AB0505 DOES VITAMIN D DEFICIENCY CONTRIBUTE TO COGNITIVE DYSFUNCTION IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS?

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Background: Neurocognitive impairment is one of the most common SLE manifestations. However, its pathophysiology remains poorly understood [1]. Vitamin D deficiency is a potential risk factor for cognitive impairment [2,3].
Objectives: Our aim is to evaluate the relationship between 25(OH)D3 level and cognitive performance in patients with SLE.
Methods: Thirty Egyptian patients diagnosed as systemic lupus erythematosus and their age and sex matched controls were subjected to a battery of neuropsychological evaluation by California Verbal Learning Test (CVLT-II), Controlled Oral Word Association Test (COWAT) and Trail making test and evaluation of depression by using Beck Depression Inventory (BDI). Serum level of 25(OH)D3 was measured in cases and controls.
Results: Patients with SLE had a worse performance than controls in verbal memory total recall, executive function and phonemic verbal fluency as there was a statistically significant difference in CVLT-II total recall, Trail making test and phonemic-COWAT respectively. There was no significant difference between the patients and controls in Beck Depression Inventory (BDI). There was a significant positive correlation between the vitamin D level and executive function assessed by trail making test (r =0.399, p=0.03).

Table 1. Comparison of psychometric tests between the patients and controls

Psychometric tests	Patients (n=30)	Controls (n=20)	p value
CVLT- II total recall	39.65±7.43	53.05±11.89	**<0.0001***
CVLT-II –II short term free recall	8.823±2.87	9.94±3.17	0.2
CVLT-II –II short term cued recall	2.04±1.58	2.41±2.52	0.6
CVLT-II –II long term free recall	9.96±3.36	10.52±2.76	0.5
CVLT-II –II long term cued recall	1.47±1.16	2.23±2.79	0.3
Trail Making Test	178.04±86.76	80.53±28.24	**<0.0001***
COWAT- phonemic	17.96±7.63	30.82±7.23	**<0.0001***
COWAT- semantic	11.47±3.16	14.17±4.84	0.05

Table 2. Correlations between vitamin D level and measures of cognitive among cases

	Vitamin D level	
	r	P-value
cvlt-total recall	0.040	0.843
cvlt-short term free recall	0.000	0.999
Cvlt short cued recall	0.219	0.273
Cvlt free long term recall	0.281	0.155
cvlt cued delayed	-0.079	0.695
Trail making test	0.399	0.039*
COWAT semantic	0.024	0.906
COWAT phenomic	-0.198	0.333

Conclusions: Vitamin D deficiency in patients with SLE could have a significant impact on their cognitive performance.
References:
[1] Carbotte R. M., Denburg S. D. and Denburg J. A., "Cognitive Dysfunction and Systemic Lupus Erythematosus," In: R. G. Lahit, Ed., Systemic Lupus Erythematosus, Churchill Livingstone, New York, 1992, pp. 865–881.
[2] Etgen T, Sander D, Bickel H, Sander K, Forstl H. Vitamin D deficiency, cognitive impairment and dementia: a systematic review and meta-analysis. Dement Geriatr Cogn Disord. 2012; 33:297–305.
[3] Balion C, Griffith LE, Strifler L, Henderson M, Patterson C, Heckman G, et al. Vitamin D, cognition, and dementia: a systematic review and meta-analysis. Neurology. 2012; 79:1397–405.
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AB0506 PREGNANCY OUTCOMES IN WOMEN WITH RHEUMATIC DISEASES: A SINGLE CENTER-STUDY

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Background: Systemic Lupus Erythematosus (SLE), Antiphospholipid Syndrome (APS) and Thrombophilia are associated with considerable pregnancy-related morbidity. Multidisciplinary teams allows the application of an experienced protocol to monitor and treat them during pregnancy in order to reduce adverse pregnancy outcomes and this way improve the prognosis of the pregnancy.
Objectives: To investigate pregnancy outcomes in women with rheumatic diseases and thrombophilia from a Spanish cohort.
Methods: A population of 93 patients diagnosed with SLE, APS and Thrombophilia atended in a specialized multidisciplinary unit of Rheumatic Diseases and pregnancy from the Complejo Hospitalario Universitario de Granada, Spain from January 2012 to December 2016. The following variables were collected: age, presence of antiphospholipid antibodies and anti Ro, thrombotic episodes and prior abortions, treatment during pregnancy, obstetric outcomes births/abortion and pregnancy length. The statistical analysis was done using the McNemar Test.
Results: 93 pregnant women were included in the study. 26 were diagnosed with SLE, 32 with APS and 35 with Thrombophilia (mostly, Heterozygotes for MTHFR gene). 47.3% were younger than 35 years and 52.7% were elder than 35 years. 66.7% had one or more prior abortions, meaning a total record of 159 abortions and an average of 1.71±1.76 abortions per patient. The treatment received by the patients is specified in table 1. 9 patients (3 APS and 6 thrombophilia) received a treatment with intravenous gammaglobulin with doses of 400 mg/kg, apart from Low-Molecular-Weight Heparin (LMWH) and Acetylsalicylic Acid (ASA), two days in a row at the beginning and then every three weeks during the whole pregnancy. 90 (96.8%) pregnancies were developed. 6 of them were preterm pregnancies and 84 were term pregnancies. Only 3 abortions (3.2%) occurred in the patients monitored in our unit. The reduction in the number of abortions was statistically significant ($p<0.001$). Regarding those 3 registered abortions, 2 were patients diagnosed with SLE, with no records of previous abortions and they occurred during the second trimester of pregnancy. 1 was diagnosed with APS and she had records of 2 previous abortions and occurred during the first trimester of pregnancy. Those patients who received treatment with gammaglobulin iv showed an mean of 4.88±1.85 previous abortions per patient and all had a term delivery (100%).

