to our clinics after diagnosis of CHB and were subsequently found to be anti-SSA positive, reporting no symptoms of diseases. Considering the 7 additional pregnancies, the incidence of CHB was 1.9%. We observed 3 neonates (0.8%) with cutaneous NLS and 1 case of transient increase of liver enzymes. In another neonate, a 1st degree A-V block was found after birth. A complete analysis of maternal and fetal outcome was possible in 244 cases (Table 2) and compared with 3158 unselected healthy controls. Among these 244 cases, 65% were taking hydroxychloroquine

Conclusion: none of the patients prospectively followed in our centers before and during pregnancy developed complete CHB. If the 7 cases of anti-SSA positivity diagnosed after CHB detection were included in the analysis, the incidence of CHB was comparable to previous reports. Our data suggest that a strict follow up and proper treatment of anti-SSA positive patients with or without an autoimmune disease before and during pregnancy can reduce the risk of NLS. Further studies are warranted to confirm a possible protective role of anti-rheumatic treatments, including HCQ

References:

[1] Fredi M. Front Cardiovasc Med. 2019

Disclosure of Interests: Maria Gerosa: None declared, Micaela Fredi: None declared, Laura Andreoli: None declared, Cecilia Chighizola: None declared, Lorenza Maria Argolini: None declared, Davide Donzelli: None declared, Tamara Vojinovic: None declared, Véronique Ramoni: None declared, Elisa Bellis: None declared, Laura Trespidi: None declared, Federica Gazzola: None declared, Enrico Ferrazzi: None declared, Sonia Zatti: None declared, Fausta Benvenuti: None declared, Pier Luigi Meroni: None declared, Franco Franceschini: None declared, Carlomaurizio Montecucco: None declared, Rolando Cimaz: None declared, Roberto Caporali Consultant of: AbbVie; Gilead Sciences, Inc.; Lilly; Merck Sharp & Dohme; Celgene; Bristol-Myers Squibb; Pfizer; UCB, Speakers bureau: Abbvie; Bristol-Myers Squibb; Celgene; Lilly; Gilead Sciences, Inc; MSD; Pfizer; Roche; UCB, Angela Tincani: None declared

DOI: 10.1136/annrheumdis-2020-eular.1531

SAT0208

INCIDENCES OF ADVERSE EFFECTS AND DISEASE FLARE DUE TO PNEUMOCYSTIS PNEUMONIA PROPHYLAXIS WITH TRIMETHOPRIM/SULFAMETHOXAZOLE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

M. Goto¹, N. Yokogawa¹, Y. Miyoshi¹, K. Shimada¹. ¹Tokyo Metropolitan Tama Medical Center, Department of Rheumatic Diseases, Tokyo, Japan

Background: Methods of preventing pneumocystis pneumonia (PCP) in systemic lupus erythematosus (SLE) are controversial. Previous studies have verified the efficacy and safety of trimethoprim/sulfamethoxazole (TMP-SMX) in patients with rheumatic diseases¹. However, as for SLE, some clinicians advise against prescribing TMP-SMX because sulfa allergy is reportedly more common in SLE than in other rheumatic diseases^{2,3}. Anecdotally, sulfonamides may also worsen SLE itself, but few data are available on lupus flares related to sulfonamides³.

Objectives: This study aimed to assess the incidences of adverse effects and disease flare due to PCP prophylaxis with TMP-SMX in SLE patients.

Methods: SLE patients seen at our hospital between September 2010 and April 2018 who received TMP-SMX as a PCP prophylaxis were enrolled. The clinical manifestations, treatment course, adverse drug reactions, and occurrence of lupus flares were retrospectively assessed from the medical records. The Naranjo adverse drug reaction probability scale⁴ was used to determine whether the reactions were induced by SMX-TMP. According to the British Isles Lupus Assessment Group (BILAG) 2004 index, a severe flare of lupus was defined as a development of a new grade A manifestation, and a moderate flare as a development of grade B manifestation following grade C, D or E. Two board-certificated rheumatologists reviewed the medical records in a blinded fashion to determine the reason for the flare, with disagreement resolved by consensus.

Results: In total, 188 SLE patients were enrolled; of these, 117 (62.2%) had no adverse events and were able to continue taking SMX-TMP as needed. Seventy-one patients (37.8%) stopped SMX-TMP due to suspected adverse drug reactions, including fever, rash, liver function disorder, and cytopenia. The Naranjo scale indicated "definite" in 4, "probable" in 39, and "possible" in 28. Eighteen-patients restarted the SMX-TMP and 9 patients could continue the prophylaxis without adverse effects. Five patients were hospitalized to treat the adverse events: 3 with drug rash (concomitant use of hydroxychloroquine in 2), 1 with hypersensitivity (concomitant use of azathioprine) and 1 with hyponatremia, respectively.

