dsDNA, C1q, chromatin, Smith, and ribosomal P (figure 1F). Autoantibody levels remained relatively stable in partial- and non-responder proliferative LN patients, as well as in patients with membranous LN.

Conclusions LN patients exhibit heterogeneous autoantibody profiles associated with ISN/RPS classification. Specifically, levels of autoantibodies against dsDNA, C1q, chromatin, and ribosomal P may serve as noninvasive biomarkers of proliferative LN. In patients with proliferative but not membranous LN, a decline in the titers of several autoantibodies, including many not routinely measured over time, such as anti-Sm, was associated with treatment response, suggesting a possible role in LN pathogenesis. In addition, these autoantibodies may serve as early biomarkers of treatment response.

LP-016 ANTI-HISTONE AND ANTI-NUCLEOSOME ANTIBODIES, RATHER THAN ANTI-DSDNA ANTIBODIES ARE ASSOCIATED WITH INTERFERON-INDUCED BIOMARKERS IN SUDANESE AND SWEDISH SLE PATIENTS

[1]Sahwa Elbagir, [2]NasrEldeen A Mohammed, [3]Vilija Oke, [3]Agneta Zickert, [1]Anna Svanqvist, [1]Christine Möller Westerberg, [4]Anders Larsson, [5]Jan Nilsson, [1,6]Amir Elshafie, [7]Elnour M Elagib, [8]Musa AM Nur, [3]Iva Gunnarsson, [3]Elisabet Svenungsson, [1]Johan Rönnelid*. *[1]Department of Immunology, Genetics and Pathology, Uppsala University, Uppsala, Sweden; [2]Faculty of Medical Laboratory Sciences, Al Neelain University, Khartoum, Sudan; [3]Division of Rheumatology, Department of Medicine Solna, Karolinska Institute, Karolinska University Hospital, Stockholm, Sweden; [4]Department of Medical Sciences, Section of Clinical Chemistry, Uppsala University, Uppsala, Sweden; [5]Department of Experimental Medical Science, Lund University, Lund, Sweden; [6]Department of Clinical Immunology and Transfusion Medicine, Linköping University Hospital, Linköping, Sweden; [7]Rheumatology Unit, Military Hospital, Omdurman, Sudan; [8]Rheumatology Unit, Alribat University Hospital, Khartoum, Sudan*

10.1136/lupus-2023-KCR.146

Background In SLE, anti-dsDNA often exists together with autoantibodies against other chromatin components, like histones and nucleosomes. These antibodies can induce cytokines including interferon-alpha.

Methods We have measured ANA specificities and investigated their associations to inflammatory biomarkers. We included 93 Sudanese and 480 Swedish SLE patients. Serum levels of autoantibodies against dsDNA, Sm, the Sm/U1RNP complex, U1RNP, SSA/Ro52, SSA/Ro60, SSB/La, ribosomal P, PCNA and histones were quantified with a bead-based multiplex immunoassay. In the Swedish cohort also anti-nucleosome antibodies were investigated. Relative levels of 73 plasma biomarkers were determined with Proximity Extension Assay technique or ELISA. Adjusted p values were considered significant when <0.05.

Results Among Sudanese patients, levels of 5/73 biomarkers showed significant associations to ANA-associated antibodies. Anti-histone antibodies showed the strongest positive correlations with interferon-inducible factors MCP-1 and IP-10, and with MCP-3 and S100A12, and negative correlation with stem cell factor. Also anti-dsDNA antibodies associated with MCP-3, IP-10 and S100A12, but when combined in the same regression model, anti-dsDNA associations but not anti-histone lost significance.

Validation analyses among Swedish patients for MCP-1, IP-10, SA100A12 also demonstrated significantly stronger associations to anti-histone and anti-nucleosome antibodies respectively, compared to anti-dsDNA and other ANA specificities, and in combined regression models, anti-histone/nucleosome showed the strongest associations. When excluding anti-histone or anti-nucleosome positive patients, the associations between interferon-inducible factors MCP-1/IP-10 and anti-dsDNA and were lost. In contrary, when excluding anti-dsDNA positive patients, associations with anti-histone and anti-nucleosome respectively remained significant. SA100A12 associations with anti-dsDNA antibodies remained significant after exclusion of anti-histone positive patients but lost significance when excluding anti-nucleosome positive patients.

Conclusions Levels of mainly IFN-induced inflammatory biomarkers correlate stronger with anti-histone and anti-nucleosome antibodies compared to other ANA specificities including anti-dsDNA. Our results suggest that autoantibodies against DNA-complexes or DNA-associated proteins rather than anti-dsDNA induce the interferon signature in SLE.

