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AB0508 EFFECT OF ALCOHOL CONSUMPTION AND SMOKING ON DISEASE DAMAGE IN SYSTEMIC LUPUS ERYTHEMATOSUS: DATA FROM KOREAN LUPUS NETWORK (KORNET) REGISTRY

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Objectives: We assessed correlations of smoking habits and alcohol consumption with disease activity or damage in patients with systemic lupus erythematosus (SLE).
Methods: A total of 505 patients with SLE were enrolled in the KORean lupus Network (KORNET) SLE registry from January 2014 to January 2016. Disease activity and organ damage were measured by the Systemic Lupus Erythematosus Disease Activity Index 2000 (SLEDAI-2K) and the Systemic Lupus International Collaborating Clinics/American College of Rheumatology (SLICC/ACR) damage index, respectively. Multivariate logistic regression analysis was used to analyze associations with cutaneous lesions.
Results: There are no differences in SLEDAI-2K and SLICC/ACR damage indexes according to either smoking status or alcohol consumption. More frequent cutaneous damage was observed in current alcohol drinkers compared to non-current alcohol drinkers (p=0.020). Cutaneous damage was significantly associated with alcohol consumption [Odds ratio (OR) 4.048, 95% confidence interval (CI) 1.251 – 12.102, p=0.020]. Both low (1–5 glasses/week) and high (≥6 glasses/week) amounts of alcohol consumption had a significant impact on cutaneous damage compared to the absence of current alcohol consumption (p=0.033 and p=0.027, respectively). Pairwise comparison of alcohol consumption and smoking status with cutaneous damage showed that only alcohol consumption was significantly associated with the presence of cutaneous damage, compared to non-current alcohol consumption and non-current smoking (OR 3.513, 95% CI 1.130 – 10.920, p=0.030).
Conclusions: Current alcohol consumption, but not smoking, might influence the development of cutaneous damage in patients with SLE.
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AB0509 IDENTIFICATION OF NOVEL BIOMARKERS ASSOCIATED WITH DISEASE ACTIVITY OF PRIMARY SJÖGREN'S SYNDROME AND CLINICAL RESPONSE TO VAY736