Lupus flares occurred in 10 patients (5.3%) within one month after the start of the SMX-TMP prophylaxis. Macrophage activation syndrome (MAS) or neuropsychiatric SLE occurred in 9 of them. Of 188 cases, 2 patients (1.1%) developed a new onset of MAS during the stable clinical course as the flare, which was considered due to SMX-TMP. Confounding factors, including high disease activity and the reduction of glucocorticoids, were identified in other 8 flares.

Conclusion: PCP prophylaxis with SMX-TMP was tolerable in most SLE patients. However, a small number of SLE patients developed severe adverse effects or disease flares due to the SMX-TMP.

References:

- [1] Park JW, et al. Annals of the Rheumatic Diseases 2018;77:644-649.
- [2] Suyama Y, et al. Modern Rheumatology 2016;26:557-61
- [3] Petri M, et al. Journal of Rheumatology 1992;19:265-9
- [4] Naranjo CA, et al. Clinical Pharmacology and Therapeutics 1981;30:239-45

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4551

SAT0209

PREVALENCE AND RELATED FACTORS OF SLEEP DISTURBANCE IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME

Y. Han¹, L. Long², X. Chen², G. Tang³, Q. Peng¹, J. Liu¹, Q. Zhou². ¹Zunyi Medical University, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, Department of Rheumatology, Chengdu, Sichuan, China; ²Sichuan Provincial People's Hospital, School of Medicine, University of Electronic Science and Technology of China, Department of Rheumatology, Chengdu, Sichuan, China; ³Chongqing Bishan People's Hospital, Department of Nephrology, Chongqing City, China

Background: The incidence of primary Sjögren's syndrome(pSS) is increasing gradually, and it was ranking second among connective tissue diseases(CTDs) in China. Studies recently have shown that many patients with various CTDs have sleep disturbances, which seriously degraded the patient's quality of life. As well known, Sleep is an important physiological process to maintain human metabolism, tissue repair, and homeostasis. At present, there are relatively several studies on sleep quality in patients with Rheumatoid arthritis(RA) and Systemic lupus erythematosus(SLE), but less reports on pSS in China have been published. Therefore, it is important to explore the quality of sleep and its influencing factors in such patients.

Objectives: The purpose of this study is to evaluate the quality of sleep and related factors in China Mainland patients with primary Sjögren's syndrome(pSS), and to provide reference and theoretical basis for constructing targeted sleep interventions and improve their quality of life.

Methods: A all of 103 pSS patients and 40 matched healthy controls were enrolled in a comparative study of sleep quality using the Pittsburgh Sleep Quality Index(PSQI), and demographic, clinical, and laboratory data were collected from them. The patients completed questionnaires on the European League Against Rheumatism (EULAR) SS Patient Reported Index(ESSPRI), EULAR SS Disease Activity Index (ESSDAI), Xerostomia inventory(XI) with the help of researchers. Pain and fatigue were evaluated with a 100-mm visual analogue scale(VAS). Generalized Anxiety Disorder(GAD-7) and Patient Health Questionnaire(PHQ-9) were used to assess anxiety and depression separately, and whether they have autonomic symptoms (such as sweating, palpitations) will be asked.

Results: The PSQI score and the frequency of poor sleep quality(PSQI>7) were higher in the pSS patients (11.60±5.03, 71.8%) than the healthy controls (5.98±3.85, 25%). Poor sleepers had a significantly higher GAD-7, PHQ-9, XI, ESSPRI, pain and fatigue VAS, and longer disease duration than good sleepers. Additionally, poor sleepers show more frequent autonomic symptoms. Sleep quality of patients with pSS was positively correlated with GAD-7, PHQ-9, XI, ESSPRI, pain and fatigue VAS scores, but no correlation with disease activity. Meanwhile, depression is an independent factor of sleep quality.

Conclusion: Our study showed that the sleep disturbance seen in patients with pSS may contribute to the depression associated with this disease. Future research should investigate that whether antidepressant treatment improve sleep and directly improve quality of life.

References:

- [1] Austad C, Kvien TK, Olsen I C. Sleep disturbance in patients with rheumatoid arthritis is related to fatigue, disease activity, and other patient-reported outcomes[J]. Scandinavian journal of rheumatology, 2017, 46(2): 95-103.
- [2] Lewis I, Hackett K L, Ng W F, et al. A two-phase cohort study of the sleep phenotype within primary Sjögren's syndrome and its clinical correlates[J]. Clinical and experimental rheumatology, 2019, 37(3): 78-82.
- [3] Chung S W, Hur J, Ha Y J, et al. Impact of sleep quality on clinical features of primary Sjögren's syndrome[J]. The Korean journal of internal medicine, 2019, 34(5): 1154.
- [4] Liu X, Tang M, Hu L. Reliability and validity of the Pittsburgh sleep quality index[J]. Chinese journal of psychiatry, 1996, 29: 103-107.
- [5] Grabovac I, Haider S, Berner C, et al. Sleep quality in patients with rheumatoid arthritis and associations with pain, disability, disease duration, and activity[J]. Journal of clinical medicine, 2018, 7(10): 336.

Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2020-eular.6206

SAT0210 FACTORS ASSOCIATED WITH TIME TO SEVERE LUPUS NEPHRITIS IN A COHORT OF COLOMBIAN PATIENTS

S. Herrera¹, J. C. Diaz-Coronado^{1,2}, D. Rojas-Gualdrón³, L. Betancur-Vasquez², D. Gonzalez-Hurtado², J. Gonzalez-Arango², L. Uribe-Arango², M. F. Saavedra Chacón², J. Lacouture-Fierro², S. Monsalve², S. Guerra-Zarama², J. D. Lopez², J. D. Serna², J. Barbosa², A. Sierra³, D. Hernandez-Parra¹, R. Pineda-Tamayo¹.
¹Artmedica IPS, Grupo de información clínica, Medellín, Colombia; ²CES University, Departamento medicina interna, Medellín, Colombia; ³CES University, Facultad de medicina, Medellín, Colombia

Background: Systemic lupus erythematosus (SLE) clinical manifestations, and their severity, vary according to age, ethnicity and socioeconomic status. Both Hispanic and Afro-Americans have a higher incidence and more severe presentation when compared to Caucasian patients with SLE

Objectives: To analyze clinical and immunological characteristics associated with time to severe renal involvement in patients with Systemic Lupus Erythematosus in a Colombian cohort followed for one year, between January 2015 and December 2018

Methods: Retrospective follow-up study based in clinical records. Patients with SLE diagnosis that fulfilled either 1987 American College of Rheumatology Classification Criteria for SLE or 2011 Systemic Lupus International Collaborating Clinics (SLICC) classification criteria for SLE. We included patients with diagnosis of lupus nephritis according to Wallace and Dubois criteria. Patients who did not have at least two follow-up measurements or had a cause of nephritis other than lupus were excluded. The main outcome was defined as time from diagnosis to severe renal involvement defined as creatinine clearance ≤ 50 ml/min, 24-hour proteinuria ≥ 3.5 grams or end stage renal disease.

We analyzed clinical and immunological characteristics. Descriptive statistical analyses of participant data during the first evaluation are reported as frequencies and percentages for categorical variables, and as medians and interquartile ranges (IQR) for quantitative variables. Age and sex adjusted survival functions and Hazard ratios (HR) with 95% confidence intervals and p-values were estimated using parametric Weibull models for interval-censored data. P values < 0.05 were considered statistically significant

Results: 548 patients were analyzed: 67 were left-censored as they presented renal involvement at entry, 6 were interval censored as outcome occurred between study visits, and 475 were right-censored as involvement was not registered during follow-up. 529 (96.5%) patients were female, median age at entry was 46 (IQR = 23) and median age to diagnosis was 29.5 (IQR = 20.6). 67% were mestizo, 13% Caucasian and 0.3% Afro-Colombian. Age and sex adjusted variables associated with time to severe lupus nephritis were high blood pressure HR = 3.5 (95%CI 2.2-5.6; p-value < 0.001) and Anti-RO (per unit increase) HR = 1.002 (95%CI 1.001-1.004; p-value = 0.04). Figure 1 shows age and sex adjusted survival function.

Conclusion: In our cohort the appearance of severe lupus nephritis occurs in less than 15% of patients at 10 years. Both high blood pressure and elevated anti-Ro titers were associated with a higher rate of onset in the presentation of severe lupus nephritis, as seen in some polymorphs of anti Ro.

References:

Disclosure of Interests: Sebastian Herrera Speakers bureau: academic conference, Juan camilo Diaz-Coronado: None declared, Diego Rojas-Gualdrón: None

declared, Laura Betancur-Vasquez: None declared, Daniel Gonzalez-Hurtado: None declared, Juanita Gonzalez-Arango: None declared, Laura Uribe-Arango: None declared, Maria Fernanda Saavedra Chacón: None declared, Jorge Lacouture-Fierro: None declared, Santiago Monsalve: None declared, Sebastian Guerra-Zarama: None declared, Juan david Lopez: None declared, Juan david Serna: None declared, Julian Barbosa: None declared, Ana Sierra: None declared, Deicy Hernandez-Parra: None declared, Ricardo Pineda Tamayo: None declared

DOI: 10.1136/annrheumdis-2020-eular.6282

SAT0211 RENAL INJURY IN SYSTEMIC LUPUS ERYTHEMATOSUS CHARACTERIZED BY THROMBOTIC MICROANGIOPATHY

W. Hu¹. ¹Jinling Hospital, National Clinical Research Center of Kidney Diseases, Jilin, China

Background: Classical lupus nephritis (LN) is characterized by glomerular immune complex(IC) deposition with glomerular proliferation, basement membrane destruction and cell infiltration. Non-IC mediated renal injury with thrombotic microangiopathy (TMA) was also reported in patients with systemic lupus erythematosus (SLE-renal TMA), but most studies were reported in patients with both LN and renal TMA.

