(p < 0.05), CD8+T and Corynebacterium (p < 0.05), CD4+T and Corynebacterium (p < 0.05), T and Corynebacterium (p < 0.05), Th1 and Escherichia–Shigella (p < 0.01), Th2 and Dielma (P<0.001) as well as Eubacterium eligens group (p < 0.05), NK and Faecalibacterium (p < 0.01). as well as Corynebacterium (p < 0.001), IL-6 and Coprococcus (p < 0.05), IL-10 and Eubacterium eligens group (p < 0.001) as well as Veillonella (p < 0.05). and Lachnospira (p < 0.01). As for clinical disease measures, there were positive correlations between CRP and Eubacterium ventriosum (p < 0.05). and Coprococcus (p < 0.05), C4 and the abundance of Corynebacterium (p < 0.05) (Figure 1**F**).

Conclusion: Patients with gut dysbiosis that mainly characterized by reduced the diversity and impaired abundance of the intestinal flora. Abnormality of T cell subsets and cytokines, especially the level of CD4+T, CD8+T, NK, Treg, Th, IL-6 and IL-10 cells contributes to the occurrence and progression of SLE, which may be related to the disturbance of gut microbiota. The discovery of the associated intestinal microbiota of SLE may provide a new idea for treatment.

REFERENCES:

[1] Fava A, Petri M. Systemic lupus erythematosus: diagnosis and clinical management. J Autoimmun. (2019) 96:1–13. 10.1016/j.jaut.2018.11.001

[2] He Z, Shao T, Li H, Xie Z, Wen C: Alterations of the gut microbiome in Chinese patients with systemic lupus erythematosus. Gut pathogens 2016, 8:64.

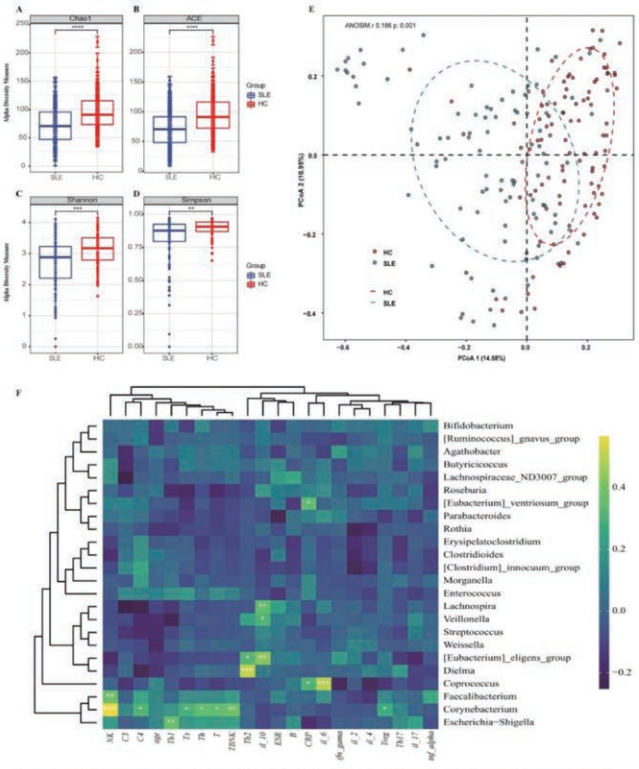

Figure1 Gut microbiome compositions of patients with SLE and HC. **(A-B)** Significantly lower Chao1 and ACE in SLE compared with HC. **(C-D)** Significantly lower Shannon and Simpson's index in SLE compared with HC by the Wilcoxon rank-sum test and Benjamini–Hochberg false discovery rate (FDR) correction. **(E)** Principal coordinate analysis (PCoA) revealed the clustering of bacterial taxa based on the Bray–Curtis distance, with each point corresponding to a subject and colored according to the type of sample. Permutational multivariate analysis of variance showed the separation of bacterial communities in feces samples was significant (q = 0.001), and the disease phenotype explained 18.6% of the variation in the overall bacterial composition of the feces between the SLE and HC, respectively. **(F)** Correlation analysis of these differential genera and cytokinesand lymphocyte subsets and clinical indicators between any two groups using Spearman's correlation analysis. The correlation effect is indicated by a color gradient from green(positive correlation) to purple (negative correlation). *p< 0.05, **p< 0.01, ***p<0.001,****p< 0.001

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Disclosure of Interests: None declared

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AB0493 FACTORS ASSOCIATED WITH SUICIDAL IDEATIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS AND ANTIPHOSPHOLIPID SYNDROME PATIENTS

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Background: Suicidal ideations in systemic lupus erythematosus (SLE) and antiphospholipid syndrome (APS) patients are associated with stress related depressive and anxiety disorders and can lead to higher mortality rates.

