Conclusions: Higher GAPSS values are found in women with SLE and aPL with previous pregnancy complications compared to those without pregnancy complications. The clinical utility of the GAPSS score in pregnancy seem promising and should be validated in a prospective cohort.

REFERENCE:

- [1] Sciascia S, et al. GAPSS: the Global Anti-Phospholipid Syndrome Score. *Rheumatology (Oxford)* 2013;52:1397–1403. doi:10.1093/rheumatology/kes388

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2450

THU0361 CHARACTERISATION OF NOVEL AUTOANTIBODIES TO AHNK1 SPECIFICALLY PRESENTED IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

K. Nozawa, Y. Matsushita, K. Doe, Y. Takasaki, K. Yamaji, N. Tamura.
Rheumatology, Juntendo University School of Medicine, Tokyo, Japan

Background: Aberrant activation of T cells has been considered to play important roles for pathogenesis of SLE. In T cells activation, calcium signalling is essential for the process. Interestingly, T cells of SLE patients have been reported to show several abnormalities of calcium signalling. In the present study, we postulated that patients with SLE may target calcium signaling-related molecules as autoantigen as autoantibodies to these molecules are potentially capable of interfering with calcium signalling through binding to these molecules localised at the plasma membrane eventually resulting in abnormal T cells activation in SLE. Regarding to the calcium signaling-related molecules, recent studies have shown that AHNK1 is predominantly expressed in CD4 +T cells of cell membrane and cytoplasm. Moreover, AHNK1 is known to play significant roles for regulating of calcium signalling at T cells activation through its ability to localise calcium channels properly at the plasma membrane as scaffold protein. Therefore, we verify whether autoimmune response to AHNK1 is elicited in SLE.

Objectives: The present study was conducted to clarify whether autoantibodies to AHNK-1 are produced in SLE compared with other connective tissue diseases and normal healthy controls (NHCs).

Methods: The Patients sera consisting of SLE (n=59), other connective tissue diseases (PM/DM; n=40, SSC; n=40, SS; n=30, MCTD; n=30, and RA; n=30) and NHCs (n=115) were used in the present study. Immunoreactivity against AHNK1 recombinant antigens was evaluated by ELISA. AHNK1 mRNA expression in peripheral blood mononuclear cells (PBMCs) was evaluated by quantitative RT-PCR. Indirect immunofluorescence (IIF) staining using monoclonal anti-AHNK1 antibodies in combination with the patient's sera containing anti-AHNK1 antibodies was evaluated using HEp-2 substrate. The experimental data were statistically analysed using the Mann-Whitney U-test or Chi-square test, and differences with P-values<0.05 were considered to be significant.

Results: Immunoreactivity against AHNK1 was significantly elevated in SLE patients compared to both NHCs and other connective tissue diseases. Significant elevation of AHNK1 mRNA expression was observed in PBMC of SLE patients compared to NHCs. Among 17 SLE patients with anti AHNK1 antibodies positive sera, 4 patients revealed reduction of anti- AHNK1 antibodies level after the treatment like glucocorticoid or immune suppressive reagents, however, the remaining 13 patients did not show the reduction of serum level pf anti-AHNK1 antibodies. In clinical profile, lymphopenia was frequently observed in these SLE patients. IIF analysis showed that AHNK-1 is localised at cell membrane and cytoplasm rather than nucleus.

Conclusions: In the present study, we found that autoantibodies to AHNK1 were significantly observed in sera with SLE compared to both NHCs and other connective tissue diseases. Furthermore, AHNK1 were enriched in PBMC of SLE patients suggesting antigen driven system may play an important role for this autoantibodies production. Anti-AHNK1 antibodies may be pathological and play an important role for pathogenesis of SLE because it may possibly alter physiological calcium signalling of T cells through binding to AHNK1 on cell membrane eventually resulting in aberrant T cells activation in SLE.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1265

THU0362 INCIDENCE OF MAJOR INFECTIONS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

¹K. Yap, L. Kyi¹, J. Chang², P. Nguyen², R. Kandane-Rathnayake², A. Hoi¹.

¹Rheumatology, Monash Health; ²Rheumatology, Monash University, Melbourne, Australia

Background: Major infections are one of the leading causes of morbidity and mortality in patients with systemic lupus erythematosus (SLE), and one of key concerns when considering the risk of immunosuppressive therapy. Previous studies have limited information on the relationship of infections and disease characteristics.

