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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4125

AB0548

ANTIBODY TO PURINNUCLEOSIDE PHOSPHORYLASE CAN BE USED AS AN ADDITIONAL MARKER OF INFECTIOUS COMPLICATIONS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Purine nucleoside phosphorylase (PNP, EC 2.4.2.1) plays a leading role in the assimilation of nucleosides and nucleotides by the cell, as well as in maintaining the immune status of the organism. Patients with PNP deficiency are highly susceptible to various infections, in view of the fact that the decreased activity of PNP is closely related to the insufficiency of cellular immunity.

Objectives: Study of the possibility of using the level antibodies to purine nucleoside phosphorylase as an additional marker of infectious complications in patients with systemic lupus erythematosus (SLE).

Methods: The study included 60 patients with SLE (women – 91.7%, mean age 36.32±15.27 years, average duration of the disease 7.96±7.35 years) with different clinical manifestations (SLEDAI activity 8.93±5.74, ECLAM activity 5.30±2.79, damage index SLICC/ACR 1.95±1.71). Antibodies to PNP (anti-PNP) were determined in our indirect ELISA test using the immobilised form of the enzyme as an antigenic matrix.

The presence of infectious complications in SLE patients was assessed by characteristic clinical manifestations and was considered to be confirmed when the causative agent was recognised and/or the serological analyses are positive. Infections were diagnosed in 38.3% of patients, the most frequent localization was the urinary system (n=12; 52.2%) and female genitalia (n=5; 21.7%).

Results: In the presence anti-PNP in the blood serum of patients with SLE we have often noted infectious complications (p=0.025, criterion χ^2) and less often lung damage (p=0.17) (when compared with a group of patients with SLE seronegative for the presence of anti-PNP).

Statistically significant differences (Mann-Whitney U-criterion) were detected only for pyuria (p<0.0005), C-reactive protein level (p=0.048) and the number of ceruloplasmin (p=0.008), while comparing the groups of SLE patients with the presence of infectious complications and without it; differences in the level of antibodies to CP (p=0.052) did not reach statistical significance. Other clinical and laboratory parameters do not have statistically significant differences between the two sessions. This fact complicates the recognition and differential diagnosis of infectious complications in SLE significantly.

The analysis of the characteristic curve of antibodies to PNP in the diagnosis of infectious pathology in SLE shows limited possibilities for using this parameter. The square under the curve was 0.687 (95% confidence interval 0.523–0.804, p=0.008), the separation point was 0.386 U/ml with a sensitivity of 55% and a specificity of 83%.

Taking into account that the typical clinical manifestations of infection with SLE can be erased as a result of the actual activity of SLE, and due to the use of immunosuppressive drugs, timely diagnosis and treatment become especially relevant. This study indicates the possibility of using the level of antibodies to PNP as an additional marker of infection, but the balance between specificity and sensitivity of this test does not allow to recommend it as a single study.

Conclusions: A high level of anti-PNP in the serum, especially combined with the C-reactive protein increase and in the absence of other markers of SLE activation allows to suspect the presence of infection and points to the need for in-depth research directed to identify the pathogen.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5276

AB0549

CAN THE OVERALL THROMBOTIC RISK IN SYSTEMIC LUPUS ERYTHEMATOSUS BE DETERMINED? THE COMBINED ROLE OF CLASSIC CARDIOVASCULAR FACTORS AND ANTIPHOSPHOLIPID ANTIBODIES

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Background: Systemic Lupus Erythematosus (SLE) is a chronic inflammatory disorder. Antiphospholipid syndrome (APS) is a thrombotic disorder associated with the presence of antiphospholipid antibodies (APA) and increased cardiovascular risk (CVR). Framingham (FRM) and SCORE (Systematic Coronary Risk Evaluation) scales are available CVR assessment systems. aGAPSS (adjusted Global Antiphospholipid Syndrome Score) combine positive APA and CVR factors, which was suggested to determine the thrombotic risk in persistently positive APA (PPAPA) patients.

Objectives: To determine the role of the thrombotic factors in SLE patients, considering CVR factors and APA. To access the application of different thrombotic risk scales.

Methods: A retrospective cohort study of 84 patients with SLE followed in an out-patient setting of a Portuguese central hospital was performed. The study evaluated patient gender, current age, age at diagnosis, duration of illness, presence of another autoimmune disease (AID), CVR factors [obesity (OB), diabetes (DB), arterial hypertension (AH), dyslipidaemia (DL), smoking (SM)], presence of APA, treatment, dose and duration of steroids. The FRM, SCORE and aGAPSS scores were calculated. The data was analysed using SPSS and considered significant if p<0.05.

Results: Table 1 characterises the study population. Male patients had a higher prevalence of AH (p=0.022), DL (p=0.047), and SM (p=0.001), with a risk of 11%–20% in the FRM scale and a risk of 5%–14% in the SCORE (p=0.000). Female patients had a higher presence of another AID (p=0.014) and treatment with disease-modifying antirheumatic drugs (p=0.014). FRM scale reveals a risk of 11%–20% in the presence of AH and >20% in SM (p=0.001). The SCORE scale reveals a risk of 5%–9% in the presence of AH (p=0.003) and 10%–14% in DL (p=0.024). When the risk is 6%–20% in the FRM scale, the risk is lower in SCORE (p=0.000). APA does not correlate with an increased CVR. All APA are associated with another AID, APS and PPAPA. The aGAPSS associates a score of 7–12 if another AID is present (p=0.000); 4–9 with APS; >7 with PPAPA (p=0.000); 4–6 with DB (p=0.039), DL (p=0.002) and AH (p=0.000); >7 with lupus anticoagulant (LA), >7 with anticardiolipin antibodies (aCL) and >12 with anti-β-2glycoprotein-I antibody (antiβ2GPI) (p=0.000).

Abstract AB0549 – Table 1

Women	74%
Current age	52.3±16.2 years
Age of diagnosis	44.9±17.4 years
Duration of disease	7.2±7.5 years
Another AID	30% (APS 60%, Sjögren syndrome 36%)
PPAPA	12%
CVR	AH 42.8%, DL 21.4%, OB 11.9%, DB 10.7%, SM 9.5%
APA	LA 19%, aCL 15.5%, antiβ2GPI 7.1%
Steroid use	61%
DMARDs	89%

Conclusions: This study highlights the existence of thrombotic factors in SLE. Their risk is even more elevated when another AID is present. The FRM and SCORE scales reflects the CVR. In SLE patients both the CVR factors and the presence of APA must be evaluated. Therefore, not only should the FRM scale be calculated, but also the global thrombotic risk, using the aGAPSS, must be accessed.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7389