Abstract 89 Table 2 Area under the curve

Test result variables	Area	P value	Cut-off Value	Hazard ratio	Asymptotic 95% confidence interval	
					Lower bound	Upper bound
MPA diameter	0.81	0.003	37.70	1.13	1.05	1.22
RPA diameter	0.70	0.015	20.46	1.15	0.10	1.21
LPA diameter	0.72	0.020	20.20	1.10	1.04	1.27
MPA/AAo	0.59	0.455	1.12	3.95	0.58	26.94
MPA/DAo	0.62	0.378	1.61	3.68	0.88	15.46

Abstract 89 Table 3 Univariate and multivariate analyses for mortality

Prognosis factor	Univariate		Multivariate	
	Hazard ratio(95% CI)	P value	Hazard ratio(95% CI)	P value
Male		0.051	0.26(0.09-0.77)	0.015
SLE		0.477		
SSc		0.066		
Mild ILD		0.261		
Pericardial Effusion		0.157	0.40(0.19-0.89)	0.020
MPA d ≥37.70 mm	0.29(0.15-0.58)	0.000	0.28(0.14-0.58)	0.019
LPA d ≥20.20 mm	0.43(0.22-0.84)	0.011		
WHO FC III-IV	0.25(0.11-0.56)	0.001	3.74(1.61-8.71)	0.001
GCs Treatment		0.623		
IM Treatment		0.402		
PAH Targeted Drug treatment		0.883		

In multivariate analysis, MPA diameter ≥37.70mm, pericardial effusion, male and WHO functional class III-IV were independent predictors of poor prognosis in patients with CTD-PAH.

measured by professional radiologist. The ratio of MPA/AAO, MPA/DAO were also calculated.

Results During the observational period of 3.44 ± 0.23 years, 2 patients were died of serious infection, 1 patients was died of renal failure and 33 patients were died of heart failure. The time dependent receiver operating characteristic (ROC) curve suggested that MPA, PRA and LPA diameter may have the 10 year prognostic value in CTD-PAH patients, the corresponding cut-off values were MPA >37.70 mm, RPA >20.46 mm and LPA >20.20 mm. Kaplan-Meier analysis showed significant difference in the long-term prognosis between patients with MPA diameter <37.70 mm and MPA diameter ≥37.70 mm (Long-rank test $p=0.00012$) and between patients with LPA diameter <20.20 mm and LPA diameter ≥20.20 mm (Long-rank test $p=0.0091$). The multivariate analyses suggested that MPA ≥37.70 mm was the independent risk factor of poor outcome of CTD-PAH patients (HR: 0.28; 95% CI: 0.14–0.58 $p=0.01$).

Conclusions Main pulmonary arterial dilatation measured by MSCT was associated with the poor prognosis in patients with CTD-PAH.

Funding Source(s): None

90

SOCIOECONOMIC DISPARITIES IN LUPUS NEPHRITIS: FINDINGS FROM THE SOUTHERN CALIFORNIA LUPUS REGISTRY

¹Arezoo Haghsheenas*, ²Kristal Choi, ³Phildrich The, ²Abigail Benitez, ²Lorena M Salto, ²Karina Torralba, ²Vaneet K Sandhu. ¹Loma Linda University Health; ²Loma Linda University; ³UC Riverside

10.1136/lupus-2019-lsm.90

Background Systemic Lupus Erythematosus (SLE) is a chronic multi-systemic autoimmune disease. Despite therapeutic advancements, lupus nephritis (LN), which occurs in 25%–75% of individuals with SLE, remains a major cause of mortality. Prior studies have demonstrated poor outcomes in SLE occurring more frequently in both ethnic minority groups as well as in those with low socioeconomic status (SES). Factors attributing to greater mortality rates in these populations include patient resistance to treatment, compliance, low SES and genetics.

Methods Subjects were selected from SCOLR, a prospective registry enrolling all-comers with SLE. Inclusion criteria were LN subjects with available biopsy report. Subjects with renal transplant and unknown LN class were excluded. Data collected included demographics, insurance information, clinical and serologic variables specifically to establish an SLE disease activity index (SLEDAI). Subjects were categorized by self-reported ethnicity: White Hispanic, White non-Hispanic, Black, and Asian/Pacific Islander. Further sub-analysis was carried out on individuals with public vs. private insurance. Insurance and ethnicity were used as surrogates for socioeconomic status and descriptive statistical analyses were calculated to determine if observed differences were statistically significant.

Results One hundred and sixty-two medical charts were reviewed. Of those, 50% of subjects were White Hispanic, 31.8% White non-Hispanic, 8.7% Black, and 6.6% Asian/Pacific Islander. After adjusting for age, sex, and BMI, public insurance was independently associated with the prevalence of LN ($p=0.038$).

We performed a subgroup analysis of the 35 LN subjects to observe the association between SES with treatment outcomes. Proteinuria was higher in subjects with public insurance at baseline and this difference was statistically significant

($p=0.053$) with a similar trend at 6 months. Baseline and 6 month SLEDAI means were higher in subjects with public compared to private insurance.

Baseline, 6 and 12 month SLEDAI means were significantly lower in Asian/PI compared to other ethnic groups. While White non-Hispanics demonstrated SLEDAI improvement over 6 months, the majority of Asians/PI, Blacks, and Hispanics demonstrated no change or worsened disease activity.

Conclusions Low socioeconomic status, as determined by the proxy variables of ethnicity and insurance type, is associated with greater mortality in SLE. To our knowledge, this is the first study that compares differences in treatment response in LN patients with low-SES in southern California. Our findings, which confirm the association of SES with long-term outcomes in SLE and LN, are in line with previous studies. More studies with greater power are warranted to validate these findings and improve healthcare outcomes.

