years for the total cohort, incidence of invasive PI in SLE was of 236/100.000 patient-years. As compared to the incidence in general French population, invasive PI was 26 times more frequent in SLE patients. PI occurred at a younger age (43.5+14.9 versus 65.3+18.7 years, p=0.009) and was more severe, with a higher frequency of invasive infection (p<0.001) and higher need for ICU admission (p=0.015) in SLE as compared to non SLE patients. Of note, unusual PI sites, including pneumococcal endocarditis (n=1), arthritis (n=1) and peritonitis (n=1) were observed in SLE patients only. Risk factors associated with PI in SLE patients were a serum gammaglobulin level <5g/L (p=0.003) and a past history of lupus nephritis (p=0.047), only. Steroids (p<0.001) and immunosuppressive drugs (p=0.027) were associated with infection severity.

Conclusions: Pneumococcal infections occur at a younger age, are more frequent and severe in SLE patients. Hypogammaglobulinemia and lupus nephritis increased the risk for PI, whereas steroids and immunosuppressive drugs were associated with infection severity only. Our study shows that SLE patients have an increased risk for invasive PI and points to the need for vaccination against *streptococcus pneumoniae* in SLE.

Disclosure of Interest: None declared

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SAT0294 COMPARISON OF CLINICAL CARE BETWEEN CHINESE AND AMERICAN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

J. Dong[1], H. Ma[1], W.N. Roberts[2], L. Wang[1], F. Khan[3], K.A. Lyn Shue[2], L. Zhao[1], L. Pan[1]. *[1]Rheumatology and Clinical Immunology, Affiliated Hospital of Qingdao University, Qingdao, China; [2]Rheumatology; [3]Internal Medicine, University of Louisville, Louisville, KY, United States*

Background: In addition to gender and ethnicity, modifiable variables like geography, socioeconomic status, health system structure, education, and physician expertise may influence outcomes in systemic lupus erythematosus (SLE).

Objectives: To compare characteristics of and treatment options for subsets of Chinese and American patients with SLE to elucidate factors that contribute to disease activity and damage.

Methods: Chart review of 77 Chinese (Qingdao) and 48 Midwestern American (Louisville, Kentucky) patients meeting American College of Rheumatology (ACR) criteria for a diagnosis of SLE followed up for four years were analyzed retrospectively. Organ damage was assessed using the Systemic Lupus International Collaborating Clinics (SLICC)/ACR Damage Index (SDI), and disease activity was assessed using the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI). Statistics were parametric exploratory tests of significance and multiple regression analyses in this hypothesis-generating effort.

Results: The interval between the time of onset and diagnosis was 44 months shorter in the Chinese arm (p=0.001), and Chinese patients followed up at six times greater frequency than American patients (p<0.001). Despite the lack of formal matching, the two cohorts featured similar disease activity according to the SLEDAI. Based on the SDI, rates of organ damage were higher in the American group. Chinese patients received more steroids, cyclophosphamide, hydroxychloroquine, intravenous immune globulin, and cyclosporine than the Louisville group, while the Louisville patients received more mycophenolate mofetil and azathioprine (p=0.001).

Table 1

Variable	Qingdao (*n*=77), mean ± SD	Louisville (*n*=48), mean ± SD	*p*-value
Onset age (years)	30.24±11.95	30.21±12.21	0.989
Age at diagnosis (years)	30.89±11.92	34.5±12.99	0.114
Duration between SLE onset and diagnosis (months)	7.94±18.46	52.30±89.90	0.001
Clinic visits per year	10.93±7.09	3.02±1.91	<0.001
Interval between the last two times of follow up (months)	1.89±1.31	12.32±28.32	0.014
Disease duration (years)	5.97±5.72	5.22±5.53	0.466
SLEDAI	5.81±4.32	4.63±4.77	0.156
SDI	0.44±0.64	1.23±1.057	<0.001

