THU0272 VISFATIN IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS: AN IMMUNE METABOLIC INTERPLAY

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Background: Visfatin is a proinflammatory cytokine (adipocytokine) that is secreted in excess from adipose tissue in obese individuals, and it has numerous metabolic and autoimmune implications: it stimulates the secretion of IL-6, IL-8, IL-10, IL-18 and TNF-α. In SLE patients these may influence disease activity and delays remission (1).
Objectives: To assess the possible effects of obesity & serum visfatin levels on SLE patients and its clinical relevance on disease process, activity and occurrence of insulin resistance.
Methods: This study was performed on 60 SLE patients satisfying the 1997 American College of Rheumatology revised criteria (ACR) and 60 apparently normal individuals with matched age and sex as control groups. All subjects were classified according to BMI into 4 groups (non-obese and obese SLE patients, non-obese and obese control persons). All patients were subjected to full history & clinical examination, assessment of SLE disease activity was done using BILAG-2004 index, laboratory investigations were done (CBC, ESR, fasting blood glucose, renal and liver function tests, lipids profile, fasting plasma insulin, calculation of insulin resistance by HOMA score, measurement of serum visfatin level by ELISA kit) and diagnosis of metabolic syndrome according to WHO definition.
Results: There were statistically significant higher grades of cardiorespiratory manifestations of BILAG score in obese compared to non-obese SLE patients. 40% of obese lupus patients were hypertensive, while only 16.6% of non-obese SLE patients A statistically significant higher prevalence of metabolic syndrome in obese compared to non-obese SLE patients. There were statistically significant higher levels of total serum cholesterol; serum triglyceride, fasting blood sugar, fasting insulin, insulin resistance and serum visfatin; but lower level of HDL in obese SLE patients compared to non- obese SLE. The same observations were recorded on comparing non-obese SLE patients to non-obese controls & obese SLE to obese controls. A statistically significant higher level of insulin resistance and prevalence of metabolic syndrome were found among obese SLE patients when compared to obese controls and non-obese SLE patients compared to non-obese controls. Regarding serum visfatin levels obese SLE patients have significantly higher serum visfatin levels than non-obese SLE patients than obese controls than non-obese controls.In all SLE patients there were statistically significant positive correlations between serum visfatin levels and each of: BMI, waist circumference, haematological manifestations, total BILAG score of disease activity, serum triglycerides, liver functions (ALT, AST, alkaline phosphatase and total serum proteins). While a significant negative with HDL level.
Conclusions: Obesity (BMI) is an independent risk factor in SLE patients that increases the SLE disease activity and complications. Visfatin is an adipocytokine its level significantly increased in obese SLE patients & it is positively correlated with disease activity.
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THU0273 PREVALENCE AND FACTORS ASSOCIATED WITH FATIGUE IN FEMALE SLE PATIENTS AT THE HOSPITAL DEL MAR / PARC DE SALUT MAR

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Background: In patients with SLE, subjective parameters are very important as they have a great impact on the quality of life. Among them, fatigue is the most prevalent symptom in SLE, as it occurs in more than 90% of patients (1). Likewise, approximately 50% of patients consider fatigue the most disabling symptom of the disease (2). Despite its high prevalence and impact on quality of life, fatigue has not been extensively studied in patients with SLE.
Objectives: To determine the prevalence of fatigue in our cohort as well as the factors with which it is associated, its relationship with demographic variables, vitamin D levels, treatments, SLE symptoms and disease activity.
Methods: A cross-sectional study was carried out including female patients with SLE (ACR 1997 criteria) who regularly attended the Parc de Salut Mar-IMAS in Barcelona between January 2012 and May 2014. We collected sociodemographic data, vitamin D supplementation, the VAS fatigue, pharmacological treatment, main serological markers of SLE, and plasma levels of 25-hydroxy vitamin D. The association between fatigue and the different variables was evaluated by the Spearman's rho correlation coefficient for the continuous and the Mann-Whitney U test for the categorical variables.
Results: One hundred and two consecutive female patients were included. The fatigue variable was evaluated through a fatigue VAS with a mean score of 52.84 (range 0–100), a median of 59.00 and a standard deviation of 29.86. A statistically significant relationship was found between fatigue and age, MHAQ, SLICC and photosensitivity in the entirety of the 102 patients. As for the relationship between fatigue and vitamin D insufficiency (25-OH vit. D≤30 levels), the sample was divided into patients receiving vitamin D supplementation (N=60) and without supplementation (N=40), finding a significant relationship between fatigue and vitamin D insufficiency in the group without supplementation.