Objectives: To examine the incidence of major infections and describe the types of infections that occur in a cohort of well-characterised SLE patients

Methods: The study included 192 SLE patients who attended the Monash Lupus Clinic at Monash Health and enrolled in the Australian Lupus Registry and Biobank (ALRB) between 1st of July 2009 to 31st Dec 2016. Major infections were defined as any serious infections resulting in hospitalisation, reactivation of major viral infection, latent or active tuberculosis or any opportunistic infections. Patient and disease characteristics were examined in patients with or without major infections, and comparison was also made with 86 rheumatoid arthritis (RA) patients who are on similar level of immunosuppression. Associations between a number of patient and disease variables and infection were examined using Wilcoxon rank-sum tests (continuous variables) and Person's chi-squared tests (binary/categorical variables).

Results: 57 (30%) SLE patients reported 97 episodes of infection during the observation period (974 person-years). The median age of patients and observation period and other demographics were similar in patients who have experienced a major infection. In contrast, 15 (17%) RA patients reported 28 infection events during the study period. RA patients who reported infections were significantly older than SLE patients with infections events, median age (IQR) 68 years⁵³ vs 42 years^{33, 54} (p<0.001) respectively. 61% of SLE patients and 54% of RA patients were on prednisolone. Comparing lupus with RA patients, the type of pathogens identified was significantly different (p<0.001), with no organism identified being the most common in lupus whereas in RA multiple pathogens are common (table 1). VZV reactivation causing shingles was the most common skin and soft tissue infection in lupus patients, and occurred more frequently than the RA patients. Among all of serious infections requiring hospitalisation, infection site did not differ between SLE and RA patients, and lower respiratory and urinary tracts were most commonly involved. In patients who experienced major infection they had a significantly higher SLEDAI (p 0.04), higher ESR (p 0.005) and lower haemoglobin (p 0.003).

Pathogen_type	SLE n=97	RA n=28	<0.001
CMV, EBV	4 (3.2%)	0 (0%)	
E coli, Salmonella	6 (5%)	7 (25%)	
HSV	9 (9%)	1 (4%)	
Influenza	2 (2%)	0 (0%)	
Multiple	7 (7%)	14 (50%)	
Unknown	30 (31%)	2 (7%)	
Pneumocystis jirovecii	1 (1%)	0 (0%)	
Staphylococcus	12 (10%)	0 (0%)	
Streptococcus			
VZV	10 (10%)	2 (7%)	

Conclusions: Our data suggests that major infections occur commonly in SLE patients, and the likelihood of infection is higher in SLE, when compared to RA patients on a similar level of immunosuppression. Higher disease activity measures were associated with increased likelihood of infection. Medication exposure such as prednisolone use was similar in SLE and RA patients, suggesting other factors other than medication use plays an important role in driving infections.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4415

THU0363 ASSOCIATION OF DEPRESSION WITH SOCIOECONOMIC STATUS, ANTICARDIOLIPIN ANTIBODIES, AND ORGAN DAMAGE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: RESULTS FROM THE KORNET REGISTRY

K.-E. Lee, J.-H. Kang, D.-J. Park, S.-S. Lee. *Chonnam National University Medical School And Hospital, Gwangju, Korea, Republic of Ireland*

Objectives: Depression is more common in patients with systemic lupus erythematosus (SLE) compared to the general population. However, few studies have

investigated risk factors of depression in SLE patients, and the results are inconsistent. This study evaluated the prevalence of, and risk factors for, depression in ethnically homogeneous Korean SLE patients.

Methods: In this study, 505 consecutive SLE patients were enrolled from the Korean Lupus Network registry. Demographic variables, clinical manifestations, laboratory findings, physician global assessment, and SLEDAI-2000 and SLICC damage index were recorded at enrollment. Patients were identified as having depressive symptoms using the Korean version of the Beck Depression Inventory (BDI) with a cut-off ≥ 16 , and categorised into four groups. Multivariable logistic regression analyses were performed to identify independent risk factors for depression defined as a BDI score ≥ 16 .

Results: Of the 505 patients, 97 (19.2%) were diagnosed with depression. Patients with a higher BDI score were older, more likely to be a current smoker, and had a SLICC score >1 . Conversely, they had lower income and educational levels. Regarding the serologic findings, patients with a higher BDI score had lower anti-double-stranded DNA positivity and higher anticardiolipin (aCL) positivity. On multivariate analysis, the following factors were associated with depression: current smoking status (OR 2.533, $p=0.049$), aCL-positivity (OR 2.009, $p=0.035$), and a SLICC damage index score >1 (OR 2.781, $p=0.039$). On the other hand, high-level education (OR 0.253, $p=0.024$) and a high income (OR 0.228, $p=0.008$) were negatively associated with depression.