Table 1. The treatment received by the patients

	SLE (n=26)*	APS (n=32)*	Thrombophilia (n=35)
Patients treated with LMWH, n*	2	2	23
Patients treated with ASA, n*	9	1	3
Patients treated with LMWH + ASA, n*	5	29	8
Patients without prophylactic treatment, n	10	0	1

*Systemic Lupus Erythematosus (SLE), Antiphospholipid Syndrome (APS), Low-Molecular-Weight Heparin (LMWH), Acetylsalicylic Acid (ASA).

Conclusions: Our results demonstrate a decrease in the number of abortions and a larger number of term pregnancies since the inclusion of patients with high risk pregnancies in our unit. Prophylactic treatment is effective for the prevention of abortions, reaching higher rate live birth pregnancies. The multidisciplinary evaluation is essential to prevent complications in women diagnosed with rheumatic diseases with high obstetric risk.
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AB0507 COBALAMIN (VITAMIN B12) STATUS IN PATIENTS WITH ANTIPHOSPHOLIPID SYNDROME (APS), ITS ASSOCIATION WITH ATHEROSCLEROTIC VASCULAR LESIONS

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Background: Cobalamin (vitamin B12) insufficienty is associated with the development of many diseases. It is known that the growth of clinical and subclinical manifestations of atherosclerotic vascular lesions are often associated with low cobalamin level. Cobalamin status is unknown in patients with antiphospholipid syndrome (APS). There are no data about the role of folic acid in the development of atherosclerotic vascular lesions in patients with APS
Objectives: To evaluate vitamin B12 status in patients with APS and to explore its relationship with atherosclerotic vascular lesion.
Methods: We observed 82 patients with APS and 37 healthy individuals. Content of cobalamin (vitamin B12) in serum were determined by immunochemical detection (ECLIA). Cobalamin level above 200 pg/ml was considered as normal within 200–300 pg/mL - both extremely low, below 200 pg/ml - insufficienty. All patients were underwent detection of endothelial dysfunction - dilatation of brachial artery endothelium, investigation of "intima-media" thickness of common carotid artery (IMT) and the presence of atherosclerotic plaques (AP).
Results: In patients with APS we recorded a significant reduction of cobalamin in the serum (351±14,3 pg/mL (95% CI: 148–562 pg/mL) compared to control group (445±18,1 pg/mL (95% CI: 272–622 pg/mL). Indicators of cobalamin status in patients with secondary APS were significantly worse than patients with primary APS. Thus, in patients with secondary APS cobalamin content was on 26.7% lower (95% CI: 140–559 pg/ml) than in the control group. In patients with primary APS cobalamin content was on 13.0% lower (95% CI: 202–565 pg/ml) than in controls, but 18.7% higher than in patients with secondary APS. Cobalamin (vitamin B12) insufficienty is accompanied by significant thickening of the walls of the common carotid artery. Thus, in patients with cobalamin deficiency IMT was on 17% higher than that in patients with optimal levels of the vitamin. Cobalamin deficiency is also associated with endothelial dysfunction. Thus, in patients with vitamin deficiency dilatation of brachial artery was significantly, by 48.6% less than in people with normal vitamin B12 status. The share of people with the presence of atherosclerotic plaques, transient ischemic attack (TIA), stroke, myocardial infarction (MI) and angina in patients with cobalamin deficiency was also higher.
Conclusions: Thus, in patients with APS low cobalamin status is associated with subclinical manifestations of atherosclerotic vascular lesions.

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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.
References:
[1] Varin MM et al. Autoimmun Rev 2010;9(9):604–8.
[2] Dörner T et al. Arthritis Rheum 2016; 68(suppl S10):4051.
[3] De Vita S, et al. Clin Exp Rheumatol 1992;10:351–6.
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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