Methods: Descriptive, cross-sectional study. We reviewed the medical records of outpatients with SLE (ACR 1997) who were seen since 2014 to 2016 in the Clinical Hospital of Buenos Aires, Argentina.
We evaluated sex, age, disease duration, obstetric history, use and doses of oral corticosteroids, BMI, 25 OH vitamin D and educational level. Disease activity was scored by SLEDAI. Scores ≥4 were classified as active.
The patients were classified into 2 groups, according to BMI: normal weight (NW) (19–25), overweight and obesity (≥25).
Results: One hundred and sixty two of 230 were evaluated. Sixty-eight patients were excluded due to lack of data. 157 (97%) were women. Mean age for both sexes was 40.6±14.3 years (p 0.70). Means of: SLEDAI 4.3±4.47 (54.9% had SLEDAI ≥4), IMC: 27.04±5.22 (56% had a BMI ≥25) and 25-hidroxivitamin D was 25.15±9.0.
Relation between 2 groups, according to BMI: 84.5% whom were in NW group have received steroids at some point vs 95.6% in BMI≥25 group (p 0.02). Mean steroids doses: BMI ≥25: 9.53±10.98 vs 5.0±7.2 in NW group (p 0.04). Multivariate analysis showed that BMI ≥25 continued significantly associated with SLE duration, independently of the steroids use and other variables.
25 OH vitamin D tended to be lower in BMI ≥25 vs NW, but no significant differences (24.53±9.91 vs 25.50±9.85) (p=0.071)

Table 1. In the multivariate analysis, Number of pregnancies was the only one variable remained significant (OR: 0.78, IC 95%: 0.63–0.98) (p=0.03)

Variable	IMC ? 25 (n: 71)	IMC ≥25 (n: 91)	P
Duration (months) Median (rank)	60 (1–384)	84 (2–480)	0,02
Pregnancies mean (SD)	1,20±1,62	2,64±2,84	0,0
Menopause (%)	27 (38,5)	51 (58,6)	0,009
Abdominal perimeter mean (SD)	88±8,3	99±11,9	0,0
Depression (%)	9 (12,5)	24 (26,6)	0,02
Chronic renal failure (%)	2 (2,7)	9 (10)	0,03
SLEDAI ≥4 (%)	33 (45,8)	56 (62,2)	0,02
SLICC mean (SD)	0,30±0.55	1,3±1,3	0,0
SLICC ≥1 (%)	18 (25)	64 (71,1)	0,0
Arterial hypertension (%)	12 (16,6)	32 (35,5)	0,003
Grade and University Studies (%)	32 (45)	19 (20)	0,004