Conclusions: Our results show that depression is prevalent in patients with SLE and multiple factors are associated with depression in SLE. These data could help guide target programs for those at high risk of depression in SLE.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2741

THU0364 RELATIONSHIP BETWEEN DISEASE ACTIVITY INDEX SCORES AND PHYSICIAN GLOBAL ASSESSMENT IN EARLY AND NON-EARLY SYSTEMIC LUPUS ERYTHEMATOSUS

¹M. Garabaiju, V. Sadovici-Bobeica¹, L. Mazur-Nicorescu¹, M. Cebanu², V. Salaru³, M. Mazur¹, ¹Rheumatology; ²Medical Emergency; ³Family Medicine, State University of Medicine and Pharmacy "Nicolae Testemitanu", Chisinau, Moldova, Republic of Ireland

Objectives: To evaluate the disease activity and to compare it to physician's global assessment in patients with early (early SLE) and non-early systemic lupus erythematosus

Methods: Performed case-control study included SLE patients that fulfilled SLICC classification criteria, 2012. The research included two groups: patients with early SLE – first group (disease duration less than 24 months) and non-early SLE – second group (disease duration more than 24 months). The disease activity was assessed by SLEDAI-2K and SLAM. Physician global assessment (PhGA) was rated by 0–100 numeric score. We correlated disease activity indices with physician global assessment by Pearson coefficient.

Results: A total of 96 SLE patients were analysed. First group included 45 patients with female:male ratio 14:1. The second group included 51 patients, female:male ratio 1:49. The disease activity indices: SLEDAI and SLAM denoted high disease activity level in both groups. PhGA didn't correlate with SLEDAI ($r=0.28$, $p>0.05$) in the first group, while a statistically significant correlation was determined with SLAM index ($r=0.39$, $p=0.007$). In the second group we found a moderate statistical significant correlation of PhGA with SLAM ($r=0.53$, $p=0.0001$) and weak, but also statistical significant relationship with SLEDAI ($r=0.35$, $p=0.01$). There is a better correlation of PhGA assessment and SLAM in both study groups, which can be explained by the presence of subjective components in appreciation of this index. Patient's better appreciation of their condition in the group with longer disease duration (statistical significant correlation of PhGA and both indices:SLAM and SLEDAI), probably, is because this patients know better to appreciate their disease, and patients with early SLE tend to underestimate their general condition.

Parameters of the disease	Gr I, Nr 45	Gr II, Nr 51
Age at study entry $\pm$ SD (range), years	41.18 $\pm$ 14.0 (20–75)	43.51 $\pm$ 12.3 (22–67)
Disease duration $\pm$ SD (range), month	10.14 $\pm$ 9.10 (0.1–24)	159.71 $\pm$ 94.53 (31–432)
SLAM $\pm$ SD (range), points	9.31 $\pm$ 4.87 ⁻²⁴	8.08 $\pm$ 4.38 ⁻²²
SLEDAI $\pm$ SD (range), points	11.13 $\pm$ 7.58 ⁻³⁴	7.33 $\pm$ 5.54 (0–23)
PhGA $\pm$ SD (range), points	44.02 $\pm$ 18.75 ⁻¹⁰⁻⁸⁰	47.73 $\pm$ 22.63 ⁻⁵⁻⁹²

Conclusions: In patients with early SLE PhGA correlated with SLAM, while in patients with non-early lupus PhGA correlated with both indices - SLAM and SLEDAI-2K. A better correlation of PhGA with SLAM can be explained by the presence of multiple components in this tool and also subjective data as fatigue or cognitive dysfunction.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3862

THU0365 POTENTIAL PREDICTIVE FACTORS INFLUENCING ESSDAI OF PRIMARY SJÖGREN'S SYNDROME PATIENTS

¹M. Maślińska, J. Dmowska-Chalaba¹, M. Mańczak², B. Kwiatkowska³. ¹Early Arthritis Clinic; ²Department of Gerontology, Public Health and Didactics; ³Early Arthritis Clinic, National Institute of Geriatrics, Rheumatology and Rehabilitation, Warsaw, Poland

Background: The useful tool to assessing disease activity in primary Sjögren's syndrome (pSS) is an EULAR Sjögren's syndrome disease activity index (ESSDAI).

