the brainstem encephalitis is an independent clinical entity in NPSLE, characterised by reversible high intensity lesions, especially in periventricular areas. Moreover, the data demonstrate that anti-AQP4-related neuromyelitis optica disorder is a minor population within the brainstem encephalitis. By contrast, it is suggested that anti-NR2 and anti-P might play an important role in the pathogenesis of the brainstem encephalitis.

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FRI0386 WORK DISABILITY AND QUALITY OF LIFE AMONG MULTI-ETHNIC MALAYSIAN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PATIENTS

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Background: Patients with Systemic Lupus Erythematosus (SLE) are at risk of work disability due to the substantial impact of the disease towards their physical and mental health.

Objectives: To study the prevalence of work disability (WD) and unemployment rate among SLE patients, and their associations with the quality of life (QOL) in National University of Malaysia Medical Centre (UKMMC)

Methods: This was a cross-sectional study which recruited consecutive SLE patients who attended the Nephrology and Rheumatology clinic at Universiti Kebangsaan Malaysia Medical Centre (UKMMC) from March 2017 to July 2017. Information on their current and past employment history were obtained from a customised questionnaire and WD was defined as unemployment or an inability to do paid work due to illness at the time of study or at any time after the diagnosis of SLE being made. The disease characteristics, disease activity and damage were determined from the medical records. The quality of life was measured using SF-36 questionnaires. Statistical analyses were subsequently performed to determine the factors associated with WD. This study was approved by the UKMMC ethics research committee (FF FF-2017–109).

Results: A total of 197 patients were recruited, and their median age was 37 (32 to 47) years with median disease duration of 12 (8 to 17) years. Majority of them were Malays (n=116, 58.9%), followed by Chinese (n=69, 35%), Indians (n=8,