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Background: Overexpression of B cell activating factor (BAFF) contributes to the pathogenesis of primary Sjögren's syndrome (pSS) [1]. Treatment of pSS patients with VAY736, an anti-human BAFF receptor mAb, appears promising and was associated with a positive therapeutic effect [2]. Given the complexity and heterogeneity of pSS, there is a need to further identify molecular mechanisms involved in pSS and in response to new therapeutics.
Objectives: To address this question, we assessed a panel of biomarkers in 27 patients from a clinical trial and tested their associations with pSS activity and clinical response to VAY736.
Methods: This study comprised 27 pSS patients treated with a single intravenous dose of VAY736 at 10 mg/kg (n=12), 3 mg/kg (n=6), or placebo (n=9). The disease activity scores included EULAR Sjogren's Syndrome Disease Activity Index (ESSDAI) and Patient Reported Index (ESSPRI), patient's and physician's reported visual analog scales (VAS), Short-Form 36 and Multidimensional Fatigue Inventory (MFI). BAFF and a panel of chemokines in serum and saliva were assessed using immunoassays. Circulating B cells and B cell subsets were measured by flow cytometry. High frequency ultrasound (US) of the parotid and sub-mandibular glands measured gland thickness and quality using a 4 point scoring (de Vita) [3]. Shear wave elastography of the parotid glands was also measured. All biomarkers were measured at baseline (BL) and post-treatment w6, w12, w24. The effect of VAY736 on biomarker levels was assessed by descriptive statistics. Correlations between biomarkers and disease activity scores were calculated at BL and w6, w12, and w24 using levels and relative changes from BL.
Results: In addition to B cell depletion, serum BAFF increase, and improvements in US and elastography measures [2], a subset of serum chemokine tended to be reduced nine weeks after VAY736 treatment. Pooling all 27 patients, salivary BAFF levels correlated with parotid De Vita scores at BL (left: r=0.75, right: r=0.72, $p<10^{-4}$ for both) and w6 (left: r=0.72,; right: r=0.78, $p<10^{-4}$ for both) but not at later time points. Pooling the 18 VAY736 treated patients, increase in salivary BAFF correlated with decrease in MFI at w6 (r=-0.83, $p=3\times10^{-4}$) and high levels of one of the serum chemokines at BL correlated with decrease in ESSPRI at w24 (r=-0.76, $p=3\times10^{-4}$). In the same patients, the B cell count at BL correlated with changes in several clinical outcomes at w12: ESSPRI (r=-0.65, p=0.01), Physician's VAS (r=-0.6, p=0.01), shear wave (r=-0.63, p=0.02), and parotid thickness (r=-0.6, p=0.03).
Conclusions: We identified a set of markers correlated with clinical outcomes in pSS after treatment with VAY736, which have the potential to provide additional insight in pSS and treatment-modifying effects. Further large-scale studies are necessary to confirm the value of these markers.
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AB0510 NEUROPSYCHIATRIC MANIFESTATIONS AND DISEASE ACTIVITY IN POLISH COHORT OF SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Neuropsychiatric systemic lupus erythematosus (NPSLE) is defined as wide range of neurological and psychiatric symptoms due to inflammation and ischemic processes. It is difficult to recognize primary NPSLE because of multiple central and peripheral symptoms.
Objectives: The aim of the study was to identified and classified the group of NPSLE patients with evaluation of disease activity.
Methods: We observed clinical neuropsychiatric (NP) manifestations in the cohort of 128 Polish patients with SLE. All patients with suspicion of NP symptoms had neuropsychological and imaging examinations. Symptoms of NPSLE were observed in 38 (30%) patients (34 female and 4 male) with average age 38±6 years (range 18–61 yrs), average disease duration 6,6±5,6 years (range 1,0 - 18,0 yrs). Patients were treated with oral and pulse glucocorticoids (GC) and 89% of them standard immunosuppressive drugs (CYC, MMF, AZA,MTX, CsA). As a background therapy 82% of these patients were on chloroquine or hydroksychloroquine (CQ/HCQ). All patients were assessed according to Systemic Lupus Erythematosus Disease Activity Index by SLEDAI (version 2000), Physical Global Assessment (PGA) and damage index (SDI).
Results: Central and peripheral NPSLE symptoms were recognized and categorized (Tab 1). All NPSLE patients had symptoms from central nervous system, but only 16% (n=6) of them had peripheral lupus manifestations. Mean SLEDAI score at NP event was very high 29±9,6, but mean SLEDAI score without NP symptoms was 15±8,3 and was connected with musculoskeletal, mucocutaneous, renal and hematological domains respectively n=29, 76%; n=23, 60%; n=11, 29%; n=8, 21%. Low disease activity was estimated at 3% of patients examined.Most of lupus patients (n=37, 97%) had moderate or high disease activity regardless of NP symptoms. In our study group lupus patients during NPSLE symptoms were immunologically active with increased anti-dsDNA antibodies (n=30, 78%) and/or lower complements C3 and/or C4 levels (n=21, 55%).
Conclusions: In Polish lupus cohort we observed more frequently lupus-related primary neuropsychiatric symptoms from central nervous system, especially cognitive dysfunctions, mood disorders, cerebrovascular events. Clinical activity of NPSLE patients was rather high and definitely most of patients were immunologically active despite aggressive immunosuppressive treatment and with standard background therapy.
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AB0511 VITAMIN D: POTENTIAL ROLE IN ANTIPHOSPHOLIPID SYNDROME

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Background: Vitamin D, due to its immunoregulatory properties, has been implicated in the pathogenesis of autoimmune diseases, such as antiphospholipid syndrome (APS).
Objectives: A) To determine vitamin D levels in patients with primary APS and to compare them with patients with positive antiphospholipid antibodies (aPL), not meeting clinical criteria for APS, and with healthy controls. B) To analyze the association of the vitamin D levels with both the clinical manifestations and the immunological profile of patients with primary APS.
Methods: We conducted a retrospective study including patients attended at the rheumatology clinic from a tertiary facility in Northern Spain. We included 74