Funding Source(s): None

91

THE EFFECT OF HYDROXYCHLOROQUINE ON COMPLEMENT STATUS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS; ANALYSIS OF JAPANESE REAL-WORLD PATIENTS WITH SLE IN A LARGE SINGLE CENTER OVER TWELVE-MONTH PERIOD

Yukihiro Ikeda*, Hiromichi Tamaki, Masato Okada. *St Luke's International Hospital Immuno-Rheumatology Center*

10.1136/lupus-2019-lsm.91

Background Complement is a biomarker known to be correlated with disease activity of systemic lupus erythematosus (SLE). However, it is not well-known how complement level changes after starting hydroxychloroquine (HCQ), one of the key drugs for the treatment of SLE, in patients with SLE. The aim of this study is to investigate the effect of HCQ on complement levels over a 12 month period in a large single center cohort of SLE in Japan.

Methods We retrospectively collected the data of all the 244 lupus patients treated with HCQ from the electrical medical record at St Lukes International Hospital, Tokyo, Japan. We extracted the following parameters during the period between April 2008 and March 2018; baseline characteristics,

Abstract 91 Figure 1 C4 level. The level of C4(mg/dL) increased significantly ($p<0.001$) after starting HCQ

complements levels (C3 and C4) at baseline, 1 month, 3 months, 6 months, 9 months, and 12 months after starting HCQ. Statistical analysis was performed using SPSS Statistics Version 21 (IBM Corp., Armonk, NY, USA). Mauchly's sphericity test and analysis of variance with Greenhouse-Geisser correction was used.

Results Total 244 patients on HCQ were included but 130 patients were excluded due to lack of sufficient data. The mean age of these 114 patients was 40.2 years and 108 patients (94.7%) were female.

The level of C4(mg/dL) increased significantly ($p<0.001$) after starting HCQ. Especially, the level increased more dramatically from month 1 to month 3 compared to the other periods, and steadily increased even 6 months after initiating HCQ. In terms of C3, it showed the same trend. The number of flares of disease activity has been calculated.

Conclusions The level of complements increases after initiating HCQ therapy in real-world patients with SLE in Japan. The effect tends to emerge 3 months after starting HCQ. We will show the data between disease activity and the elevation of complements.

Funding Source(s): None

92

ENGAGING PATIENTS AND PARENTS TO IMPROVE MENTAL HEALTH FOR YOUTH WITH SYSTEMIC LUPUS ERYTHEMATOSUS

¹Andrea M Knight*, ²Oluwatunmise Fawole, ³Michelle Reed, ⁴Lauren Faust, ⁵Tamar Rubinstein, ⁶Julia Harris, ⁷Aimee Hersh, ⁸Karen Onel, ⁹Erica Lawson, ¹⁰Kaveh Ardalan, ¹¹Esi Morgan, ¹²Anne Paul, ¹³Judith Barlin, ¹⁴Paola Daly, ¹⁵Mitali Dave, ¹⁶Shannon Malloy, ¹⁷Shari Hume, ¹⁸Suzanne Schrandt, ¹⁹Laura Marrow, ²⁰Angela Chapson, ²¹Donna Napoli, ²²Michael Napoli, ²³Miranda Moyer, ²⁴Rachel Adamski, ²⁵Vincent Delgaizo, ²⁶Martha Rodriguez, ²⁷Emily von Scheven. ¹The Hospital for Sick Children, Toronto; ²New York University School of Medicine; ³The Children's Hospital of Philadelphia; ⁴Philadelphia College of Osteopathic Medicine; ⁵Children's Hospital at Montefiore, New York, NY, USA; ⁶University of Missouri-Kansas City, Childrens Mercy-Kansas City, Kansas City, MO, USA; ⁷University of Utah, Salt Lake City, UT, USA; ⁸Hospital for Special Surgery, Weill Cornell Medicine, New York, NY, USA; ⁹University of California San Francisco, San Francisco, CA, USA; ¹⁰Lurie Childrens Hospital of Chicago, Chicago, IL, USA; ¹¹Cincinnati Childrens Hospital Medical Center, Cincinnati, OH, USA; ¹²Lupus Foundation of America, Washington, DC, USA; ¹³Clinical Outcome Assessments; ¹⁴Cure JM; ¹⁵Arthritis Foundation; ¹⁶Friends of CARRA; ¹⁷Riley Childrens Hospital at Indiana, Indianapolis, IN, USA

10.1136/lupus-2019-lsm.92

Background Mental health conditions are common in youth with systemic lupus erythematosus (SLE), yet intervention strategies are understudied. We used a patient-engaged approach to investigate the mental health needs of youth with SLE.

Methods An anonymous online survey examined beliefs and experiences with mental health for youth with SLE. Eligible youth ages 14–24 years had a diagnosis of SLE and reported specific treatment for the condition. Parents of youth 8–24 years meeting the above criteria were also eligible to participate. The survey was developed in collaboration with patient and parent advisors, the Childhood Arthritis and Rheumatology Research Alliance (CARRA), and the Patients, Advocates, and Rheumatology Teams Network for Research and Service (PARTNERS). Participants were recruited through the Lupus Foundation of America and CARRA clinics. We tabulated youth responses for i) self-reported prevalence of mental health problems, categorized into mutually exclusive clinician-diagnosed disorders and self-diagnosed symptoms, and ii) mean Likert ratings (0=low, 4=high) for the impact of disease related-factors on their mental health. We also compared