AB0405

ABNORMAL BLOOD LIPID METABOLISM IN PREMENOPAUSAL FEMALE SYSTEMIC LUPUS ERYTHEMATOUS PATIENTS IS RELATED TO HYPERURICEMIA AND PROTEINURIA

H. Liu1, J. Z. Lin2, X. Caix3, J. D. Ma1, Y. Mo, M. Xie1, L. Dai2, 1Panyu Central Hospital, Department of Rheumatology, Guangzhou, China; 2Sun Yat-Sen Memorial Hospital, Sun Yat-sen University, Department of Rheumatology, Guangzhou, China; 3Guangzhou First People's Hospital, The Second Affiliated Hospital of South China University of Technology, Department of Rheumatology, Guangzhou, China.

Background: 1. Hyperuricemia is often associated with abnormal lipid metabolism. We reported premenopausal female systemic lupus erythematosus (SLE) patients had elevated blood UA levels1,2. Do these patients also have hyperlipidemia?

2. Estrogen has certain effect on blood lipid metabolism, whether the blood lipid levels of premenopausal female SLE patients who have the background of hyperuricemia function are affected by estrogen and its receptors?

Objectives: To investigate the relationships between blood lipids and serum UA level, estrogen receptors (ERs) as well as ER antibodies in premenopausal female SLE patients.

Methods: 123 premenopausal female SLE patients (SLE group) were divided into normal CH group (n=93) and high CH group (n=30, CH>5.17mmol/l), and 40 healthy premenopausal females served as the control group. The blood lipid levels of the SLE group and the control group were compared, and the blood levels of lipid, UA, estrogen, ERs and ER antibodies were compared between the two SLE subgroups. Linear regression was used to analyze the influencing factors of blood CH.

Results: 1. In SLE group, the blood level of TG was significantly higher than that of the control group (1.67±1.10 vs. 0.87±0.47, P<0.001), while the levels of blood CH, LDL, HDL were comparable to the control group (all with P> 0.05).

2. The mean blood CH level of the SLE patients with hyperuricemia was 5.57±2.44mmol/l, which was significantly higher than that of patients with normal UA level (3.98 ± 1.30mmol /l, P <0.001).

3. The serum UA, CRE, CH, TG, LDL, and 24-hour urinary protein quantification (24h UPRO) in the high CH SLE subgroup were significantly higher than those in the normal CH SLE subgroup (all with P<0.05). There were no significant differences in serum estrogen, ERs and ER antibodies between the two SLE subgroups.

4. Linear regression showed that serum UA level and 24h UPRO were the dominant factors of elevated blood CH in the premenopausal female SLE patients, Table 2.

Conclusion: Compared with healthy female of the same age range, the premenopausal female SLE patients are more likely to have abnormal lipid metabolism, which is related to kidney damage and abnormal UA metabolism.

References:


Table 1. Some clinical indicators, estrogen, ERs and ER antibodies in the premenopausal female SLE patients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>95% Confidence Interval for B</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>CRE</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>CH</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>LDL</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>24h UPRO</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 2. Relationships between blood CH level and clinical indicators in the premenopausal female SLE patients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>95% Confidence Interval for B</th>
<th>Standardized Coefficients</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>CRE</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>CH</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>LDL</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>24h UPRO</td>
<td>0.003</td>
<td>0.001</td>
<td>0.249</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4918

AB0406

HUMAN PAPILLOMA VIRUS (HPV) VACCINATION SAFETY IN SYSTEMIC LUPUS ERYTHEMATOSUS COHORT - PORTUGUESE UNIVERSITY HOSPITAL SINGLE-CENTER COHORT STUDY

J. Sousa Morais1, D. G. Oliveira2, R. Faria3,4, A. Almeida3, M. Brandão3,4, Results 3,4, I. Almeida4, F. Faria4, C. Vasconcelos3,4, Serviço de Medicina, Hospital de São Marcos, Braga, Portugal; 2Serviço de Medicina, Porto, Portugal; 3Unidade de Imunologia Clínica, Porto, Portugal; 4Abel Salazar Biomedical Sciences Institute - University of Porto, UMB, Porto, Portugal.

Background: Cervical cancer is a potentially preventable consequence of Human Papillomavirus (HPV). HPV vaccination is recommended in most countries for all young women, preferentially before sexual activity begins. In Portugal, HPV vaccination is available in either bivalent (genotypes 6, 18) or tetravalent (6, 11, 16 and 18) vaccines. Both have aluminum as an adjuvant, a substance arguably capable of inducing inflammatory adjuvant syndromes. Systemic Lupus Erythematosus (SLE) mostly afflicts women of childbearing age, the very target population for HPV vaccination. There are conflicting reports in the literature regarding both the efficacy and safety of this vaccine in SLE patients. This question is particularly pressing as HPV infection prevalence seems to be increased in SLE patients.

Objectives: To analyze the safety of HPV vaccination in a SLE patient cohort followed at a university hospital.

Methods: Retrospective single-center (35 year long, 436 SLE patient cohort) review of all female SLE patients local and online national records on HPV vaccination and cervical cancer screening. Data on activity (using SELDAI-2K scoring) and concomitant drug use were reviewed for the two years before and after vaccination date.

Results: Of the 463 SLE patients, 420 were women (91%), of which 322 (85%) were vaccinated with the tetravalent vaccine. Pre-vaccination mean SLEDAI score of was 5.9: due to arthritis (n= 5; 38,5%), low complement levels of lipid, UA, CRE, CH, LDL, and 24-hour urinary protein quantification were comparable to the control group (all with P> 0.05).