Objectives: In this study, clinical features and outcomes of SLE-renal TMA in absence of obvious IC in SLE patients were analyzed.

Methods: Patients with glomerular TMA and/or vascular TMA in the absence of obvious subendothelial or epithelial immune deposits were screened out from 2332 biopsied in SLE patients who underwent first renal biopsy from January 2005 to August 2016. Their clinical, histological features and outcomes were retrospectively analyzed.

Results: In 2332 renal biopsies obtained from SLE patients, 257 (11.0%) showed renal TMA, of which 237 showed both renal TMA and LN, and 20 biopsies had only renal TMA (SLE-renal TMA). There were 2 males and 18 females with an average age of (25 ± 10) years. The median course of SLE and LN were 3.0(1.0, 6.0) and 0.8(0.5, 1.9) months. All 20 patients deserved acute kidney injury, of which 11 (55%) needed renal replacement therapy (RRT) and 12 (60%) were nephrotic syndrome. Blood system involvement was found in all cases, including 13 cases (65.0%) with TMA triad (microvascular hemolytic anemia, thrombocytopenia and elevated lactate dehydrogenase). Pathological examination showed that 17 cases (85.0%) had both glomerular TMA and vascular TMA. Immunofluorescence and electron microscopy showed that 8 cases (40%) had no IC deposition in glomerulus and 12 cases (60%) had only IC deposition in mesangium. Acute tubulointerstitial lesions in patients requiring RRT were more serious than those not needing for RRT(43.6 ± 24.9 % vs 21.7 ± 20.1 % , $P=0.047$). The fusion range of foot process was positively correlated with proteinuria ($r^2 = 0.347$, $P=0.006$).

All patients received high-dose methylprednisolone pulse therapy. Four patients received plasma exchange and three patients received gamma globulin, respectively. Eleven patients requiring RRT all stop RRT in a median time of 16.0 (9.0, 30.0) days. During a median follow-up of 58.0 (36.0, 92.3) months, complete remission (CR) was obtained in 15 cases, partial remission in 4 cases and no remission in 1 case. Six cases (30%) relapsed. No case died or progressed to end stage renal disease.

Conclusion: Renal injury characterized by TMA is not uncommon in SLE renal biopsy cases. The clinical manifestation is special and the renal injury is serious. The renal outcome is good by intensive immunosuppressive therapy. It should be considered as a unique type of renal injury in SLE.

References:

- [1] Moake JL. Thrombotic microangiopathies. *N Engl J Med*. 2002. 347(8): 589-600.
- [2] Anders HJ, Weening JJ. Kidney disease in lupus is not always 'lupus nephritis'. *Arthritis Res Ther*. 2013. 15(2): 108.
- [3] Song D, Wu LH, Wang FM, et al. The spectrum of renal thrombotic microangiopathy in lupus nephritis. *Arthritis Res Ther*. 2013. 15(1): R12.
- [4] Hu WX, Liu ZZ, Chen HP, Zhang HT, Li LS, Liu ZH. Clinical characteristics and prognosis of diffuse proliferative lupus nephritis with thrombotic microangiopathy. *Lupus*. 2010. 19(14): 1591-8.
- [5] Tomov S, Lazarchick J, Self SE, Bruner ET, Budisavljevic MN. Kidney-limited thrombotic microangiopathy in patients with SLE treated with romiplostim. *Lupus*. 2013. 22(5): 504-9.
- [6] Li C, Yap D, Chan G, et al. Clinical Outcomes and Clinico-pathological Correlations in Lupus Nephritis with Kidney Biopsy Showing Thrombotic Microangiopathy. *J Rheumatol*. 2019 .
- [7] Chen MH, Chen MH, Chen WS, et al. Thrombotic microangiopathy in systemic lupus erythematosus: a cohort study in North Taiwan. *Rheumatology (Oxford)*. 2011. 50(4): 768-75.
- [8] Park MH, AUID- Oho, Caselman N, Ulmer S, Weitz IC, AUID- Oho. Complement-mediated thrombotic microangiopathy associated with lupus nephritis. *Blood Adv*. 2018. 2(16): 2090-2094.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1198