patients with primary APS, 54 patients with positive aPL serology not meeting clinical criteria for APS and 326 healthy controls adjusted by the month of vitamin D analysis. We considered 30 ng/ml and 10 ng/ml as the thresholds for vitamin D insufficiency and deficiency, respectively.
Results: Median levels of vitamin D were similar in the three groups: 21 (range 5–69) in primary APS, 25 (4–50) in the aPL-positive group, and 21 (4–105) in controls. Overall, 53.9% of measurements were performed during the sunny season (April to September). Ten percent of patients with primary APS were males, versus 16% in the aPL serology group and 26% among healthy controls (p=0.007). Mean age was 46±15 in primary APS, 49±17 in the aPL-positive group and 53±10 in the control group (p<0.001). Regarding vitamin D insufficiency, 82% of APS patients had levels of vitamin D (<30 ng/ml) versus 70% and 72% of patients with aPL serology and controls, respectively (p=0.168). When analyzing the prevalence of vitamin D deficiency (<10 ng/ml), we found significant differences across the groups: 16.2% in patients with primary APS, 11.1% in patients with positive serology and only 4.9% in healthy controls (p=0.002). There was no significant association between insufficient levels of vitamin D and the presence of thrombotic or obstetric events. Nevertheless, we found a trend for the presence of more thrombotic events in patients with vitamin D deficiency (p=0.097). Regarding the immunological profile, we found no association between vitamin D and either the number of positive antibodies or their serological evolution. However, we found an association between insufficient levels of vitamin D and the presence of lupus anticoagulant (54.7% vs 18.2%, p=0.047)
Conclusions: More than 80% of patients with primary APS have insufficient levels of vitamin D and 16% of them have very low levels of vitamin D.
Primary APS patients show a higher frequency of vitamin D deficiency than healthy controls.
Patients with vitamin D insufficiency have more commonly positivity for lupus anticoagulant.
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AB0512 EPIDEMIOLOGICAL, CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS OF ANTIPHOSPHOLIPID SYNDROME: STUDY OF 170 PATIENTS

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Background: Antiphospholipid syndrome (APS) is an autoimmune disease defined by the presence of antiphospholipid antibodies (aPL) and thrombosis and/or pregnancy morbidity. Although thrombotic and obstetric APS are considered the same disorder, there are pathogenetic and clinical differences between them.
Objectives: To describe the epidemiological, clinical and immunological characteristics of a cohort of APS patients from a defined population and to study the differences between thrombotic, obstetric and mixed APS.
Methods: Retrospective study including patients attending the rheumatology and the obstetric clinics of a tertiary facility in Northern Spain. All patients met APS classification criteria.
Results: We included 84 patients with thrombotic APS, 76 with obstetric APS and 10 with mixed APS. Main demographical characteristics are showed in table. There were differences in the age of discovery a positive serology (46±15 yr in thrombotic APS, 36±8 yr in obstetric, and 36±14 in mixed APS). Moreover, the prevalence of systemic lupus erythematosus (SLE) was higher in patients with thrombotic and mixed APS (26% and 30% vs 5% in obstetric APS, p=0.001). Anticardiolipin antibodies were, overall, the most frequently positive. Lupus anticoagulant was significantly more common in patients with thrombotic and mixed APS (70% and 71% vs 30% in obstetric APS, p=0.002). We found no differences in the load of antibodies between the three groups. Regarding traditional cardiovascular risk factors (CVRF), tobacco use was the most common, followed by hypertension and dyslipidemia. The last two factors were more frequent in patients with thrombotic and mixed APS than in those with obstetric APS (p<0.001). As expected, treatment with heparin was more frequent in obstetric and mixed APS, while oral anticoagulants were more frequently used in thrombotic APS. Antimalarial drugs were less frequently used in obstetric APS (17% vs 37% and 30%, p=0.020), probably due to a lower prevalence of lupus in this group.

	Total 170	Thrombotic APS 84	Obstetric APS 76	Mixed APS 10	P
Age (yr), mean ± SD	41,2±13,7	46.5±15.5	35.9±8.1	36.5±14.4	<0.001
SLE, n (%)	29 (17)	22 (26)	4 (5)	3 (30)	0.001
Load of antibodies				0.201	
– 1	63 (37)	24 (29)	34 (45)	5 (50)	
– 2	68 (40)	37 (44)	28 (37)	3 (30)	
– 3	38 (22)	23 (27)	13 (17)	2 (20)	
aCL	130 (77)	67 (80)	54 (72)	9 (90)	0.306
aB2Gp1	108 (64)	56 (67)	49 (65)	3 (30)	0.070
LA	53 (58)	40 (70)	8 (30)	5 (71)	0.002
Family history of thrombosis, n (%)	21 (19)	14 (29)	4 (7)	3 (50)	0.011
Traditional CV risk factors, n (%)					
Tobacco use	69 (41)	37 (44)	28 (37)	4 (40)	0.650
Hypertension	55 (32)	41 (49)	10 (13)	4 (40)	<0.001
Dyslipidemia	48 (28)	39 (46)	5 (7)	4 (40)	<0.001
Diabetes mellitas	8 (5)	4 (5)	4 (5)	0	0.761
Previous treatment, n (%)					
Heparin	88 (52)	28 (33)	54 (72)	6 (60)	<0.001
Oral anticoagulants	71 (42)	62 (74)	3 (4)	6 (60)	<0.001
Antiplatelet therapy	145 (86)	63 (76)	74 (97)	8 (80)	<0.001
Corticoids	5 (3)	5 (6)	0	0	0.072
Antimalarials	47 (28)	31 (37)	13 (17)	3 (30)	0.020
Immunosuppressants	5 (3)	4 (5)	1 (1)	0	0.371