2.44mmol/l, which was significantly higher than that of patients with normal CH group (n=93) and high CH group (n=30, CH>5.17mmol /l), and 40 healthy premenopausal females served as the control group. The blood lipid levels of the SLE group and the control group were compared, and the blood levels of lipid, UA, estrogen, ERs and ER antibodies were compared between the two SLE subgroups. Linear regression was used to analyze the influencing factors of blood CH.

Results: 1. In SLE group, the blood level of TG was significantly higher than that of the control group (1.67±1.10 vs. 0.87±0.47, P<0.001), while the levels of blood CH, LDL, HDL were comparable to the control group (all with P> 0.05).

2. The mean blood CH level of the SLE patients with hyperuricemia was 5.57±2.44mmol/l, which was significantly higher than that of patients with normal UA level (3.98 ± 1.30mmol /l, P <0.001).

3. The serum UA, CRE, CH, TG, LDL, and 24-hour urinary protein quantification (24h UPRO) in the high CH SLE subgroup were significantly higher than those in the normal CH SLE subgroup (all with P<0.05). There were no significant differences in serum estrogen, ERs and ER antibodies between the two SLE subgroups.

4. Linear regression showed that serum UA level and 24h UPRO were the dominant factors of elevated blood CH in the premenopausal female SLE patients, Table 2.

Conclusion: Compared with healthy female of the same age range, the premenopausal female SLE patients are more likely to have abnormal lipid metabolism, which is related to kidney damage and abnormal UA metabolism.

References:
Background: Antiphospholipid syndrome (APS) is a systemic autoimmune disease characterized by specific vascular and obstetric manifestations and by antiphospholipid antibodies (aPL) positivity [1]. To date, little is known regarding nailfold videocapillaroscopy (NVC) alterations in APS patients and in asymptomatic aPL-carriers, non-specific abnormalities being the most frequently reported [2,3,4].

Objectives: To retrospectively analyze NVC alterations in APS patients and to correlate NVC alterations with both clinical manifestations and serum aPL profile.

Methods: Thirty-five aPL positive patients having received at least one NCV investigation (mean age 47 years, range 16-81, 31 female and 4 male) were retrospectively included in the study. For each patient complete medical history was collected with a particular attention to past vascular thrombosis and pregnancy morbidity. Patients were classified as affected by APS according to the updated Sapporo classification criteria [5]. Lupus anticoagulant (LAC), IgM and IgG anti-cardiolipin antibodies (ACL) and IgM and IgG anti-beta2 Glycoprotein 1 (anti-B2GPI) were assessed in each patient according to the recommended procedures [5]. NCV parameters were analyzed in each patient, with a particular interest to hemorrhages or nailfold bed-parallel hemosiderin deposits (“comb-like” hemorrhages) presence [2,6]. Statistical analysis was performed by parametric and non-parametric tests. Results: Seventeen patients (mean age 49 years, range 16-81) were asymptomatic aPL-carriers and 18 (mean age 46 years, range 26-71) years were affected by APS. Within APS patients, 16 had a history of vascular thrombosis and 2 had pregnancy morbidity; in 6 patients APS was secondary to other autoimmune rheumatologic conditions (3 to Systemic Lupus Erythematosus, 2 to vasculitides and 1 to Mixed Connective Tissue Disease).

Among the total number of aPL-carriers and APS patients six showed a normal NVC pattern, 24 had non-specific NVC abnormalities and 5 patients had a “scleroderma-like” pattern. Interestingly, NCV microhemorrhages were significantly more frequent in APS patients than in asymptomatic aPL-carriers, both in score and in absolute (p=0.05 and p=0.04, respectively). Particularly, in APS patients “comb-like” hemorrhages had a statistically significant higher prevalence than isolated hemorrhages (p=0.03). Dilated capillaries score was significantly higher in APS patients than in asymptomatic aPL-carriers (p=0.01). Not any statistically significant difference was observed regarding other capillary parameters (score of giant capillaries, loss of capillaries, or anormal shapes, i.e. angiogenensis). Not any statistical correlation was observed between NVC parameters and different aPL profile.

Conclusion: The study shows that the total number of microhemorrhages and in particular the “comb-like” subtype, are significantly the most frequent specific abnormalities in APS patients when compared to asymptomatic aPL carriers. The presence of the “scleroderma-like” NVC pattern may suggest a concomitant overlap syndrome. Not any correlation was found between aPL profile and other NVC parameters. Further studies need to develop a more specific NVC pattern for APS patients.


Disclosure of Interests: : Giorgia Ferrari: None declared, Sabrina Paolino: None declared, Alberto Sulli Grant/research support from: Laboratori Baldacci, Carmen Pizzonni: None declared, Greta Pacini: None declared, Emanuele Gotelli: None declared, Adriano Lercara: None declared, Vanessa Smith Grant/research support from: The affiliated company received grants from Research Foundation - Flanders (FWO), Belgium (100% of FWO), Boehringer Ingelheim Pharma GmbH & Co and Janssen-Cilag NV, Consultant of: Boehringer-Ingelheim Pharma GmbH & Co, Speakers bureau: Actelion Pharmaceuticals Ltd, Boehringer-Ingelheim Pharma GmbH & Co and UCB Biopharma Sprl, Maurizio Cutolo Grant/research support from: Bristol-Myers Squibb, Actelion, Celgene, Consultant of: Bristol-Myers Squibb, Speakers bureau: Sigma-Alpha

DOI: 10.1136/annrheumdis-2020-eular.4881