Conclusions: Over a half of our cohort had BMI ≥25 and was characterized by older age, more frequent menopause, longer course of the disease, increased steroid use and lower educational level. Depression and hypertension were the statistically more frequent comorbidities found. Obesity was associated with more activity and accrual damage including chronic renal disease.
Disclosure of Interest: None declared
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AB0479 THE ROLE OF ANTIBODIES TO XANTHINE OXIDASE AND ADENOSINE DEAMINASE IN THE DEVELOPMENT OF ANTI-PHOSPHOLIPID SYNDROME IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Objectives: The aim of the research was to study the processes of formation of antibodies to the enzyme purine metabolism (PM) - xanthine oxidase (XO) and adenosine deaminase (ADA) - in patients with systemic lupus erythematosus (SLE) with laboratory indicants of secondary antiphospholipid syndrome (APS).
Methods: 30 healthy people and 60 SLE patients with different clinical manifestations were included in this research. Antibodies to the investigated enzymes were determined in the procedure of an indirect ELISA-test using immobilized form of the corresponding enzyme as antigen array (We have developed this technique). The results of the detection of antibodies to the XO (anti-XO), antibodies to ADA (anti-ADA) and antibodies to the ADC (anti-ADC) were recorded on a spectrophotometer at a wavelength of 450 nm. b_2-glycoprotein-I-dependent (b_2GP-I) to the phospholipid antibodies (aPL) class IgM and IgG were determined by using a commercial test kit “Anti-Phospholipid Screen IgG/IgM” (Orgentec). The levels of IgG aPL/IgM did not exceed 10 GPL/MPL-U/ml in the group of healthy individuals.
Results: According to the survey the number of SLE patients with elevated levels of anti-ADA was 51.6%, the anti-XO - 53.3%. There has been a number of statistically significant correlations between the presence of anti-XO with clinical and laboratory parameters: the level of circulating immune complexes (r=0.297, p=0.024), with a hemoglobin level (r= -0.286, p=0.042), the number of lymphocytes (r= -0.29, p=0.033), and platelets (r= -0,308, p=0.028). In 25 (41.7%) patients with SLE aPL IgG class were detected, in 19 (31.7%) - aPL IgM were detected. As a result of multivariate dispersive analysis leading role of aPL in the development of APS has been established (F=52,5, p<0,001).
In positive for the presence of anti-ADA patients with SLE aPL IgG class (but not aPL class IgM) were detected more frequently and at higher titer than in SLE patients, without this type of antibodies (p=0.029). Joint detection of anti-ADA and aPL in patients with SLE manifestations was associated with cytopenia (p=0.019, Fisher’s exact test). It was also noted that elevated levels of anti-XO were significantly more frequently detected in patients which were also positive for the presence of aPL IgG class (p=0.036) and aPL IgM class (p=0.044). Comparison of the groups of patients with SLE, the positive and negative for the presence of anti-XO, demonstrated a statistically significant increase in the frequency of signs of vasculopathy (chi-square=4.4, p=0.042).
Considering a direct link between the level of anti-XO and the level of the CIC we can assume that the anti-XO in the composition of the CIC have some impact on the transformation of “xanthine oxidase ↔ xanthine dehydrogenase” in the direction of increasing the formation of XO and, as a consequence, a significant increase of generation of superoxide radicals, release of calcium ions into the extracellular space, and, in addition, platelet aggregation and increased blood viscosity.
Conclusions: Antibodies to enzymes PM may be a factor in the development and maintenance of vascular disorders in patients with SLE, and their detection can be used as an additional test in the complex diagnosis of SLE with symptoms of APS.
Disclosure of Interest: None declared
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AB0480 A FUNCTIONAL MAGNETIC RESONANCE IMAGING STUDY ON THE PSYCHOPATHOLOGY OF PATIENTS WITH PRIMARY SJOGREN’S SYNDROME AND ANXIETY DISORDER

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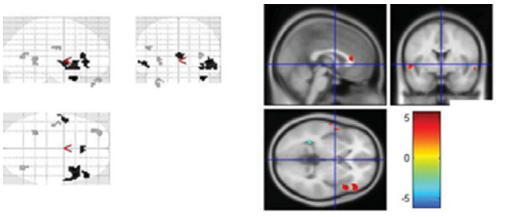
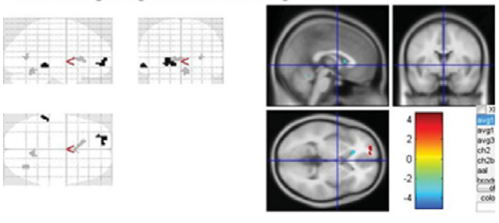
Background: Sjogren syndrome (SS) is a chronic systemic autoimmune disease characterized by exocrine gland inflammation and symptoms of oral and ocular dryness. Anxiety affects as many as 50–70% of persons living with SS. While anxiety is commonly experienced, very little is known concerning the mechanisms of cognitive dysfuction in SS.
Objectives: To reveal the psychopathology of patients with Sjogren’s syndrome and anxiety disorder.
Methods: 12 patients with pSS and anxiety disorder (SAS≥50), 11 patients with pSS, and 10 healthy controls were recruited. (1) Self-rating Anxiety Scale (SAS) were used to assess anxiety level of participations. All the subjects went through functional magnetic resonance imaging (fMRI) while listening actively to neutral words, negative words and negative words alternating with neutral ones.
Results: When subjects listened to neutral words alternating with no words, prefrontal cortex and BA21 were active in patients with pSS and anxiety disorder. When subjects listened to negative words alternating with no words, patients showed increased activity in prefrontal cortex, BA21, anterior cingulate and fusiform. Furthermore, when subjects listen to negative words alternating with neutral words, patients with pSS and anxiety disorder showed more increased



BRODMANN	Pixels	Max t value	P value	coordinates		
32	9	3.80	0.001	43	-21	6
21	34	3.15	0.001	63	-24	-6
47	103	3.11	0.000	31	18	-3
47	41	3.85	0.004	51	38	12

Fig.1 The results of comparison between pSS with anxiety group and pSS group, while listening to negative words alternating with neutral words. （P<0.005）



BRODMANN	Pixals	Max t value	P value	coordinates		
10	40	3.78	0.004	-24	51	-3
	39	3.72	0.004	-9	18	6
47	15	4.39	0.004	-31	27	0

Fig.2 The results of comparison between pSS with anxiety group and health controls, while listening to negative words alternating with neutral words. （P<0.005）

activity in prefrontal cortex, anterior cingulate, and caudate nucleus than that of other two groups.