Table 2

Medication	Qingdao (*n*=77)	Louisville (*n*=48)	*p*-value
Prednisone	77 (100%)	29 (60.42%)	<0.0001
Cyclophosphamide	34 (44.16%)	6 (12.50%)	<0.0001
Hydroxychloroquine	72 (93.51%)	32 (66.67%)	<0.0001
Methotrexate	9 (11.69%)	3 (6.25%)	0.489
Mycophenolate mofetil	10 (12.99%)	18 (37.50%)	0.001
Azathioprine	2 (2.60%)	5 (10.42%)	0.147
Intravenous immune globulin	12 (15.58%)	1 (2.08%)	0.035
Cyclosporine	17 (22.08%)	1 (2.08%)	0.005

Conclusions: The establishment of follow-up and treatment of SLE differs in specific, identifiable ways between these subsets of Chinese and midwestern American patients. Greater access to and increased frequency of follow-up appears associated with a lesser degree of organ damage, supporting the treat-to-target concept as applied to SLE. Complete, controlled trials in both settings are necessary, and further detailed comparison of larger cohorts may inform conclusions about the likelihood of generalizability of trial results from one setting to another.

Disclosure of Interest: None declared

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SAT0295 ANTI-RO52/TRIM21 ANTIBODIES ARE ASSOCIATED WITH QT INTERVAL PROLONGATION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

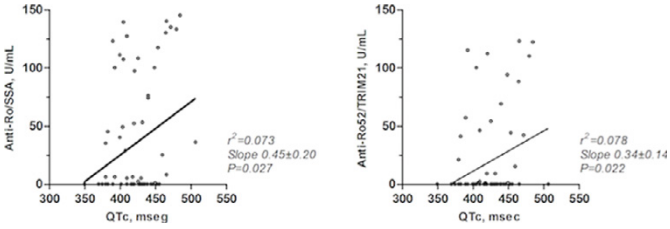
L.F. Perez, L.H. Silveira, L. Amezcua, O. Estevez, M. Moreno. *Reumatologia, Instituto Nacional de Cardiologia Ignacio Chavez, Mexico City, Mexico*

Background: Long QT syndrome (LQTS) is characterized by an abnormal QT corrected (QTc) interval prolongation that is associated with increased risk of sudden death. Studies have associated LQTS with several rheumatic conditions, and evidence points towards a link between the degree of systemic inflammation and the duration of QTc interval. Moreover, recent evidence suggests that anti-Ro antibodies may play a role in the QTc prolongation by mechanisms not fully understood, thus constituting a novel autoimmune-mediated LQTS.

Objectives: This study was aimed to assess whether QTc interval prolongation is associated with the presence of anti-Ro antibodies in SLE, particularly with reactivities against Ro52/TRIM21 antigens.

Methods: Consecutive patients fulfilling the 1997 ACR criteria for SLE were included. Patients with history of ischemic heart disease, with implantable pacemakers, and those taking drugs that potentially could affect QT interval (except for antimalarials) were excluded. Patients underwent a resting 12-lead electrocardiogram recording to measure QT interval corrected by BazzetÕs formula. A QTc interval duration greater than 460 msec in women and 440 msec in men was set to be abnormal. Serum anti-Ro and anti-Ro52/TRIM21 antibody levels were measured by ELISA. Data were expressed as frequencies and means (± standard deviation), and differences were tested by YatesÕ continuity corrected chi square or Mann-Whitney tests, while linear regressions were performed to assess linearity between autoantibody levels and QTc duration. The GraphPad Prism 4.02 software was used for calculations.

Results: Sixty-six patients with mean age of 39±13 years (57 female gender) were included. A QTc prolongation was found in 10 patients (15%), with mean QTc interval of 470±18 msec as compared to 414±23 msec in those with no LQTS. Main clinical and demographic characteristics were similar for both groups, except for a lesser use of antimalarials and higher serum creatinine levels in patients with LQTS. Disease activity was similar between groups.Anti-Ro antibody levels were significantly higher in patients with prolonged QT interval (75±66 U/mL versus 29±44 U/mL; P=0.005); similarly, anti-Ro52/TRIM21 levels were higher in those with LQTS (50±55 U/mL versus 14±30 U/mL; P=0.01). Notably, a linear association (see the Figure) between the QTc intervals and levels of anti-Ro antibodies (r2=0.073; P=0.02) and anti-Ro52/TRIM21antibodies (r2=0.078; P=0.02) was observed.



