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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3443

THU0368

ARE ANTI-PHOSPHATIDYLSERINE PROTHROMBIN ANTIBODIES A USEFUL SCREENING TOOL FOR THE LUPUS ANTICOAGULANT?

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Background: Anti-phosphatidylserine prothrombin antibodies (PSPT) have been reported to be strongly associated with the lupus anticoagulant (LAC) in established antiphospholipid syndrome (APS) and autoimmune cohorts. However, there is a paucity of similar studies assessing clinical utility on an all-comer patient population undergoing evaluation for suspicions of APS.

Objectives: To determine the sensitivity and specificity of IgG and IgM PSPT to the LAC in patients undergoing evaluation for APS.

Methods: Patients from June 2017 to December 2017 undergoing evaluation for APS had blood draws for the LAC, anti-cardiolipin (aCL), anti-β2 glycoprotein-1 (β2GP1), and PSPT. Both IgG and IgM isotypes were tested for each antibody. Presence of the LAC was determined by trained haematologists interpreting a number of mixing and neutralisation studies. Demographic details were abstracted from the medical record and cases meeting the SLICC criteria for systemic lupus erythematosus (SLE) and the revised Sapporo criteria for APS were enumerated.

Results: Fifty six eligible patients were identified. Mean age was 50±18 years. 68% were female, 20% with SLE, and 20% with APS. At time of testing, 18% were on warfarin, 7% on direct factor Xa inhibitors and 2% on low-molecular weight heparin. The LAC was negative in 45% (25/56) of those tested. In LAC negative cases, the IgG and IgM PSPT were negative in 100% and 92% of cases, respectively. In LAC positive cases, IgG PSPT was positive in 35% and IgM PSPT was positive in 61%. Compared to the LAC, IgG PSPT was 100% (95% CI: 72%, 100%) sensitive but was only 56% (40%, 70%) specific. Similarly, the IgM isotype of PSPT showed 90% (70%, 99%) sensitivity but only 66% (48%, 81%) specificity. Overall, 38% (21/56) of the cases possessed an isolated, singly positive LAC with concurrent negative IgG/M aCL and β2GP1 antibodies. In this isolated LAC positive-only group, further testing with IgG and IgM PSPT was positive in 38% and 57% of the cases, respectively.

Conclusions: In this study, IgG and IgM PSPT were found to be highly sensitive to the LAC and may be a useful tool in the screening of and the interpretation of the LAC.

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Acknowledgements: Special thanks to Susan Hartzler, Cory Blixt, Serena Navitskas, and Diane Meier.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5013

THU0369

CREATION OF A WEIGHTED SLICC SLE CLASSIFICATION CRITERIA AND COMPARISON WITH PROPOSED EULAR/ACR SLE CLASSIFICATION CRITERIA

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Background: In previous validation work, the SLICC 2012 SLE classification criteria were more sensitive than the revised ACR-11 criteria, while both criteria had similar agreement with physician diagnoses. Both of these classification rules count each SLE manifestation equally.

Objectives: Our objective was to derive and test a classification rule which differentially weights the variable used in the SLICC classification rule. We also compared this rule to a recently proposed EULAR/ACR classification rule that also uses a weighted approach.

Methods: The physician-rated patient scenarios used to develop the 2012 SLICC classification criteria were re-employed to devise a weighted classification rule. A multiple linear regression model was constructed with the 2012 SLICC criteria variables as predictors and the binary outcome (physician classification of SLE) as the outcome. To generate the weights for each criteria, we then multiplied each criteria's coefficient by 100 and rounded to the nearest integer. The 'Direct Coombs' criteria (coefficient <1) was deleted for simplicity. The weights for the remaining manifestations were: acute cutaneous, 26 chronic cutaneous, 12 oral ulcers, 16 arthritis, 9 serositis, 16 renal without biopsy, 9 neurologic, 9 hemolytic anaemia, 9 leukopenia or lymphopenia, 14 thrombocytopenia, 15 alopecia, 11 ANA, 11 anti-dsDNA, 19 anti-Sm, 16 antiphospholipid antibodies, 9 low complement. 11 A cutoff for classification was chosen as the score that maximised overall agreement (i.e., the sum of sensitivity and specificity) of the new weighted criteria with physician diagnosis. Patients with lupus nephritis or the new weighted classification rule of 56 or more with at least one clinical component and one immunologic component were classified as SLE. We evaluated the performance of this revised SLICC criteria, on an independent set of patient scenarios, and compared this to the performance of the older revised ACR criteria, the previous SLICC 2012 criteria, and the newly proposed EULAR/ACR criteria.