LP-203 THE NEW MARKERS OF SYSTEMIC LUPUS ERYTHEMATOSUS ACTIVITY: FOCUS ON INTERLEUKIN (IL)-1B AND SOLUBLE IL-2 RECEPTOR

Mariia Aristova, Tatyana Panafidina, Yulia Gorbunova, Anastasiya Avdeeva, Tatyana Popkova*. *Systemic lupus erythematosus laboratory, V.A. Nasonova Research Institute of Rheumatology, Russian Federation*

10.1136/lupus-2023-KCR.147

Background Systemic lupus erythematosus (SLE) is a systemic autoimmune disease with unknown etiology, characterized by the hyperproduction of autoantibodies to various components of the cell nucleus and the resulting immune-inflammatory damage to tissues. Current trends of personalization therapy require the search for new serum markers, the production of which reflects aberrant activation of the immune system with further formation of autoimmunity. These are cytokines, chemokines and their receptors. Our aim was to determine the levels of interleukin (IL)-1b and soluble IL-2 receptor (sIL-2R) in patients with SLE, to evaluate their association with clinical and laboratory disease manifestations.

Methods The study included 26 patients (21 women, 5 men) with a diagnosis of SLE meeting the criteria of SLICC 2012 and EULAR/ACR 2019. The mean age of the patients was 33 ±11 years and the median disease duration was 14 [4;144] months. Examination of patients included standard laboratory and instrumental diagnostics. Disease activity was assessed using the SLEDAI-2K index. Serum levels of IL-1b and sIL-2R were determined by enzyme immunoassay (Invitrogen, Australia).

Results In the study cohort median IL-1b and sIL-2R levels were 3,3 [2,5;4,6] ng/mL and 0,0065 [0,005;0,008] pg/mL, respectively. Only negative correlation of IL-1b level with glomerular filtration rate was found (R=-0,48, p<0,01). sIL-2R level was associated with SLEDAI-2K (R=0,53, p<0,005), anti-dsDNA (R=0,55, p<0,003), C3 (R=-0,56, p<0,003) and ferritin level (R=0,47, p<0,05), CRP (R=0,45, p<0,002), urinary casts (R=0,46, p<0,01), leukocyturia (R=0,42, p<0,03). There were no statistically significant differences in the concentrations of both studied immunological markers between patients with lupus nephritis (LN) (n=18) and without LN (n=8).

Conclusions The concentration of sIL-2R correlates with laboratory indicators of SLE, SLEDAI-2K and urine sediments, suggesting its promising potential for SLE activity evaluation.

In turn, IL-1b levels may reflect renal function, which requires further study in a larger cohort of patients with SLE.

3. SLE comorbidities

LP-019 SOCIAL MALADJUSTMENT AND ANXIETY-DEPRESSIVE SPECTRUM DISORDERS IN SYSTEM LUPUS ERYTHEMATOSUS AND PRIMARY ANTIPHOSPHOLIPID SYNDROME PATIENTS

[1,2]Anastasia Borisova, [2]Yuriy Veltishchev, [1]Tatyana Lisitsyna, [1]Tatiana Reshetnyak*, [2]Olga Seravina, [2]Oksana Kovalevskaya, [1]Fariza Cheldieva, [1]Anton Abramkin, [2]Artur Zeltyn. *[1]Thromboinflammation, V.A. Nasonova Research Institute of Rheumatology, Russian Federation; [2]Mental Disorders in Somatic Diseases, Moscow Research Institute of Psychiatry, Serbsky NMRC PN MoH, Russian Federation*

10.1136/lupus-2023-KCR.148

Background stress factors (SF), anxiety-depressive spectrum disorders (ADSD) in patients with rheumatic disorders (RD) are related to stress vulnerability

Methods 110 patients (62 – SLE, 48 – PAPS), mostly women (85 (77,3%)), mean (M±SD) age 37,5±12,2 years, were consecutively enrolled in the study. ADSD were diagnosed in accordance with ICD-10. PSS-10 scale was used.

Results The majority of patients suffered ADSD (100 (90,9%)), that were mostly related to SF and developed earlier than RD in 48 (77.4%) SLE and 31 (63.3%) PAPS patients.

SF in childhood (0–11 years) (58 (93,5%) vs 33 (68,8%) p=0,001), first of all parental deprivation in 0–3 years (44 (70.9%) vs 17 (35,4%), p=0,0001) were found more often in SLE than PAPS patients.

SF in adolescence (11–16 years) were more commonly found among SLE but not PAPS patients (34 (54.8%) vs 17 (35,4%), p=0,03) with more often social maladjustment in SLE (15 (24,2%) vs (4 (8,33%), p=0,02).