Objectives: To describe the rates and potential causes of suicidal ideations in SLE and APS patients.

Methods: 159 patients (62 with SLE, 49 with SLE and secondary APS, 48 with primary APS (PAPS)), mostly women (120 (75,5%)), were consecutively enrolled in the study. The mean (M±SD) age was 37,5±12,2 years. SLE activity was measured by SLEDAI. Suicidal ideations and mental disorders were detected by psychiatrist in semi-structured interview. The severity of mental disorders was measured with MADRS, HADS, PHQ9, PSS10, and quality of life with EQ-5D, LupusQoL.

Results: The majority of patients had mental disorders (149 (93.7%)) with a predominance of anxiety and depressive spectrum (143 (89.9%)). Anxiety and depressive disorders in remission were diagnosed in 7 (4.40%) patients. Suicidal ideations in the past were revealed in 20 (12,6%) patients: in SLE - 9 (14,5%), SLE + APS - 8 (16,3%), PAPS - 3 (6,25%); suicidal attempt – in 1 (0,63%) patient with SLE + APS; autoaggressive behavior – in 11 (6,92%) patients (mainly presented as discontinuation of treatment in 10 (6,29%) patients): 6 (9,68%) - SLE, 4 (8,16%) - SLE + APS, 1 (2,08%) - PAPS. Current suicidal ideations were found in 16 (10,1%) patients: SLE - 5 (8,06%), SLE + APS - 5 (10,2%), PAPS - 6 (12,5%). The patients with suicidal ideations had higher depression (according to MADRS, HADS, PHQ-9) and anxiety (according to HADS) severity, they also presented with higher rates of stress perception (PSS-10) and poorer life quality (EQ-5D, LupusQol). The APS duration was significantly longer in patients with suicidal ideations; no differences in activity, severity and duration of SLE or steroid therapy were found, but SLE patients with current suicidal ideations compared to patients without them were 2 times more likely to receive rituximab (Table 1).

Table 1. Description of patients with/without suicidal ideations.

Characteristic, Me [25%; 75%] M±SD	With current suicidal ideations (n=16)		Without current suicidal ideations (n=143)		
	n	%	n	%	p
SLE	5	31,3	57	40,2	n/s
SLE+APS	5	31,3	44	30,9	n/s
APS	6	37,4	41	28,9	n/s
SLE duration, months	156,0 [132,0; 216,0]		84,0 [24,0; 68,0]		n/s
APS duration, months	228,0 [204,0; 348,0]		120,0 [48,0; 180,0]		0,001
MADRS	27,0 [14,5; 31,5]		13,0 [8,0; 18,0]		0,0001
HAM-A	18,5 [10,5; 25,5]		15,0 [10,0; 21,0]		n/s
HADS:					
-depression	7,0 [3,0; 9,0]		3,0 [1,0; 6,0]		0,009
-anxiety	9,0 [5,0; 14,0]		6,0 [3,0; 9,0]		0,04
PHQ-9	12,0 [8,0; 15,0]		6,0 [3,0; 12,0]		0,02
PSS-10	32,7±8,73		27,6±6,50		0,006
EQ-5D	0,56±0,29		0,72±0,22		0,009
Lupus Qol	113,7±24,9		132,0±25,8		0,02
Methylprednisolone intake:					
-Current dose, mg/day	10,0 [0; 22,5]		10,0 [5,0; 15,0]		n/s
-Cumulative dose, g	16,9 [0,9; 61,2]		7,2 [0; 28,9]		n/s
Rituximab treatment	5	31,2	26	18,2	n/s

Conclusion: Suicidal ideations in SLE/ APS patients are mainly caused by anxiety-depressive spectrum disorders provoked by stress factors, no associations with the duration, activity and manifestations of the rheumatic diseases were found. Timely identification and therapy of depressive and anxiety spectrum disorders can prevent suicidal ideations and possible poor outcomes.

Disclosure of Interests: None declared

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AB0494 COMPARISON OF CUTANEOUS SILENT PERIOD PARAMETERS IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME WITH THE HEALTHY POPULATION

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Background: Neurological involvement has a great importance in the clinical spectrum of primary Sjögren's syndrome (pSS) (1). The presence of small fiber neuropathy (SFN), which cannot be detected in routine electrophysiological examinations, causes the peripheral nervous system involvement to be underestimated in the course of the disease and causes pain-related symptoms in patients that cannot be explained by routine examinations (2). Various methods can be used in the detection of SFN, and cutaneous silent period (CSP) measurement is gaining popularity recently due to its non-invasiveness and practical application (3).

Objectives: Evaluating SFN involvement in patients with pSS using CSP and evaluating its relationship with clinical parameters.