Objectives: The aim of this study was indication of laboratory and clinical factors affecting the ESSDAI in pSS patients.

Methods: 75 pSS patients were included; 65 (87%) female, 10 (13%) men; mean age 50 years SD ± 15 . The tests included: basic laboratory tests, rheumatoid factor (RF), erythrocyte sedimentation rate, CRP, gammaglobulins serum concentration, C4 and C3 component of complement, antinuclear antibodies (ANA) - IF test HEp-2000, anti-SS-A and anti-SS-B antibodies evaluation with semi-quantitative immunoblotting, standard ELISA assays for serum cytokines levels (BAFF, APRIL, FLT-3L, TNF- β , IL-21) and β 2-microglobulin. Biopsy of minor salivary gland with the histopathological evaluation (focus score-FS) and the immunocytochemistry was also performed with the CD3+, CD4+, CD19+, CD21+, CD35+ cells presence assessment. The Schirmer's test and ocular staining score (OSS) were performed. The Bioethics Committee approval was obtained. Statistics: U Mann-Whitney (continuous variables) tests, Spearman correlation coefficient (correlations between quantitative variables) with statistical significance set at $p<0.05$.

Results: ESSDAI depends on FS, the presence of CD4+, CD3+ cells in the minor salivary glands infiltrates, RF and cryoglobulins ($p<0.05$). The division of pSS subjects into two subgroups (ESSDAI >5 ; <5) revealed, that the autoantibodies as anti-SS-A and anti-SS-B, influence the severity of the disease ($p=0.046$; $p=0.015$ respectively). ESSDAI positively correlated with OSS, but not with the Schirmer's test, other tested cytokines, ESR, CRP and gammaglobulins concentration - yet interestingly ESSDAI correlates negatively with IgG4 ($\rho=-0.435$).

Conclusions: The results confirm, that organ-related complications are influenced by inflammatory activity. This activity is expressed by mononuclear cell infiltrates (FS), which consist primarily of T-lymphocytes (indicators of active and early stage inflammation). However, contrary to other observations, no correlation between ESSDAI and cytokines or β 2-microglobulin was found. The correlation of ESSDAI with the presence of pSS marker autoantibodies (anti-SS-A, anti-SS-B antibodies), as well as with non-specific ones (RF or cryoglobulins), indicates the immunological disease activity and overactivity of B lymphocytes as suspected. The reduction of IgG4 concentration in pSS patients correlating with higher ESSDAI can be associated with breaking the autotolerance and lack of stimulation of IgG4 production. But the role and importance of IgG4 in immunological processes both as an activator of dependent autoimmune diseases and, on the other hand, the marker of induction of immune tolerance requires further research.

REFERENCES:

- [1] Seror R, Bowman SJ, Brito-Zeron P, et al. EULAR Sjögren's syndrome disease activity index (ESSDAI): a user guide. RMD Open 2015;1:e000022.
- [2] Risselada AP, Kruize AA, Bijlsma JW. Clinical applicability of the EULAR Sjögren's syndrome disease activity index: a cumulative ESSDAI score adds in describing disease severity. Ann Rheum Dis 2012;71(4):631.
- [3] Seror R, Theander E, Bootsma H, et al. Outcome measures for primary Sjögren's syndrome: a comprehensive review. J Autoimmun 2014;51:51–66.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4241

THU0366 STUDY OF THE ROLE OF MICRO-RNA 20A EXPRESSION IN SYSTEMIC LUPUS ERYTHEMATOSUS IN AN EGYPTIAN COHORT

¹M.S. Elkhaila, M. Zehairy¹, M. Tayel¹, A. Elkeria², D. Elkaffash³, N. Baddour⁴.

¹Rheumatology unit, Internal Medicine department; ²Nephrology unit, Internal medicine department; ³Clinical and Chemical Pathology; ⁴pathology, Faculty of Medicine, Alexandria University, Egypt, Alexandria, Egypt

Background: Micro-RNAs are small noncoding RNAs that act as cytoplasmic post-transcriptional gene expression regulators by targeting their complementary messenger RNA. They regulate several inflammatory, immunologic and oncogenic pathways. MicroRNAs are differentially expressed in patients with systemic lupus erythematosus (SLE), especially in association with lupus nephritis. The positive miRNA list in SLE patients in different studies presents relatively