Conclusions: Anxiety disorder commonly exists in patients with pSS. The pathology of this psychological symptom is poorly understood, which may be one of manifestation of nervous system involvement. fMRI may provide a novel insight into the pathological process accompanying subtle psychiatric disorders commonly experienced by patients with pSS.

References:

[1] Massara A, Bonazza S, Castellino G, et al. Central nervous system involvement in Sjögren's syndrome: unusual, but not unremarkable–clinical, serological characteristics and outcomes in a large cohort of Italian patients. Rheumatology (Oxford). 2010;49:1540–9.

[2] Martinez S, Cáceres C, Mataro M, et al. Is there progressive cognitive dysfunction in Sjögren Syndrome? A preliminary study. Acta Neurol Scand. 2010;122:182–8.

[3] Barbara M. Segal, Bryon A. Mueller,et al. Disruption of brain white matter microstructure in primary Sjogren's syndrome: evidence from diffusion tensor imaging. Rheumatology 2010;49:1530–1539.

[4] Liu LJ, Zhang XY, He N1, et al. Genetic variation in WDR1 is associated with gout risk and gout-related metabolic indices in the Han Chinese population. Genet Mol Res. 2016 Apr 28;15(2). doi: 10.4238/gmr.15027381.

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AB0481 SUBCLINICAL NEUROPSYCHIATRIC DYSFUNCTIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS -A HOSPITAL BASED STUDY

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Background: Up to 50% of systemic lupus erythematosus (SLE) patients experience neuropsychiatric manifestations (NP) during the disease course but many might have subclinical neuropsychiatric lupus (NPL), causing significant increase in morbidity and mortality. The pathogenesis of NPL is multifactorial and involves various inflammatory cytokines, autoantibodies and immune complexes[1].

Objectives: To examine for the presence of subclinical NPL, cerebral atherosclerosis and their correlation - if any to brain magnetic resonance imaging (MRI/MRA) findings and SLE disease activity.

Methods: This is a cross sectional observational study that included thirty adult female SLE patients fulfilling the updated ACR classification criteria for SLE[2]. All were subjected to: detailed history taking, thorough clinical examination, assessment of SLE disease activity using Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) score, psychometric evaluations using the Modified Mini-Mental State Examination (MMSE) to assess for cognitive dysfunction, Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Scale (HAM-A) to assess for the presence of depression and anxiety respectively. CBC, ESR, full blood chemistry, urine analysis, protein/creatinine ratio, brain MRI/MRA.

Results: The mean age was 31.7 years (22 to 40 years). 12 patients (40%) had positive antiphospholipid (APL) antibodies with or without clinically evident antiphospholipid syndrome (APS). 22/30 (73.33%) had different NP manifestations, 13 had depression (43.3%), 15 had anxiety (50%) and 16 had cognitive impairment (53.3%). All patients with depression and anxiety, 87.5% of patients with dementia had MRI abnormalities. All SLE patients with positive aPL were found to have MRI abnormalities, while MRI abnormalities were found in only 8 SLE patients with negative aPL (100% vs. 44.4%) ($p<0.001$). There was a statistically significant correlation between SLE disease activity and both NP manifestations and MRI/MRA abnormalities. aPL antibodies also had a significant correlation with NP manifestations. MRI abnormalities included discrete white matter lesions (60%), cortical atrophy (25%) and gross infarctions (15%). MRA revealed atherosclerotic changes of one or more of the large intracranial vessels in (27.27%) of NPSL patients.

Conclusions: Significant number of SLE patients without overt neuropsychiatric manifestations were found to have subclinical cerebrovascular and cognitive dysfunctions, depression and anxiety by simple bedside questionnaires. SLE disease activity positively correlates with neuropsychiatric manifestations. The presence of APL antibodies is a strong risk factor for developing NPSL. Several distinct brain MRI patterns were observed in patients with active NPSL, suggestive of different pathogenetic mechanisms.

References:

[1] Popescu A and Kao A. Neuropsychiatric systemic lupus erythematosus. Current neuropharmacology, 2011, 9(3):449.

[2] Petri M, Orbai A, Alarcón G, Gordon C, Merrill J, Fortin P, Weisman M. Derivation and validation of the Systemic Lupus International Collaborating Clinics classification criteria for systemic lupus erythematosus. Arthritis & Rheumatism, 2012, 64(8):2677–86.