Results: Table 1 shows the performance of the four classification rules. There was no statistically significant difference (at the 0.05-level) between any pair of rules with respect to overall agreement with the physician diagnosis.

Abstract THU0369 – Table 1. Sensitivity and specificity of four different SLE classification rules based on physician diagnoses of patient scenarios

Classification Rule	Sensitivity (n=349)	Specificity (n=341)	Overall Agreement (n=690)
Revised ACR-11	290 (83%)	326 (96%)	616 (89%)
SLICC 2012	340 (97%)	288 (84%)	628 (91%)
Proposed EULAR/ACR	317 (89%)	302 (90%)	619 (90%)
Weighted SLICC 2012 criteria	310 (88%)	304 (89%)	614 (89%)

Conclusions: The two newly derived weighted classification rules did not perform better than the existing list-based rules in terms of over-all agreement. Given that the list-based rules are easy to calculate, they may be preferred in most clinical settings.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1952

THU0370

THE SIGNIFICANCE OF NON-MYDRIATIC FUNDUS EXAMINATION OPERATED BY RHEUMATOLOGISTS IN SCREENING FOR RETINOPATHY OF SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

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Background: Retinopathy is a common fundus lesion in SLE patients. Non-mydiatic Fundus Camera images directly and objectively and avoids the mydiatic drug-induced glaucoma attack, which can not only reduce the suffering of patients but also save time and costs.

Objectives: To understand the significance of non-mydiatic fundus examination operated by rheumatologists in screening for retinopathy of SLE.

Methods: After professional training, rheumatologists use non-mydratric fundus camera to take fundus photography of inpatients in our department and record the clinical features and laboratory test results of the patients. The results of fundus photography are interpreted by both ophthalmologists and rheumatologists. The fundus results of SLE patients from July 2016 to June 2017 were analysed. 35 cases (62 eyes) of retinopathy were defined as experimental group, and 35 cases (70 eyes) without retinopathy were randomly selected as the control group.

Results: A total of 203 patients with SLE with an average age of 38.4 ± 11.6 years acquired bilateral fundus results, including 28 males and 175 females (86.2%). Ocular lesions were found in 51 (25.1%) cases, of which 35 (62.6%) were common retinopathy. There were 5 cases of retinal atrophy and pigmented degeneration (4 binocular, 1 monocular), 9 cotton spots (6 binocular, 3 monocular), 7 flaming bleeding (7 binocular), 14 choroiditis with drusen (9 binocular, 5 monocular), arteries tortuous or occluded in 5 (3 binocular, 2 monocular). The SLEDAI score, anti-dsDNA level and C3 decline rate of the experimental group were significantly higher than those of the control group ($p < 0.05$ or $p < 0.01$), while the titer of antinuclear antibody, the positive rate of anti-SM antibody, the positive rate of anti-phospholipid antibodies, and the erythrocyte sedimentation rate had no significant difference ($p > 0.05$). Subsequently, we followed up 16 patients with retinopathy and SLEDAI score ≥ 10 and achieved remission (SLEDAI score ≤ 4) with glucocorticoid and immunosuppressive agents with an average duration of 6.5 ± 4.5 months. The second examination showed that retinal lesions were improved in 9 cases (56.25%), 3 cases (18.75%) were unable to judge due to the appearance of optical media change which may caused by glucocorticoid, and 4 cases (25%) showed no obvious changes.

Conclusions: Non-mydratric fundus examination performed by rheumatologists may assist rheumatologists in screening for retinopathy in SLE patients, assessment of disease activity and treatment outcome.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6783

THU0371 CORRELATION BETWEEN IRREGULAR MENSTRUATION AND DISEASE ACTIVITY OF SYSTEMIC LUPUS ERYTHEMATOSUS :1 YEAR COHORT STUDY

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Background: Systemic lupus erythematosus (SLE) often occurs to young women of reproductive age. Not only the disease but the treatment itself could affect the capability of getting pregnant. In clinical scene, we often experience SLE patients having menstrual irregularity before their relapse. Reports about correlation between menstrual irregularity and disease activity of SLE was very limited.

Objectives: We started this study, that this study could be a suggestion for clinician to use the symptom as a warning sign for relapse.