Conclusions: Our results strengthen the hypothesis that a specific autoantibody-mediated LQTS occur in SLE patients positive to anti-Ro antibodies. This interference in the ventricular repolarization appears to be associated with increased levels of antibodies against Ro52/TRIM21 antigens, and supports the realization of an electrocardiogram as part of the routinely evaluation in SLE patient with circulating anti-Ro antibodies.

Disclosure of Interest: None declared

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SAT0296 RELATIONSHIP BETWEEN DISEASE ACTIVITY INDEX SCORES AND SUBJECTIVE ASSESSMENTS IN EARLY SYSTEMIC LUPUS ERYTHEMATOSUS

M. Garabajiu[1], V. Sadovici-Bobeica[1], L. Mazur-Nicorici[1], M. Cebanu[1], V. Salaru[2], M. Mazur[1]. *[1]Rheumatology; [2]Family Medicine, State University of Medicine and Pharmacy "Nicolae Testemitanu", Chisinau, Moldova, Republic of*

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

Methods: Cross-sectional study including 41 early SLE patients that fulfilled SLICC classification criteria, 2012. The early disease was defined one with the duration 2 years from the diagnosis. The disease activity was assessed by SLEDAI-2K and SLAM. Global indices were appreciated by patient and physician global assessments (PGA and MDGA), rated by 0–100 numeric score. We correlated disease activity indices with global assessments by Pearson coefficient.

Results: There were 41 SLE patients integrated in the study, female:male ratio 9,25:1, mean age (SD) 39 (12.35) years (range 20–67 years), disease duration (SD) was 9.92 (9.18) month (range 1–24). The mean disease activity by SLEDAI was 11.2±7.84 (range 2–34) and SLAM – 8.83±4.41 (range 3–22) points, both indices denoted high disease activity level. Mean PGA values were 48.93 (19.13) (range 10–80), and mean MDGA values 45 (19.04) (range 10–80). Also, PGA and MDGA didn't correlate with SLEDAI (r=0,25, p>0,05; r=0,27, p>0,05), while a statistically significant correlation was determined with SLAM index (r=0,85, p<0.001; r=0,46, p=0.002). A subclass analysis of SLAM components showed that cortical dysfunction (depression, psychosis) and the presence of headache correlated with PGA (r=0,36, p<0,05; r=0,4, p<0,05), so we can establish that the difference in correlation between SLAM and SLEDAI with PGA and MDGA is explained by a more accurate disease assessment by SLAM, including also subjective complaints that influences the global patient's status.
Conclusions: The use of SLAM for disease activity assessment in early SLE patients is more sensible than SLEDAI and its results correlates with PGA and MDGA.
Disclosure of Interest: None declared
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SAT0297 SLE PATIENTS WITH SECONDARY SJÖGREN'S SYNDROME ARE CHARACTERIZED BY TYPICAL AUTOANTIBODIES AND A PRO-INFLAMMATORY STATE

M. Kvarnström[1], G. Ruacho[2], J.T. Gustafsson[3], A. Zickert[3], V. Oke[3], J. Rönnelid[4], K. Elvin[5], I. Gunnarsson[3], E. Svenungsson[3]. *[1]Dep. of Medicine, Unit of Experimental Rheumatology, Karolinska Institutet, Karolinska Uniververity Hospital, Stockholm; [2]Centre for Clinical Research Sörmland, Uppsala Univerity, Sörmland; [3]Dep. of Medicine, Unit of Rheumatology, Karolinska Institutet, Karolinska Uniververity Hospital, Stockholm; [4]Department of Immunology, Genetics and Pathology, Uppsala Univerity, Uppsala; [5]Unit of Clinical Immunology, Department of Clinical Immunology and Transfusion Medicine, Karolinska Institutet, Karolinska Uniververity Hospital, Stockholm, Sweden*