Methods: Patients with a diagnosis of pSS followed in the rheumatology outpatient clinic and healthy volunteers demographically homogeneous with the patient group were included in the study. The CSP responses were recorded over the abductor pollicis brevis muscle in the upper extremity of all participants. The latency and duration values of the responses were obtained. In patient group, EULAR Sjögren's Syndrome Patient Reported Index (ESSPRI), Hospital Anxiety and Depression Scale (HADS), Short Form-36 (SF-36) questionnaire, Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) and Central Sensitization Inventory (CSI) were applied for the evaluation of symptom severity, mood, quality of life, presence of neuropathic pain and central sensitization, respectively. Comparison of CSP parameters between patients with pSS and healthy volunteers was determined as the primary outcome measure. The secondary outcome measure was the relationship between CSP parameters and ESSPRI, HADS, SF-36, LANSS and CSI scores.
Results: A total of 36 patients and 36 healthy controls were included in the final analyses. There was no significant difference between the two groups in terms of demographic data. The mean CSP latency was significantly longer in patients with a mean of 78.18 (±7.51) when compared to controls with a mean of 67.91 (±6.41) (95% CI: 6.98- 13.55, p<0.001). Mean CSP duration was also significantly shorter in patients with a mean of 33.40 (±6.93) (95% CI: 9.57 -15.31, p<0.001). There were no significant differences in CSP parameters (latency and duration, respectively) according to patients' neuropathic pain or central sensitization profile (p>0.05 for all analyses). There were significant correlations of CSP parameters with ESSPRI dryness (r=0.469, p=0.004; r=-0.553, p<0.001), fatigue (r=0.42, p=0.011; r=-0.505, p=0.002), pain (r=0.428, p=0.009; r=-0.57, p<0.001) subscores and mean ESSPRI score (r=0.631, p<0.001; r=-0.749, p<0.001). Significant correlations were not found between CSP parameters and SF-36 scores, other than CSP duration and "pain" subscore (r=-0.395, p=0.017). When the other correlations were investigated there were no significant correlations other than CSP duration and the HADS anxiety score (r=-0.201, p=0.02).
Conclusion: As an indicator of CSP measurement, SFN is more common in patients with pSS than in the healthy population. The association with important clinical symptoms of the disease course such as dryness, fatigue, pain and anxiety highlights the importance of detecting small fiber neuropathy.
REFERENCES:
[1] Margaretten M. Neurologic manifestations of primary Sjögren syndrome. Rheumatic Disease Clinics. 2017;43(4):519-29.
[2] Birnbaum J, Lalji A, Saed A, Baer AN. Biopsy-Proven Small-Fiber Neuropathy in Primary Sjögren's Syndrome: Neuropathic Pain Characteristics, Autoantibody Findings, and Histopathologic Features. Arthritis Care Res (Hoboken). 2019 Jul;71(7):936-948.
[3] Tekatas A, Tekatas DD, Solmaz V, Karaca T, Pamuk ON. Small fiber neuropathy and related factors in patients with systemic lupus erythematosus; the results of cutaneous silent period and skin biopsy. Advances in Rheumatology. 2020 Jun 15;60.
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AB0495 SERUM AND URINE GALECTIN-9, IP-10 AND SIGLEC-1 AS BIOMARKERS OF DISEASE ACTIVITY IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Galectin-9, interferon-inducible protein-10 (IP-10) and sialoadhesin (SIGLEC-1) are proteins associated with interferon signature, and considered as potential biomarkers reflecting disease activity in patients with systemic lupus erythematosus (SLE).
Objectives: In this study, we aimed to investigate the association of serum and urine levels of galectin-9, IP-10 and SIGLEC-1 with disease activity in patients with SLE.
Methods: Sixty-three patients with active SLE (31 renal and 32 extrarenal) were included in the study. Thirty inactive patients with SLE (15 renal and 15 extrarenal) and 32 healthy volunteers were selected as control groups. Serum (s) and urine (u) levels of galectin-9, IP-10 and SIGLEC-1 were tested using ELISA. Urine levels of biomarkers were normalized by urine creatinine.
Results: Groups were comparable with regard to sex and age distribution. Of 125 participants, 102 (81.6%) were female and median age was 33 (28-44.5) years. Proliferative lupus nephritis (LN) (class III/III+V and IV/IV+V) were found in 22 patients with active renal SLE (70.9%), while 6 patients (19.3%) had pure class V and 3 (9.7%) had class II LN. Levels of sIP-10, uIP-10, sGalectin-9 and uSIGLEC-1 were significantly higher in the active SLE group compared to the inactive SLE group (sIP-10 p=0.046, uIP-10 p<0.001, sGalectin-9 p=0.031 and uSIGLEC-1 p=0.006); however, no differences were detected in the comparison of uGalectin-9 and sSIGLEC-1 between the groups (uGalectin-9 p=0.180 and sSIGLEC-1 p=0.699) (Table 1). Serum and urine levels of galectin-9, IP-10 and SIGLEC-1 did not differ between patients with active renal and extrarenal SLE. Levels of sIP-10, uIP-10 and uSIGLEC-1 were correlated with SLE Disease Activity Index (SLEDAI). Serum and urine levels of all biomarkers were re-tested in 41 of 63 patients (65%) with active SLE after a median treatment of 8 (5-22.5) months. At the time of the second tests, there was a significant decrease in disease activity as measured by SLEDAI [2 (0-4)] compared to the time of the first tests [10 (6-15.5)]. Comparison of sGalectin-9 levels between the serum at the time of active disease and remission showed a very significant decline (p<0.001) as shown in Figure 1. uGalectin-9, sIP-10 and uSIGLEC-1 also decreased after treatment; however, the difference was not statistically significant.