Methods: The study design was prospective cohort. 67 patients who fulfilled ≥ 4 of the American College of Rheumatology (ACR) criteria for the classification of SLE whose age was 20 to 45 years old and treated as outpatient at Showa University Hospital from Feb 2016 to Jan 2017 were recruited. At the initial point, patients' disease were not active and were receiving maintenance therapy. Loss to follow up was eliminated. We set the main exposure as menstrual irregularity and the primary outcome as whether they would have relapse within 1 year from the registration. We defined the menstrual irregularity as deviation from the normal menstruation, which is 'flow occur every 25 to 35 days and last three to seven days'. We had questionnaire formed from each patient. Definition of relapse was the doctor's decision, to intensify the patients' treatment. We set the confounding as age, Japan Perceived Stress Scale (JPSS), current smoking, history of treatment with IVCY and logistic regression analysis was performed.

Results: The mean age was 35.7 years old. Irregular menstruation patients were 11 (16.4%). The relapse group was 12 (17.9%) and those of normal group was 59 (89%). There was no significant difference in patients' background between both groups. Adjusted with the cited confounding variable there was no significant difference between the both groups (Odds ratio 2.25; 95% Confidence Interval (CI) 0.24 to 20.7; $p = 0.47$).

Abstract THU0371 – Table 1. Abstract THU0371 – Table 2. Logistic regression analysis. Adjusted with age, history of treatment with IVCY, current smoking, and JPSS.

	Total	Normal menstruation group	Irregular menstruation group	p value
Number	67	56	11	
Age median [IQR]	35.7[31-41]	38[31-41]	37[28-41]	0.35
0 month SLEDAI median[IQR]	3[2-6]	2[0-6]	4[2-6]	0.24
JPSS median [IQR]	15[11-18.8]	15[11-18.5]	13[9-29]	0.51
Current smoking N(%)	8(11.9)	6(10.7)	2(18.1)	0.4
History of IVCY N(%)	10(14.9)	8(14.2)	2(18.1)	0.74
0 month PSL dose median[IQR]	5.5[4-10]	5.7[4.3-9.6]	5[3-11]	0.73
0 month Immune-Suppressing drug N(%)	40(59)	35(62.5)	5(45.4)	0.29

IQR: interquartile range, SLEDAI: systemic lupus erythematosus disease activity index, JPSS: Japan Perceived Stress Scale, IVCY: intravenous cyclophosphamide PSL: prednisolone.

	Coefficient (β)	SE	Wald χ^2	p value	Odds ratio	95%CI
Irregular Menstruation Group	-0.40	0.56	0.51	0.47	2.25	0.24-20.7

Adjusted with age, history of treatment with IVCY, current smoking, and JPSS

Conclusions: We investigate that whether menstrual irregularity could be the predictor for the disease relapse, but we could not prove the significant relation.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5274

THU0372 ULTRASONOGRAPHIC SCORING OF THE MAJOR SALIVARY GLANDS: IS THERE A RELATIONSHIP WITH DISEASE ACTIVITY AND FUNCTIONAL STATUS OF THE GLANDS ?

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Background: Ultrasonography (USG) of major salivary glands (SG-USG) is a non-invasive tool that has been used to evaluate salivary glands in primary and secondary Sjogren's syndrome (SjS).

Objectives: We aimed to investigate relation between the ultrasonographic scoring of major salivary glands and systemic disease activity or salivary secretion in patients with primary SjS.

Methods: Seventy-five SjS patients (F/M:73/2) with the mean age of 52 ± 12 and duration of follow-up period of 58 ± 54 months fulfilling ACR-EULAR classification criteria (2002) were included. Disease activity indexes (Sjögren's Syndrome Patients Reported Index (ESSPRI), Visual Analogue Scale (VAS), EULAR Sjögren's Syndrome Disease Activity Index (ESSDAI)) were recorded. Simultaneously, sialometric evaluation of the salivary glands was performed. Major salivary glands (bilateral parotis and submandibular glands) were scored according to two different scoring systems [Hocevar A.(0–48) and Milic VD. (0–12)] and elastography was recorded as well.

Results: Demographics, clinical characteristics, disease activity indexes and SG-USG scores were summarised in table 1 and table 2. Forty-one (55%) and 45 (60%) patients had the cut-off values of ≥ 17 (Hocevar) and ≥ 6 (Milic USG). The patients with the scores of ≥ 17 (Hocevar) were found to have higher scores of ESSPRI-total (16 ± 6 vs 13 ± 7 , $p = 0.045$) and lower sialometry (4.6 ± 4.7 vs 8.4 ± 4.6 ml, $p = 0.002$). Scores of Hocevar and Milic-USG were negatively correlated with sialometry ($r = -.430$, $p = 0.001$ and $r = -.430$, $p = 0.001$). Hocevar, Milic and