AB0535
LEPTIN LEVELS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS, CONNECTION WITH COURSE OF THE DISEASE AND Atherosclerotic VASCULAR LESIONS
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Background: Atherosclerosis and its complications remain the leading causes of death in patients with systemic lupus erythematosus (SLE). Along with the known pathological factors that significantly accelerate the development of cardiovascular events in patients with SLE (hyperinsulinemia, hypertension, atherogenic dyslipidemia, disease activity, etc.), in recent years the role of dysadipokemia has been intensively studied. In patients with SLE serum leptin increases, but how its concentration changes under the conditions of the inflammatory process and how it is associated with other factors that aggravate the course, have not been studied enough. Its role in the formation of atherosclerotic vascular lesions in patients with SLE is also unknown.

Objectives: The aim of the study was to assess leptin levels in patients with SLE and to analyze its relationship with the course of the disease, lipid spectrum and atherosclerotic vascular lesions.

Methods: We examined patients with SLE (31 women and 4 men), mean age = 46.23 ± 1.36 years. The average duration of the disease was 9.97 ± 0.82 years. SLE was verified on the basis of ACR / EULAR criteria (2019) and formulated according to the classification recommended by the Association of Rheumatologists of Ukraine (2020). The control group included 20 healthy individuals of the appropriate age and sex.

The content of leptin in the serum was determined by enzyme-linked immunosorbent assay according to the instructions of the manufacturer. The SLEDAI index was used to assess activity. Assessment of endothelial function was determined by the Celemajer method.

Results: The level of leptin in the serum in apparently healthy individuals and patients with SLE differed significantly. In particular, the average hormone content in patients with SLE was 39.4 ± 3.4 ng / ml, while in the control group - 24.4 ± 3.8 ng / ml, i.e. higher by 38.1 % (P < 0.01). The patient’s age and disease duration were weakly related to leptin levels (r = 0.25, r = 0.34, respectively). It was found out that in patients with SLE serum leptin levels were directly proportional to the disease activity. In particular, a close associative relationship was established between the activity of the disease determined by the SLEDAI index and ESR (r = 0.81, r = 0.42, respectively). The study found a close association between serum leptin concentrations and blood lipid spectrum in patients with SLE. In particular, it was the highest with LDL (low density lipoprotein) (r = 0.54) and probable with total cholesterol and triglycerides (r = 0.32, r = 0.28, respectively). In patients with SLE with a high (≥42.2 mg / ml) leptin level, the endothelium-dependent vasodilation brachial artery (EDV BA) was 52.3 % higher and the CCA IMT (common carotid artery intima-media thickness) was 32 % higher than in patients with relatively normal leptin levels. In addition, the proportion of patients with a decrease in intima-media thickness, at least 6% of the control group in patients with high leptin levels was 12–25% higher than among patients with relatively normal levels of the enzyme under study. The presence of atherosclerotic plaques, their area and the severity of atherosclerotic lesions of the carotid arteries also determined the tendency to increase in proportion to the increase in serum leptin levels. Thus, hyperleptinemia in patients with SLE is associated with deterioration of vascular function of the carotid artery and the severity of atherosclerotic vascular lesions.

Conclusion: Significantly higher levels of serum leptin were found in patients with SLE, which were associated with inflammatory activity and dyslipidemia, as well as with structural and functional reorganization of blood vessels, which should be considered as an important risk factor for vascular lesions.

Disclosure of Interests: None declared

AB0536
RELATIONSHIP OF EXERTIONAL ACTIVITY AND MENTAL WELLBEING IN SYSTEMIC LUPUS ERYTHEMATOSUS
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Background: Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with a variety of clinical manifestations [1] and has a profound effect on physical health [2]. Anxiety and depression are common symptoms of SLE which can have a significant impact on the quality of life [3].

Objectives: To study whether or not the physical state of health relates to the extent of anxiety and depression in SLE patients.

Methods: The Physical Component Summary Score (PCS) was determined using the 36-Item Short Form Survey (SF-36) in a cohort of 146 SLE patients consecutively visiting our outpatient clinic. Two groups were compared: one with low PCS (<50 %) (LPCS) and the comparison group with high PCS ≥50 % (HPCS). Patients with SLE who visited our Rheumatology clinic between March 2019 and December 2020 as part of a monocentric cross-sectional study completed additional standardized questionnaires: Hospital Anxiety and Depression Scale (HADS), Beck’s Depression Inventory (BDI II), Multidimensional Assessment of Fatigue (MAF), Functional questionnaire Hanover (FFbH) and the international questionnaire on physical activity in short form (IPAQ-SF). The data was assessed with SPSS 27 (IBM, Armonk, NY, USA). The tests include bivariate and partial correlations. Significance tests were performed using non-parametric tests.

Results: In total, 146 patients participated in the study. 14.4 % (n = 21) were females, and the mean age was 46.2 ± 2.2 years. The mean state of physical health according to SF36 was 54.9 % ± 25.6 % in the examined cohort. There were 62 (42.5 %) patients with LPCS, of average age 54.0 ± 10.3 years and 84 (57.5 %) with HPCS, of average age 47.2 ± 13.3 years. The majority of patients in both groups were females (55/7, 88.7 % and 70/14, 83.3 %). A SLEDAI score > 2 was confirmed in 33.9 % (n = 21) of the patients with LPCS and in 25 % (n = 21) of patients with HPCS, the mean SLEDAI score did not significantly differ between LPCS and HPCS patients (2.4 versus 1.9, p = 0.261). Among patients with LPCS, 54.8 % (n = 34) presented low physical activity and 64.5 % reported functional impairment (FFbH < 80). More than half of LPCS-patients (53.2 %, n = 33) showed a low Mental Health summary score (MCS < 50 %) and over a third of them had moderate to severe depression (BDI II ≥ 19, 38.7 %, n = 24) and indicated pathological anxiety (HADS > 10, 37.1 %, n = 23).

