AB0635

ANTI-PHOSPHOLIPID ANTIBODIES IN LUPUS MYOCARDITISV. Dhir¹, A. Gawalkar¹, J. Ahluwalia², A. Bahl³, S. Sharma¹, A. Sharma¹, S. Jain¹.¹Internal Medicine (Rheumatology Unit); ²Hematology; ³Cardiology, Post Graduate Institute of Medical Education and Research, Chandigarh, India

Background: Myocarditis in lupus is an uncommon clinical manifestation, with unknown pathogenesis.⁽¹⁾ Suggested etiologies includes Immune-complexes, cell mediated damage and anti-phospholipid antibodies. The latter may affect the myocardial function microthrombi in cardiac vessels or direct cytotoxicity.⁽²⁾ Previously, small studies have suggested an association between antiphospholipid tests as myocarditis.

Objectives: To evaluate whether myocarditis in SLE is associated with antiphospholipid positivity.

Methods: This was a cross-sectional study in which patients fulfilling SLICC criteria 2012 for SLE or Alarcon Segovia criteria for MCTD were included after consent. Patients were recruited as 'Cases' if they had myocarditis/cardiomyopathy defined by poor generalised contractility and/or dilation of all chambers nad/or reduced ejection fraction on echocardiography without any obvious cause. Those with regional wall motion abnormalities or pulmonary artery hypertension (moderate or severe) were excluded. Controls were age (± 2.5 years) and disease duration ($\pm 25\%$) matched patients of SLE without any abnormality on echocardiography. Serum titers of anticardiolipin antibodies and b2 GP1 (both IgG and IgM) were measured by commercial ELISA kit. Lupus anticoagulant was detected by Dilute Russell Viper Venom Test (dRVVT) with both screening (prolonged) and confirmation steps (shortening on higher phospholipid content, ratio >1.2) on doubly centrifuged, platelet poor plasma. Proportions were compared using chi-square test (or Fischers exact test) and continuous variables by Mann-Whitney U test.

Results: A total of 51 patients were recruited in this study that included 21 cases and 30 controls. All had SLE, except 1 case was of MCTD (among cases). There was no difference in mean ($\pm$ SD) age (33.3 ± 14.7 , 32.8 ± 12.4 years, $p=0.9$) or median (interquartile range) disease duration (30^{8-38} 25 (13.5–45) months, $p=0.6$) between groups. Mean ejection fraction of Cases was 31.7% ($\pm 9.3\%$) while that of Controls was 55.7% ($\pm 1.7\%$) ($p<0.001$). There were no significant differences between proportion of Cases (42.9%) and Controls (40%) with positive antiphospholipid tests ($p=0.7$). The majority had positive anticardiolipin antibodies, followed by b2 GP1, and lupus anticoagulant was positive in only two in each group (figure 1). Among 9 Cases positive at baseline, 6 patients could be re-tested (2 expired and 1 was lost), out of which 3 had persistent positivity. Out of 12 Controls positive once, 8 could be retested (1 expired and 3 were lost), with 1 being persistently positive. There was no significant difference in persistent positivity between groups. ($p=0.3$).

Abstract AB0635 – Figure 1

Conclusions: This study did not find any significant association between antiphospholipid antibodies (single time or persistent) with cases of lupus myocarditis.

REFERENCES:

- [1] Doria A, Iaccarino L, Sarzi-Puttini P, Atzeni F, Turriel M, Petri M. Cardiac involvement in systemic lupus erythematosus. *Lupus*. 2005;14(9):683–6.
- [2] Bidani AK, Roberts JL, Schwartz MM, Lewis EJ. Immunopathology of cardiac lesions in fatal systemic lupus erythematosus. *The American journal of medicine*. 1980;69(6):849–58.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3672

AB0636

DAMAGE ACCRUAL IN SYSTEMIC LUPUS ERYTHEMATOSUS NOT RELATED TO SUSTAINED HYPOCOMPLEMENTEMIAW.D. Raymond¹, L. Tyack¹, G. Ø. Eilertsen², J. Nossent¹. ¹School of Medicine and Pharmacology, University of Western Australia, Perth, Australia; ²Molecular Inflammation Research Group, Department of Clinical Medicine, Arctic University, Tromsø, Norway

Background: Hypocomplementemia (HC) represents a significant clinical finding in Systemic Lupus Erythematosus (SLE) as it suggests complement activation by immune-complexes, which can initiate inflammation. As disease activity contributes to damage accrual in SLE patients, we investigated the role of HC as a predictor of subsequent organ damage.

Objectives: Investigate the relationship between HC, disease flares and organ damage accrual in SLE patients.

Methods: Longitudinal cohort study of 102 SLE patients with HC defined as a C3 and/or C4 levels below cut-off during median follow-up of 13.8 years (IQR 7.0, 23.1). Disease activity was scored by time averaged SLEDAI-2K without the serological components (cWAS), flares by SELENA-SLEDAI and damage accrual by SLICC-DI. Analysis included comparisons between normocomplementemic (NC) and hypocomplementemic (HC) patients, and multivariate logistic and Cox regression modelling determined the predictive value of HC on organ damage.