Background: Sjögren's syndrome occurs in isolation (primary Sjögren's syndrome, pSS), but it is also often secondary (sSS) to, and sometimes difficult to delineate from, other rheumatic diseases, in particular from systemic lupus erythematosus (SLE). Consequently there is a need to investigate similarities and differences between SLE patients with (SLE-sSS) and without sSS (SLE-noSS).
Objectives: To investigate the occurrence of sSS in a large cohort of SLE patients and to explore clinical and laboratory characteristics associated with SLE-sSS as compared to SLE-noSS and controls.
Methods: We included 504 consecutive SLE patients and 322 population controls, individually matched for age and gender to the first patients. All patients fulfilled the 1982 revised ACR criteria for SLE. SLE-sSS was defined according to the American-European consensus criteria (AECC). Accordingly, subjective and objective quantifications of sicca symptoms were recorded on all subjects. All underwent a thorough clinical investigation. SLE-associated autoantibodies, (ANA screening by BioPlex 2200 system, Bio-Rad) and Rheumatoid factor (RF, Phadia Immunocap 250) were determined with standardized methods for all subjects, Routine laboratory workup and a panel of cytokines (MSD 30-plex cytokine assays, performed on samples from 433 consecutive SLE patients and 319 controls) were measured on fasting blood samples.

Immunoglobulins, autoantibodies and pro-inflammatory cytokines in SLE-SS, SLE-noSS and population controls

	Controls N=322 median (IQR) or N(%)	SLE-SS N= 117 median (IQR) or N(%)	SLE-noSS N=387 median (IQR) or N(%)	p-value SLE-SS vs. SLE-noSS
IgA total g/L	2.1 (1.5-2.8)	2.9 (1.8-4.3)	2.7 (1.9-3.6)	0.38
IgG total g/L	10.9 (9.5-12.2)	14.5 (10.4-18.3)	12.4(9.8-15.8)	0.009
IgM total g/L	1.1 (0.8-1.6)	1.0 (0.5-1.6)	0.9 (0.6-1.5)	0.89
anti-dsDNA % positive (+)	5(1.6)	36(31.3)	154(41)	0.06
anti-Ro52 % +	3 (0.9)	56(47.9)	84(21.8)	<0.0001
anti-Ro60 % +	5 (1.6)	69(59)	137(35.9)	<0.0001
anti-La/SSB % +	10 (3.1)	44(37.6)	69(18)	<0.0001
anti-Sm % +	1 (0.3)	19(16.2)	75(19.5)	0.42
anti-RNP 68 % +	0 (0)	11(9.4)	40(10.4)	0.74
Rf IgG % +	10/261(3.8)	17/80(21.2)	35/259(13.5)	0.09
Rf IgM % +	14/283(4.9)	32/83(38.6)	56/281(19.9)	0.0005
Rf IgA % +	12/282(12.4)	34/74(45.9)	75/267(28.0)	0.004
TNF-α pg/mL	2.3(2.0-2.8)	4.9 (3.6-7.1)	4.4 (3.0-6.0)	0.008
IL-6 pg/mL	0.5 (0.4-0.7)	1.5 (0.8-3.0)	1.1 (0.6-2.0)	0.009
MCP-4 pg/mL	55.8 (40.8-80.5)	94.9 (66.9-131.3)	74.7 (52.4-120.0)	0.019
MIP-1 β pg/mL	43.7 (33.4-56.4)	81.1 ((54.8-123.6)	68.9 (50.3-105.1)	0.021
IL12/IL-23p40 pg/mL	131.2 (99.8-179.5)	211.3 (141.4-363.8)	177.1 (119.6274.5)	0.032
IP-10 pg/mL	351.9 (259.2 -476.4)	808 (536-1911)	726 (440-1471)	0.036