Table 1. Correlation between fatigue and the different SLE variables studied

Age**	Correlation coefficient	0.289
	p-value	0.003
	N	102
MHAQ**	Correlation coefficient	0.484
	p-value	0.000
	N	102
SLICC**	Correlation coefficient	0.256
	p-value	0.009
	N	102
25-0H-VitD**	Correlation coefficient)	-0.356
	p-value	0.024
	N (not supplemented)	40
Photosensitivity*	55.32 [30–80]	p-value = 0.043
	N	102

Significant value $p<0.05$. Med [P25–P75]. *Mann-Whitney U test; **Spearman's rho test.

Conclusions: Fatigue is highly prevalent among female patients with SLE. A statistically significant association was found between the presence of fatigue, on the one hand, and age, MHAQ, SLICC, photosensitivity, and vitamin D insufficiency in the group of patients without supplementation on the other. It is necessary to carry out further studies with a larger sample and with validated fatigue measurement scales to confirm our findings.
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THU0274 FOOTPRINTS OF NEUTROPHIL EXTRACELLULAR TRAPS ARE ELEVATED IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Impaired removal of apoptotic waste in patients with systemic lupus erythematosus-SLE has been long known as important factor that trigger autoimmune response. Neutrophil extracellular traps could be another source of autoantigens in patients with SLE.
Objectives: The aim of this study was to compare NETs markers (free DNA, myeloperoxidase) and dnase I in SEL patients and healthy controls, as well to assess their relationship with serological markers of SLE disease activity (C3 and C4 complement components, anti-dsDNA antibodies) and SLEDAI score (clinical disease activity index).
Methods: We analysed 111 sera obtained from 84 SEL patients (60 patients had 1 sample and 24 patients had 2 or 3 samples) and 50 healthy blood donors. Serum levels of myeloperoxidase, B-cell activating factor-BAFF, cell free DNA, complement components C3 and C3, antibody to dsDNA by CLIFT end ELISA assays, netolitic activity and DNAse I were measured. The group of 35 patients was selected (11 with *de novo* disease) for which clinical data were recorded.
Results: SLE patients had significantly higher concentration of free serum DNA (1.69±0.23 vs. 1.42±031 ng/mL, p=0.0003), dnase I (10.4±6.9 vs. 5.8±5.7 U/mL, $p<0.05$), anti-MPO antibodies (13.8±43.4 vs. 0.9±0.3 U/mL, $p<0.001$) and myeloperoxidase activity (1607±2353 vs. 560.3±182.5 RU, $p<0.05$) in comparison to healthy controls. The ability of sera to degrade NETs was similar in both groups. Free DNA, dnase I, BAFF and anti-MPO levels as well myeloperoxidase activity showed significant correlation with anti-dsDNA antibodies measured by ELISA test. None of studied parameters showed correlation with C3 and C4 complement components. C3 and anti-dsDNA antibodies measured by indirect immune fluorescence were independent predictors of SLEDAI score in multivariate analysis, while BAFF and dnase I were significant in univariate analysis. Free cDNA was predictor of SLEDAI score higher than 7 in univariate analysis.
Conclusions: Increased amount of NETs markers found in lupus sera confirms their role in SLE pathogenesis. Determination of NETs markers could be useful serological parameter to follow disease activity in SLE patients.
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