Results: HC occurred in 2/3 of patients overall and was more often due to low C3 (97%) than low C4 (54%). HC patients had a higher prevalence of anti-dsDNA Ab (72% vs 36%, $p<0.01$) and aPL (74% vs 40%, $p<0.01$), but HC concurred with anti-dsDNA presence in only 36% of cases. HC patients had higher maximum cSLEDAI scores, but the time adjusted cWAS scores (1.9 vs 1.2, $p=0.9$) and the frequency and risk of overall damage accrual (SDI >0 , $n=60$) associated with HC was similar as for NC patients (OR 1.08, $p>0.20$).

Conclusions: Low complement levels occur in 2/3 of SLE patients but have negligible impact on time averaged disease activity and damage accrual in SLE. Discrepancies between low C3, low C4 and anti-dsDNA Ab occurrence indicate that in SLE alternative complement activation occurs frequently and requires further translational study.

Acknowledgements: The Rheumatology Group of UWA (JN) was supported by an unrestricted grant from the Arthritis and Osteoporosis Foundation of Western Australia (AOWA). The AOWA provided WR with a PhD Scholarship in Memory of Johan Donald Stewart.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1643

AB0637

HAEMATOLOGICAL INVOLVEMENT OF PRIMARY SJÖGREN'S SYNDROME PATIENTS IN A SINGLE CENTRE STUDY OF 232 CHINESE CASES

X. Wang, Z. Wu, Y. Liang, F. Cheng, R. Feng, X. Fang, S. Yang, B. Gong, J. Tang. Department of Rheumatology, Tongji Hospital, Tongji University School of Medicine, Shanghai, China

Background: Primary Sjögren's syndrome (pSS) is a common systemic autoimmune disease, characterised by lymphocytic infiltration of the secretory glands and different extraglandular manifestations. Besides haematological disorders are prevalent but not well recognised in patients with pSS.

Objectives: Our aim is to determine the existence of cytopenia at diagnosis or during follow-up of our pSS patients as well as the associated factors.

Methods: A cohort of pSS patients that had been followed-up in the Department of Rheumatology, Tongji hospital of Tongji University, from 2011 to 2017 was retrospectively assessed. Clinical and laboratory findings about the patients were recorded.

Results: Out of 232 pSS patients composing the cohort, cytopenia was already present in 55.60% ($n=129$) at the time of diagnosis. Anaemia was detected in 30.17% ($n=70$), leukopenia in 37.5% ($n=87$), neutropenia in 22.41% ($n=52$), and thrombocytopenia in 26.72% ($n=62$) of patients. The proportion of patients with cumulative cytopenia was 6.47% ($n=15$). Cumulative cytopenia was disease-related in 5.60% ($n=13$) and medication-related in 0.86% ($n=2$) of the patients. In patients with cytopenia at the time of diagnosis, erythrocyte sedimentation rates (ESR) were higher ($p<0.001$), C3 and C4 hypocomplementemia was more prevalent ($p<0.001$, $p=0.060$), and they were positive for anti-SSB at a greater proportion ($p=0.058$). Hyperglobulinemia, C3 hypocomplementemia, positive anti-SSA and anti-SSB might increase the incidence of anaemia in pSS, with OR of 2.700, 2.042, 1.537 and 1.901, respectively. In addition, logistic regression analysis suggest C3 hypocomplementemia might be associated with different types Leukopenia ($p<0.01$), while abnormal Transaminase and C4 hypocomplementemia are independent risk factors for thrombocytopenia with a OR of 4.171 (1.516–11.480) and 5.697 (1.662–19.523). Cytopenia in pSS patients not either at diagnosis or during follow-up, was always easy to be ameliorated, but several cases led to unfavourable outcome.

Conclusions: The most common haematological disorders in pSS patients are leukopenia, and cytopenia in pSS patients might be related to disease activity.

REFERENCES:

- [1] Tim Both, et al. Reviewing primary Sjögren's syndrome: beyond the dryness – From pathophysiology to diagnosis and treatment. *Int. J. Med. Sci.* 2017, 14(3): 191–200.
- [2] García-Carrasco M, et al. Serologic features of primary Sjögren's syndrome: Clinical and prognostic correlation. *Int J Clin Rheumatol* 2012;7 (6):651–659.

Acknowledgements: We would like to thank all of the participants who took part in the studies featured in this research. The present work was sponsored by the National Natural Science Foundation of China (No. 81273295, 81302562, 81671598), China International Medical Exchange Foundation (Z-2014–06–2–1620), and Shanghai Sailing Program (No.17YF1417200).

