AB0589

RELEVANCE OF B AND T CELL SUBSETS TO LUPUS FLARE IN KOREAN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) is a systemic autoimmune disease with heterogeneous clinical manifestations and is characterised with autoreactive T cells and autoantibody overproduction by activated B cells.

Objectives: The aims of this study were to characterised T-cell and B-cell subpopulation phenotype in Korean patients with SLE, and to elucidate the association between lymphocyte subpopulation and lupus activity.

Methods: We used multicolor flow cytometry to analyse subsets of peripheral blood B-cells (defined by CD19, IgD, CD27, and CD38) and T-cells (CD3, CD4, CD8, CD45RA, CCR7) in 26 patients with SLE and 22 age- and sex-matched healthy subjects. Baseline and 6 month follow-up SLE disease activity index (SLEDAI) was recorded, and SLEDAI score ≥ 6 was considered as lupus flare-up. Lymphocyte phenotype was also compared between stable disease and lupus flare-up.

Results: The number of B cells and CD8 + T cells were not different between SLE patients and healthy subjects; however, non-switched memory (NSwM) B cells was decreased in SLE patients. Double negative (DN) T cells, CD4 + T cells and its subset [naïve, central memory (CM), effector memory (EM) and terminally differentiated effector memory (TEMRA) cells] were decreased in SLE patients compared to healthy controls. Patients with lupus flare-up showed significantly decreased CD4 + and DN T cells, whereas CD4 + EM T cells were increased in patients with lupus flare up, compared to stable SLE. SLEDAI was correlated with DN T cells ($\rho = -0.728$, $p < 0.001$), CD4 + CM T cells ($\rho = -0.544$, $p = 0.004$), CD4 + EM T cells ($\rho = -0.697$, $p < 0.001$) and CD8 + EM T cells ($\rho = -0.408$, $p = 0.039$). Six (23%) patients experienced lupus flare and a patient presented still high disease activity at 6 month follow-up visit. Interestingly, these patients showed the low number of DN T cells, CD4 + EM and TEMRA cells at baseline when they were stable.

Conclusions: Biased differentiation of T-cells was associated with lupus flare and aggravation of SLE 6 months later. Understanding T cell subset enables accurate stratification of lupus flare-up and personalised approach.

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Acknowledgements: We wish to thank Jihoon Kwon, the M.S. student for his excellent support.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7514

AB0590

A VALIDATION STUDY OF THE PREGNANCY MORBIDITY QUESTIONNAIRE(PMQ) IN WOMEN WITH ANTIPHOSPHOLIPID ANTIBODIES AND PREGNANCY MORBIDITY

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Background: The presence of antiphospholipid antibodies (aPL) are associated with pregnancy complications. There is a lack of validated pregnancy

questionnaires to assess previous pregnancy morbidity reliably in aPL positive patients. We therefore designed the pregnancy morbidity questionnaire (PMQ).

Objectives: To validate the pregnancy morbidity questionnaire (PMQ) in the prospective Vienna Lupus Anticoagulant and Thrombosis Study (LATS) cohort.

Methods: The Vienna Lupus Anticoagulant and Thrombosis Study (LATS) is an ongoing, single-centre, biobank-based, prospective observational cohort study enrolling patients (age > 18 years) who are persistently positive for lupus anticoagulant (LA) (two positive tests at least 12 weeks apart) with or without a history of thrombosis or pregnancy complications¹. The cohort currently consists of 150 patients (mean age: 41.3 years, female gender: $n = 122$ (81.3%), history of thrombosis or pregnancy complications: $n = 111$ (74.0%)). Of these 150 women, 15 were approached at their follow up visit and invited to fill out the PMQ. The PMQ consists eight questions outlined in table 2.

Results: Twelve women agreed to participate, of whom nine had a previous history of pregnancy and/or pregnancy complications. Patient characteristics are shown in table 2. PMQ results are outlined in table 2.

Abstract AB0590 – Table 1

Patient Characteristics (N=9)	
Age at the time of questionnaire, mean (SD, range)	58 (+/- 13.6, 25-86)
Years since last pregnancy, mean (SD, range)	35 (+/- 10, 20-58)
Lupus anticoagulant positive only	5 (25%)
Antiphospholipid syndrome	2 (10%)
Pregnancies (N=20)	
Maternal age at pregnancy, mean (SD, range)	24.5 (+/- 4.3, 18-33)
Live-birth rate	17/20 (85%)
Gestational age, weeks (SD, range)	34.8 (+/- 11, <10-24)
Birthweight, kg (SD, range)	3.2 (+/- 0.5, 2.2-4)
aPL related early pregnancy loss (<10 weeks)	2 (10%)
aPL related preterm delivery (<34 weeks)	1 (5%)
aPL related preterm delivery due to placental insufficiency	1 (5%)
Aspirin taken during pregnancy	0 (0%)
Heparin taken during pregnancy	0 (0%)
Key: SD, standard deviation	

Abstract AB0590 – Table 2. Pregnancy questionnaire results

	Correct answer, validated against cohort info	Detailed answer, but not captured on cohort entry	Incorrect answer
Q1: Pregnancy date	20 (100%)	0%	0%
Q2: Live birth	20 (100%)	0%	0%
Q3: Gestational age at delivery	9 (45%)	11 (55%)	0%
Q4: Weight at delivery	1 (5%)	19 (95%)	0%
Q5: aPL related pregnancy complications	18 (90%)	0%	2 (10%)
Q6: Aspirin during pregnancy	20 (100%)	0%	0%
Q7: Heparin during pregnancy	20 (100%)	0%	0%
Q8: Other medications during pregnancy	20 (100%)	0%	0%

Conclusions: Our aim was to validate the PMQ in the prospective Vienna Lupus Anticoagulant and Thrombosis Study (LATS) cohort. Patients were able to recall their pregnancy history in great detail over a period of more than three decades. Our PMQ may provide a tool to assess previous pregnancy morbidity in patients with antiphospholipid antibodies.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5791