Conclusions: In our cohort, patients with thrombotic or mixed APS have a higher frequency of SLE than patients with obstetric APS. Positivity for lupus anticoagulant is more common in patients with thrombotic or mixed APS. Regarding traditional CVRF, hypertension and dislypidemia are more common in patients with thrombotic or mixed APS.
Disclosure of Interest: None declared
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AB0513 FATIGUE IN CHINESE PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME: A CROSS SECTIONAL STUDY

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Background: Primary Sjögren's syndrome (pSS) is the second most common systemic autoimmune disease, with a female-male ratio of 9:1, and characterized by sicca symptoms of the eyes and mouth, including joint pains and multi-system involvement. pSS affects patients' health-related quality of life (QoL), mental status and relationships with family. In pSS patients, symptoms such as fatigue, depression, arthralgia, fibromyalgia and general loss of well-being are commonly reported. Among them, fatigue is the most common problem that includes physical and mental fatigue, it can be as disabling as pain, which is difficult to manage and has a notable impact on QoL. Fatigue is a tiredness which may be mental, physical, or both, and that results in an inability to function at normal performance levels. However, the underlying pathophysiological mechanisms of fatigue remain unclear. A number of studies have reported the association of fatigue with Primary Sjögren's syndrome (pSS), whereas, because of the small sample size of pSS patients, we still lack large sample studies to find the relationship between pSS and fatigue.
Objectives: To investigate the relationship of fatigue severity to other clinical features in primary Sjögren's syndrome (pSS) and to identify factors contributing to the physical and mental aspects of fatigue in Chinese patients.
Methods: Sixty-seven consecutive patients with PSS according to the American-European Consensus group (AEGG) criteria were included. Demographic, clinical and biological characteristics for all patients were collected. The Fatigue Severity Scale (FSS), Profile of Fatigue (ProF), Visual analogue scale, Hospital Anxiety and Depression Scale (HADS), OHIP-14 Scale, MDADI Scale and PSQI Scale were adopted to assess fatigue, depression, anxiety, xerostomia, xerophthalmia and sleep disturbances. Associations with fatigue were compared using multivariate regression.
Results: 94% of our patients were women. The mean age of patients was 51.13±13.23 years, and the mean disease duration was 4.12±4.49 years. The mean oral dryness was 51±17.82, and the mean ocular dryness was 33.56±26.3. Abnormal fatigue, defined as an FSS score >or=4, was present in 64% of the patients. Dry symptoms, low educational level, Pain and depression had a negative impact on fatigue scores. The regression models explained that Pain and depression were the strongest predictors of fatigue according to the FSS.
Conclusions: Fatigue is a tiredness which may be mental, physical, or both, and that results in an inability to function at normal performance levels. However, the underlying pathophysiological mechanisms of fatigue remain unclear. From our study, we found that psychosocial variables are determinants of fatigue, and fatigue is associated with depression, but depression is not the primary cause of fatigue in primary SS. Therefore, the investigation of the pathophysiologic correlates of physical and mental aspects of fatigue is needed to guide the development of more effective interventions.
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AB0514 THE RELATIONSHIP BETWEEN SERUM LEVEL OF C-TERMINAL TELOPEPTIDE OF TYPE I COLLAGEN WITH COURSE OF SYSTEMIC LUPUS ERYTHEMATOSUS AND STRUCTURAL AND FUNCTIONAL STATE OF BONE TISSUE

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Background: It is well known, that the incidence of osteoporosis in patients with systemic lupus erythematosus (SLE) is higher compared to the population level. Its severity in patients with SLE is associated with a number of factors: female gender, disease activity, damage index, glucocorticoid therapy etc. One of metabolic factors indicating the reducing bone mineral density (BMD) is the level