Table 1. Serum and urine levels of biomarkers across study groups.

Biomarker	Active SLE (n=63)	Inactive SLE (n=30)	Healthy Control (n=32)
sGalectin-9 (ng/ml)	11.73 (7.52-14.15)	8.66 (7.51-10.02)	5.61 (4.56-6.6)
sIP-10 (pg/ml)	279.4 (147.5-430.3)	173.4 (142.2-247.9)	74.3 (58.8-103)
sSIGLEC-1 (pg/ml)	181.2 (157.8-213.9)	182.5 (169.9-203.1)	258.3 (179-602)
uGalectin-9 (ng/ml)	8.83 (4.07-18.11)	11.54 (7.03-15.07)	10.63 (5.55-17.4)
uIP-10 (pg/ml)	34.4 (15.9-73,9)	20.8 (9.9-53.3)	12.2 (1.8-25.7)
uSIGLEC-1 (pg/ml)	321 (236.3-370.9)	297.6 (247.7-371)	290 (205.1-323.5)
uGalectin-9 (ng/mgCre)	15.50 (9.60-32.05)	11.41 (8.78-19.54)	13.57 (11.27-22.08)
uIP-10 (pg/mgCre)	73.4 (40.9-136.9)	26.1 (18.1-55.1)	16.4 (5-32.5)
uSIGLEC-1 (pg/mgCre)	619.6 (389.4-1056.5)	393.2 (248.6-715.8)	425.6 (264.7-925.9)

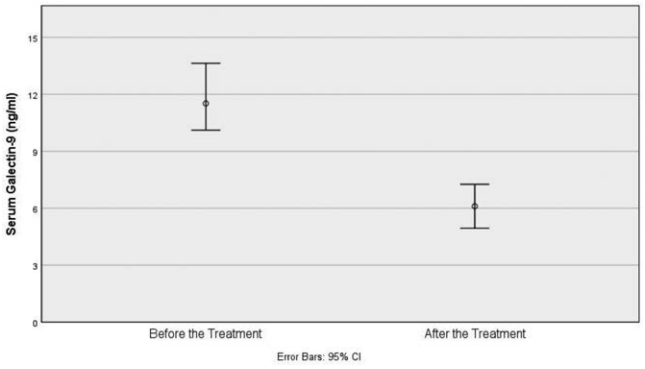

Figure 1. Serum levels of galectin-9 before and after the treatment in 41 patients with active SLE.

Conclusion: sIP-10, uIP-10, sGalectin-9 and uSIGLEC-1 are associated with disease activity in SLE. None is able to discriminate active renal from active extrarenal disease. sGalectin-9 may be a valuable biomarker to monitor response after treatment for active disease (Funded by Scientific Research Projects Coordination Unit of Istanbul University. Project number: TSA-2019-34218).
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AB0496 SHOULD ANTIBODIES TO DOMAIN I B2-GLYCOPROTEIN 1 BE INVESTIGATED IN PATIENTS WITH ANTIPHOSPHOLIPID SYNDROME (APS) AND SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)?

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Background: The role of antiphospholipid antibodies (aPL) not included in the International Classification Criteria for the verification of APS continues to be discussed.
Objectives: To determine the clinical significance of IgG antibody for domain 1 β_2-glycoprotein 1 (IgG-aβ_2-GP1-D1) in patients with APS and SLE.
Methods: The study included 187 patients: 52 - with primary APS (PAPS), 12 - with probable APS (proAPS), 59 - with SLE+APS, and 64 - with SLE without APS. The comparison group included 49 patients with various rheumatic diseases (thrombosis without aPL (n=7), rheumatoid arthritis (RA) (n=10), Behcet's disease (BD) (n=15), systemic sclerosis (SSD) (n=12), pregnant women (n=2),