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6530

AB0638 CLINICAL SIGNIFICANCE OF ESR IN CHINESE PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Y. Xu, X. Feng, L. Sunon behalf of Jiangsu Lupus Collaborative Group. *The Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing, China*

Background: During the process of systemic lupus erythematosus (SLE), disease flare and infection are often accompanied by each other and always pose a major challenge to clinical treatments. Although erythrocyte sedimentation rate (ESR) has been tested in SLE patients for many years, there is still a lack of consensus on its value.

Objectives: To validate the value of ESR in Chinese SLE patients at the time of their first admission and to determine whether it is related to a poor outcome.

Methods: Clinical data of patients with ESR tested on their first admission were extracted from our SLE database; (Feng et al. *PLoS ONE* 2016;11(12): e0168619) and analysed for the relation with disease activity (SLEDAI), infection status, organ involvements and survival situation. To determine the risk of ESR for long-term mortality, cumulative survival was illustrated with the Kaplan-Meier plot and factors were compared using the Log-rank test.

Results: Totally 1225 patients were included in this study, of which 92.2% were female and the median age at admission was 34.3 years. The most often seen organ involvements were mucocutaneous (66.4%), musculoskeletal (55.0%), renal (51.7%) and hematologic (45.2%) respectively. ESR levels were correlated with SLEDAI scores ($r=0.145$, $p=0.000$), but not elevated in patients with infections. Patients with cardiopulmonary, renal or hematologic impairments had higher ESR levels (all $p<0.05$). Subgroup analysis showed that serositis, renal insufficiency and anaemia might be responsible for the respective organ involvement. The ten year survival rates for patients with elevated ESR was 80.57%, lower than that of 88.62% for patients with normal ESR ($p<0.01$) (figure 1).

Abstract AB0638 – Figure 1. Cumulative survival rates for patients with elevated or normal ESR at first admission

Conclusions: High ESR levels in SLE patients are associated with active disease and specific organ involvements, and may predict a poor prognosis. It should be checked routinely for the monitoring of SLE patients.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3378

AB0639 RISK OF MORTALITY IN SJOGREN'S SYNDROME AFTER 1ST ADMISSION

Y.-C. Chen. *Rheumatology, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan, Province of China*

Background: The long-term prognosis of patients with SS is unclear. Population-based studies have shown conflicting evidence regarding relative mortality in SS.

Objectives: There is conflicting evidence regarding prognosis in patients with SS (pSS). The aim of this study was to estimate the risk factors of mortality in patients with SS through a in hospital review.

Methods: Through a review of databases through October 2002 till 2016, we identified cohort studies reporting relative risk (compared with standardised population), risk factors and causes of mortality in patients with SS.

Results: We identified 695 (83.2% females) with SS, of whom 88 patients died over a median average follow-up of 13 years. Leading causes of mortality were infections; Risk factors associated with increased mortality were advanced age at diagnosis [HR 1.045 (95% CI 1.024, 1.067)], male sex [RR 2.18 (95% CI 1.45, 3.27)], associated with SLE [HR 2.448 (95% CI 1.108, 5.406)], diabetes [HR 1.986 (95% CI 1.125, 3.505)]

Abstract AB0639 – Table 1

	Regression coefficient	P value	HR	95.0% CI for HR	
				Lower	Upper
Gender	0.173	0.568	1.189	0.657	2.152
Age	0.044	0.000	1.045	1.024	1.067
BMI	-0.051	0.075	0.950	0.898	1.005
RA	0.245	0.576	1.277	0.541	3.017
SLE	0.895	0.027	2.448	1.108	5.406
Diabetes	0.686	0.018	1.986	1.125	3.505

Conclusions: After first admission, the risk factor for mortality include old age, associated with SLE and diabetes. These require close follow-up.

REFERENCE:

- [1] Baldini C, Pepe P, Quartuccio L, et al. Primary Sjogren's syndrome as a multi-organ disease: impact of the serological profile on the clinical presentation of the disease in a large cohort of Italian patients. *Rheumatology* 2014;53

Acknowledgements: We thanks to Kaohsiung CGMH for data support

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5386

AB0640 IMPLAUSIBLE ANTI-SMITH ANTIBODY IS NOT IMPLAUSIBLE TO AUTOIMMUNE DISEASE IN CHINESE POPULATION USING THE EUROIMMUN LINE IMMUNOASSAYS

Y. Wu, Y. Meng. *Department of Laboratory Medicine, West China Hospital, Sichuan University, Chengdu, China*

Background: Anti-Sm antibody is important test for lupus. In China, many labs detected anti-Sm using Euroimmun line immunoassays (LIA) kit, which mixture with purified Sm and RNP antigens as target antigens in Sm/RNP band and purified Sm antigens in Sm band. On the instruction, anti-Sm results should be determined according to the 2 bands. That is divided as true anti-Sm positive cases (having positive Sm and Sm/RNP bands) and implausible cases (having Sm band without Sm/RNP band), the value of implausible anti-Sm is not very clear now.

Objectives: We aimed at investigating the clinical value of the implausible anti-Sm in Chinese population.