Results: SLE-sSS, as defined by AECC, occurred in 23% of the SLE patients. Compared to SLE-noSS the SLE-sSS group was older, both at inclusion (55 vs 43yrs, p<0.0001) and at disease onset (40 vs. 32 yrs p<0.0001), and with a greater number of females (96 vs. 83%, p=0.0007), higher occurrence of leucopenia (57 vs. 45%, p=0.02) and peripheral neuropathy (15 vs 7%, p=0.01). Nephritis was less common in SLE-sSS (32 vs 43%, p=0.03). Higher levels of total IgG, positivity for anti-SSA/Ro52, anti-SSA/Ro60, anti-SSB antibodies, RF IgM and RF IgA further characterized the SLE-sSS group. 20/30 investigated cytokines were detectable, of these 19/20 were higher in SLE than in controls. 6/20 cytokines (TNF-a, IL-6, MCP-4, MIP-1β, IL12/IL-23p40 and IP-10) were upregulated in SLE-sSS vs. SLE-noSS (see table for figures).
Conclusions: Through strictly applying the AECC criteria we report that the frequency of SLE-sSS increases with age and affects roughly ¼ of SLE patients. Nephritis was less common while leucopenia and peripheral neuropathy were more common among SLE-sSS patients. In addition to excess of well-known SS-associated autoantibodies we report higher levels of six pro-inflammatory cytokines in SLE-sSS as compared to SLE-noSS. These findings demonstrate that, though often regarded as a milder version of SLE, patients with SLE-sSS are characterized by a state of chronic systemic inflammation.
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SAT0298 INFLUENCE OF AGE ONSET IN CLINICAL AND BIOLOGICAL SPECTRUM OF SYSTEMIC LUPUS ERYTHEMATOSUS

M. Kechida[1], N. Lorenzo[2], I. Ben Chaaben[1], R. Klii[1], S. Hammami[1], I. Khochtali[1]. *[1]Internal Medicine and Endocrinology Department, Fattouma Bourguiba Hospital, Monastir, Tunisia; [2]Internal Medicine and cancerology Department, Saint-Cyr Hospital, Lyon, France*

Background: Systemic lupus erythematosus (SLE) is a multi systemic auto immune disease which can affect patients at any age.
Objectives: We aimed to study influence of age onset in clinical and biological spectrum of SLE
Methods: medical records of 89 patients diagnosed as SLE according to the ACR criteria of 1997, between January 2004 and December 2016, were retrospectively analyzed. Patients were divided into 3 groups according to the age of onset: Juvenile onset patients (group 1) (G1) (≤16 years), Adult onset patients (group 2) (G2) (>16 and <50 years), Late onset patients (group 3) (G3) (≥50 years). Clinical and biological comparative study was conducted between the 3 groups. Data were analyzed by chi-square test and potentially associated factors were tested by binary logistic regression.
Results: among the patients 11.2% are in G1, 75.3% in G2 and 13.5% in G3. Prevalence of SLE was higher in female than male (F/M=9/1) but predominance of women was lower in G1 (F/M=4/1) compared to G2 (F/M=10/1) and G3 (F/M=11/1). Patients in G3 had more hypertension (41.7%) compared to G2 (6%) (p=0.5) and G1 (0%) (p=0.04). Vespertilio erythema was less frequently found in G3 (33.3%) compared to G2 (64.2%) (p=0.045) and G1 (80%) (p=0.04). Anti Sm antibodies were more frequent in G1 (87.5%) compared to G2 (38.5%) (p=0.009) and G3 (18.2%) (p=0.003). Multivariate analysis showed that hypertension is significantly associated to late onset lupus (OR=29, 95% IC= [2.77 – 320], p=0.05) and anti Sm antibody is more frequent in juvenile onset patients (OR=12, 95% IC= [1.4- 117], p=0.024).
Conclusions: according to our study, prevalence of lupus is higher in female regardless of age onset. Late onset lupus is associated to a high frequency of co morbidity while anti Sm antibody seems to be a hallmark of juvenile onset.
Disclosure of Interest: None declared
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SAT0299 ATYPICAL ANTIBODIES IN PATIENTS WITH PRIMARY SJOGREN'S SYNDROME

M. Fernandez Castro[1], J.L. Andreu[2], C. Sanchez-Piedra[3], V. Martínez Taboada[4], A. Olive[5], J. Rosas[6] on behalf of SJOGRENSER group, part of the Spanish Society of Rheumatology Systemic Autoimmune Diseases Study Group (EASSER). *[1]Rheumatology, Hospital Infanta Sofía; [2]Rheumatology, Hospital Puerta de Hierro Majadahonda; [3]Research unit, Spanish Society of Rheumatology, Madrid; [4]Rheumatology, Hospital Marque's de Valdecilla, Santander; [5]Rheumatology, Hospital Hospital Germans Trias i Pujol, Barcelona; [6]Rheumatology, Hospital Hospital Marina Baixa, Alicante, Spain*

Background: One of the main features of primary Sjögren's syndrome (pSS) is