SF during few months before the RD onset were experienced by 45 (72.6%) SLE, 31 (64.5%) PAPS patients. SLE patients also were significantly more likely to be exposed to multiple stress factors before RD than PAPS (29 (46.8%) vs 9 (18.8%), p=0.002).

As a result, SLE were more vulnerable to stress factors compared to PAPS patients, according to PSS-10: 28,7±6,25 vs 26,2±6,68, p=0,05.

Conclusions SF in childhood are related to social maladjustment and predispose to ADSD and SLE onset.

LP-022 PREFERENCE AND EFFICACY OF ZOLEDRONATE FOR THE TREATMENT OF GLUCOCORTICOID-INDUCED OSTEOPOROSIS IN PATIENTS WITH AUTOIMMUNE DISEASE INCLUDING SYSTEMIC LUPUS ERYTHEMATOSUS

Ji-Won Kim*, Ju-Yang Jung, Hyoun-Ah Kim, Chang-Hee Suh. *Department of Rheumatology, Ajou University School of Medicine, Republic of Korea*

10.1136/lupus-2023-KCR.149

Background Bisphosphonates (oral alendronate and risedronate, and intravenous zoledronate) are effective agents for glucocorticoid-induced osteoporosis (GIOP). Zoledronate is a convenient and highly compliant treatment compared to other bisphosphonates. In this study, we aimed to compare the efficacy, patient satisfaction, and preference of zoledronate with other bisphosphonates.

Methods We included 50 patients diagnosed with GIOP during treatment for autoimmune diseases including systemic lupus erythematosus (SLE). All patients had new fractures or persistent osteoporosis in follow-up bone densitometry after taking oral bisphosphonates for at least 1 year. After 1 year of treatment with zoledronate, a face-to-face survey was conducted on patients' preference and satisfaction. The treatment efficacy was analyzed by comparing the changes in bone density and fractures with patients maintaining oral bisphosphonates as controls.

Results Patients with SLE and rheumatoid arthritis were included, with a mean age of 64.1 years (96% were female), and the mean duration of GIOP of 5.5 years. There was no difference in the cumulative glucocorticoid doses of the two groups. There were no significant differences in the treatment efficacy between zoledronate and oral bisphosphonate; annualized percentage change in bone density in the lumbar spine (1.9±3.91g/cm2 vs. 1±5.3g/cm2, p=0.355), femur neck (-0.91 ±6.31g/cm2 vs. 0.41±5.07g/cm2, p=0.264), and hip (0.29 ±2.91g/cm2 vs. 0.41±5.07g/cm2, p=0.888). The incidence of new fractures was two in each of the two groups, showing no difference. As a result of the survey, 39 patients (78%) preferred intravenous zoledronate over oral bisphosphonates and had higher satisfaction, and the most common reasons were administration interval and convenient regimen. The infusion-related adverse events of zoledronate were only 2 patients (4%).

Conclusions The patient reported preference and satisfaction of zoledronate were significantly higher than that of oral bisphosphonates, and the treatment efficacy for osteoporosis was similar. Therefore, zoledronate is recommended as a proper treatment for GIOP in patients with autoimmune disease including SLE.

LP-023 SYSTEMIC LUPUS ERYTHEMATOSUS CONCOMITANT WITH ATOPIC DERMATITIS, A CASE SERIES REPORT

Seon Young Song*, Hae Chang Joh, Ki Yeon Kim, Mihn Sook Jue, Jeong Eun Kim, Joo Yeon Ko. *Department of Dermatology, Hanyang University College of Medicine, Seoul, Korea, Republic of Korea*

10.1136/lupus-2023-KCR.150

Description Systemic lupus erythematosus (SLE) and atopic dermatitis (AD) are both immune disorders that can lead to significant physical complications. There have been several reports of coexistence or association of the two diseases. In cases of concurrence of SLE and AD, patients may require more comprehensive therapeutic strategies for proper control of both diseases' activities. In addition, physical trauma such as excoriation can exacerbate or initiate cutaneous lupus erythematosus lesions, so called Koebner phenomenon.

Herein, we report 12 patients with SLE accompanied with AD. They commonly presented with eczematous lesions or lichenification of the flexural areas with marked itching. They all showed elevation of immunoglobulin E (IgE) level, thus satisfying the diagnostic criteria for AD. Additionally, ANA titer and Anti-dsDNA antibody were elevated in laboratory tests. Also, they satisfied other diagnostic criteria for SLE, such as acute or chronic cutaneous lupus erythematosus. Under the diagnosis of concurrent AD and SLE, they were