Compared to the LPCS group, a smaller number of patients with HPCS had low physical activity (36.9 %, n = 31, p = 0.031) and the difference in mean weekly MET between the two groups was 2730 counts (p = 0.003). There was no impairment of functional capacity in patients with HPCS (FFbH mean Score 90.9, p < 0.001). In contrast to the LPCS group, only 17.8 % (n = 15) of the patients with HPCS achieved MCS ≥ 50 % (p < 0.001). Completely free of depressive symptoms were 65.5 % (n = 55) of the patients with HPCS and only 4 patients (4.8 %), reported moderate to severe depression (p < 0.001). Patients with LPCS reported fatigue (GFI > 20) more often than patients with HPCS (98.4 % versus 54.8, p < 0.001).

Conclusion: SLE patients with low physical health conditions have highly significant mental health impairment, especially with regard to physical functioning. Physical functioning and limitations due to physical health should be considered and physical activity needs to be improved. Measurement of the PCS should be a routine tool in the overall assessment of the health conditions of SLE patients.
**AB0537**

**DRY EYE SYMPTOMS STRONGLY CORRELATE WITH OCULAR AND EXTRAOCULAR PAIN IN PRIMARY SJÖGREN’S SYNDROME. INTERIM REPORT OF A PILOT CROSS-SECTIONAL MONOCENTRIC STUDY.**

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**Background:** Ocular involvement in primary Sjögren’s Syndrome (pSS) has been traditionally assessed by Schirmer’s test, Tear Break Up Time (TBUT) and Ocular Staining Score (OSS). The role of Ocular Surface Disease Index (OSDI), Visual Function Questionnaire-25 (VFQ-25) and Numerical Rating Scale (NRS) in measuring ocular pain and discomfort in pSS has not been yet investigated in detail.

**Objectives:** To explore the prevalence of ocular pain in patients with pSS, and to investigate the potential correlations between dry eye, ocular pain, extraocular patient-reported outcomes and disease activity.

**Methods:** In this ongoing cross-sectional study, OSDI, VFQ-25 and NRS for ocular pain were administered to 19 consecutive patients with a definite diagnosis of Systemic Lupus Erythematosus (SLE) and Sjoögren’s Syndrome (SS) (SLEDAI), EULAR SS Patient Reported Index (ESSPRId), erythrocyte sedimentation rate (ESR), TBUT, OSDI, VFQ-25 and NRS.

**Results:** In the study, 19 consecutive patients have been enrolled so far. The sample demographics and disease-related features are representative of a typical pSS population (10% male sex, median age at diagnosis of 49 [IQR 24], median ESSDAI = 1 [IQR 6] being biological, haematological and glandular involvement the most represented). Prevalence of ocular pain of any grade (NRS>0) was 11/19 (58%); 6 patients (33%) reported severe ocular pain (NRS>5). The correlation analysis was significantly strong for patient-reported dryness (ESSPRId), ocular surface-associated symptoms (OSDI), and stability of the tear film (TBUT) with NRS for ocular pain. Moreover, ocular pain also correlated with generalised pain (ESSPRId) and fatigue (ESSPRIf), while a significant correlation was outlined for OSDI (but not TBUT) with ESSDAI and ESR. Detailed results are summarised in Table 1.

**Table 1. Pearson r coefficients calculated for self-reported ocular pain (NRS), patient-reported outcomes (ESSPRId, OSDI, VFQ-25), physician-assessed dryness (TBUT), disease activity (ESSDAI) and erythrocyte sedimentation rate.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pearson r</th>
<th>p-value</th>
</tr>
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<tbody>
<tr>
<td>NRS</td>
<td>-0.36**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>TBUT</td>
<td>-0.51**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>ESSDAI</td>
<td>0.25</td>
<td>0.04</td>
</tr>
<tr>
<td>ESSPRId</td>
<td>0.38**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>OSDI</td>
<td>0.48**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>VFQ-25</td>
<td>0.37**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>ESR</td>
<td>-0.19</td>
<td>0.07</td>
</tr>
</tbody>
</table>

**Acronyms:** NRS - Numerical Rating Scale (for ocular pain); TBUT - Tear Break Up Time; ESSPRId - EULAR Sjögren’s Syndrome (SS) disease activity index; ESSDAI - EULAR Sjögren’s Syndrome Patient Reported Index (dryness; pain; fatigue); OSDI - Ocular Surface Disease Index; VFQ-25 - Visual Function Questionnaire-25; ESR - erythrocyte sedimentation rate.

**Conclusion:** Ocular pain may represent an additional criterion for pSS patient stratification. The unexpected association between ocular pain and extraocular symptoms is a novel datum which may suggest that nociceptive mediators could be involved in the genesis of symptoms in pSS. Indeed, OSDI seemed to perform better than TBUT in assessing the suffrance of the ocular surface thus mirroring a systemic inflammatory activity.

**REFERENCES:**


**Disclosure of Interests:** None declared

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