Disclosure of Interest: None declared

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AB0482 ELEVATION OF SERUM PROPROTEIN CONVERTASE SUBTILISIN/KEXIN TYPE 9 (PCSK9) CONCENTRATIONS AND ITS CORRELATION WITH C-REACTIVE PROTEIN, BUT NOT ATHEROGENIC LIPIDS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Patients with systemic lupus erythematosus (SLE) have a tendency of accelerated atherosclerosis with controversial benefits from statin. This phenomenon can only partly be explained by traditional risk factors for cardiovascular disease. Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a serine protease associated with cardiovascular risk that not only regulates cholesterol metabolism, but acts as a critical regulator of inflammatory reaction. PCSK9 inhibitors were also highly promising drugs bringing added cardiovascular benefit when administered with statin [1] [2].

Objectives: The present study firstly aimed to compare serum PCSK9 levels in SLE patients and healthy controls. The association between PCSK9 concentrations with atherogenic lipids and C-reactive protein (CRP) in SLE patients was also analyzed.

Methods: 77 individuals encompassed; 47 patients with SLE and 30 age- and sex-matched controls. Serum PCSK9, lipoproteins concentrations and CRP levels were assessed in patients and controls. Individuals with history of smoking, diabetes, infection, tumor and statin use were excluded.

Results: Serum PCSK9 levels were significantly elevated in patients with SLE, compared with healthy controls ($p=0.034$). PCSK9 positively correlated with serum levels of CRP ($r_s=0.351$, $p=0.016$); The tendency seemed more significant in female patients ($r_s=0.487$, $p=0.001$); No correlation with statistical significance between PCSK9 levels with disease activity (SLEDAI) or serum lipids parameter was found ($p>0.05$, all) (Table 1).

Table 1. Characteristics of patients and controls and correlational analysis of PCSK9 levels and disease parameters in SLE patients. Data are shown as number or median (interquartile range), respectively

Variables	Healthy controls	SLE	r_s, p-value
Number	30	47	NA
Female/Male	24/6	42/5	NA
Age (years)	30.5 (26–39.5)	33 (28–42)	-0.014, 0.927
PCSK9 (ng/ml)	292.44 (199.87–499.93)	390.53 (305.37–525.92)	NA
SLEDAI	NA	6 (4–8)	0.092, 0.539
Cholesterol (mmol/l)	NA	4.50 (3.90–5.40)	-0.012, 0.935
LDL cholesterol (mmol/l)	NA	2.38 (1.74–3.19)	0.002, 0.989
ApoA1 (g/l)	NA	1.30 (0.97–1.59)	0.011, 0.943
ApoB (g/l)	NA	0.79 (0.63–0.94)	0.181, 0.223
Triglycerides (mmol/l)	NA	1.26 (0.79–1.64)	-0.020, 0.896
HDL cholesterol (mmol/l)	NA	1.49 (1.22–1.86)	-0.112, 0.453
CRP (mg/l)	NA	1.31 (0.50–3.60)	0.351, 0.016
CRP (mg/l) in female patients	NA	1.195 (0.500–3.568)	0.487, 0.001

Conclusions: Elevation of PCSK9 was observed in patients with SLE and correlated with CRP but not atherogenic lipids, particularly in female patients. The result was indicative of pathogenic role of PCSK9 in the low-grade inflammation which promotes the atherogenic process in SLE patients.

References:

[1] Giugliano RP, Sabatine MS. Are PCSK9 Inhibitors the Next Breakthrough in the Cardiovascular Field?. J Am Coll Cardiol. 2015 Jun 23;65(24):2638–51.

[2] Walley KR, Thain KR, Russell JA, et al. PCSK9 is a critical regulator of the innate immune response and septic shock outcome.Sci Transl Med. 2014 Oct 15;6(258):258ra143.

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Disclosure of Interest: None declared

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AB0483 RESPONSIVENESS OF LUPUS IMPACT TRACKER AMONG CHINESE PATIENTS WITH LUPUS

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Background: Lupus Impact Tracker (LIT), a 10 item, patient reported outcome tool for patients with systemic lupus erythematosus (SLE) has undergone psychometric validation and responsiveness studies in the US and Europe.

Objectives: To report results on responsiveness of Lupus Impact Tracker among Chinese patients with SLE.

Methods: 430 patients with SLE meeting the ACR classification criteria were recruited in Hong Kong, China at a single center. LIT scores from two visits one year apart were analyzed for responsiveness and Minimal Clinically Important