Abstract 34 Table 1 The baseline characteristics of the patients (n=109)

variables	median	IQR	variables	median	IQR
Age at HCQ introduction, years	40	(30.5–50.0)	Anti-ds-DNA antibodies, U/ml	8.2	(2.9–24.7)
Gender (%female)	96/109 (88.1)		Anti-RNP antibodies, U/ml	16.5	(3.1–85.7)
Disease duration, months	95	(38.0–184.5)	Anti-Sm antibodies, U/ml	4.5	(1.0–14.0)
Body Mass Index(BMI)	21	(18.9–23.9)	Anti-Ro/SSA antibodies, U/ml	73.2	(4.2–126.5)
Skin eruption	53/109 (48.6)		Anti-La/SSB antibodies, U/ml	1.4	(0.7–5.0)
alopecia	24/109 (22.0)		IgG, mg/dl	1403	(1135–1841)
arthralgia	44/109 (40.4)		IgA, mg/dl	261	(203-355)
pregnancy	4/109 (3.7)		IgM, mg/dl	99	(58.0–144.75)
White blood cell count,/μl	5500	(4245–7185)	CH50, U/ml	33	(25.6–43.6)
Lymphocyte count,/μl	1099	(713–1099)	C3, mg/dl	76.1	(61.3–88.3)
Hemoglobin, g/dl	11.9	(10.9–13.3)	C4, mg/dl	12.1	(8.7–17.8)
Platelet counts, x10^4/μl	21.9	(18.5–27.0)	SELENA-SLEDAI	5	(3-8)
Albumin, g/dl	4	(3.7–4.3)	Comorbidities of SS (%)	28/109 (25.7)	
BUN, mg/dl	13	(10.1–17.3)	Comorbidities of APS (%)	22/109 (20.2)	
Cr, mg/dl	0.67	(0.57–0.76)	Comorbidities of LN (%)	32/109 (29.4)	
eGFR, ml/min/1.73 m^2	81.2	(66.3–102.3)	Comorbidities of NPSLE (%)	21/109 (19.3)	
ANA	320	(160-800)			

Here, we evaluated adverse events and relapse risk of SLE during the treatment of HCQ.

Methods We conducted an analysis of retrospectively collected data of 109 patients who were diagnosed as SLE and treated with HCQ at least 12 months at Nagasaki University Hospital and community hospitals. Demographic data included the patient's age at the onset of SLE, gender, the disease duration of SLE (the time from the diagnosis of SLE until the renal biopsy), comorbidities of Sjögren syndrome (SS)/anti-phospholipid syndrome (APS), and the treatment for induction. We identified the risk of adverse events and relapse at 12 months after introduction of HCQ.

Results Most of the patients were female (88.1%). The median age at introduction of HCQ was 40.0 years (interquartile range [IQR] 30.550.0 years), and the disease duration of SLE was 95 months (IQR 38.0184.5 months). The mean observation period after HCQ introduction was 12 months. The comorbidity rates of SS and APS were 25.7% and 20.2%, respectively. The SELENA-SLEDAI decreased significantly after 3 months of introduction. The dose of oral prednisolone also decreased significantly after 6 months of introduction. Eighty-six cases (78.9%) continued HCQ at 12 months after introduction. The adverse events appeared in 27 cases (24.8%), including 11 cases of skin rashes (10.1%) and 6 cases of gastrointestinal symptoms (5.5%). Predictive factor for adverse event was white blood cell (WBC) counts at baseline (odds ratio: 0.9997, 95% CI: 0.9994–0.9999, p=0.0285). Twelve of 86 cases (14.0%) experienced relapse those who needs to start prednisolone/immunosuppressants or increase the dose of prednisolone. The multivariate analysis revealed C4 value at baseline was the predictive factor of relapse (odds ratio: 0.841, 95% CI: 0.718–0.984, p=0.0097).

Conclusions We retrospectively analyzed the risk of adverse events and relapse after HCQ introduction with a mean 12 month follow-up in SLE. The lower value of C4 at HCQ introduction was a predictive factor for relapse and the lower counts of WBC was a predictive factor for adverse event.

Funding Source(s): N/A

35 PNEUMOCOCCAL VACCINATION AMONG IMMUNOSUPPRESSED LUPUS PATIENTS: WHO VACCINATES?

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10.1136/lupus-2019-lsm.35

Background Center for Disease control and US department of Health and Human Services recommend Pneumococcal vaccination (PV) for chronic diseases and immunosuppressed. PV is a known quality indicator for patients with Systemic Lupus Erythematosus (SLE). We aimed to study the prevalence rates and predictors of PV in a cohort of SLE patients on immunosuppressive medications (ISM).

Methods Data were obtained through self-report questionnaires and medical chart review of 150 patients with SLE seen in rheumatology clinic at an academic center. Ninety four patients were eligible for PV based on ISM use (current use of any ISM other than hydroxychloroquine or current prednisone 7.5 mg daily for 3 months or age 65 years). Information on rheumatologist recommendation/receipt of PV 23 in the preceding 5 years was collected by self-report in the questionnaire and/or from chart review. Information was also collected on demographics (age, gender, race, education, insurance), physician (having a primary care physician (PCP), the volume of SLE patients seen by each rheumatologist in the past 4 months) and severity and duration of SLE (ACR classification criteria, disease activity, damage, medications). Rheumatologists SLE volume was categorized as 0–50, 50–100 and >100. Univariate and Stepwise Binary logistic regression analysis were done to study predictors and most parsimonious model for PV (dependent variable).

Results Mean (SD) age of the cohort was 45.9 (15.0) years, 90% were women: 52% African-American, 26% Caucasian, 7% Hispanic, 13% Asian and 2% other. Mean (SD) SELENA-SLEDAI and SDI were 4.1 (2.3) and 1.7 (0.9), respectively. Over 90% had a PCP. SLE patient volume of rheumatologist during the previous 4 months was: 21% had 0–50, 27% had 51–75, while 52% had >76 SLE patients. Sixty-five (69.1%)

Abstract 35 Table 1 Predictors of PV in SLE patients on ISMs

Variables	Univariate analysis			Multivariate analysis			Stepwise analysis		
	OR	95% CI	P-value	OR	95% CI	P-value	OR	95% CI	P-value
				DEMOGRAPHICS					
Age	1.017	1.007–1.027	0.001	0.993	0.913–1.079	0.863			
Gender	3.5	0.727–16.848	0.118						
Caucasian ethnicity	2.833	1.117–7.186	0.028	0.356	0.02–6.229	0.479			
PPO insurance	1.727	0.822–3.630	0.149						
Education level	1.55	1.205–1.995	0.001	0.56	0.082–3.833	0.554			
				PHYSICIAN					
Primary care provider	2.24	1.398–3.589	0.001	1.734	0.004–837.506	0.861			
Volume of lupus patients seen	2.604	1.448–4.685	0.001	1.902	0.554–6.529	0.307	2.033	1.154–3.584	0.014
				LUPUS					
Number of ACR criteria met	1.15	1.056–1.253	0.001	1.061	0.471–2.39	0.886			
Duration of SLE	1.115	1.053–1.181	0	0.987	0.798–1.22	0.903			
Disease activity (SELENA-SLEDAI)	1.154	1.030–1.294	0.014	0.961	0.469–1.97	0.913			
Damage (SLICC-SDI)	2.02	1.249–3.268	0.004	1.619	0.312–8.412	0.566			
Class III-V lupus nephritis	6.333	1.874–21.402	0.003	1.049	0.021–51.942	0.981			
Receipt of steroids ever	2.071	1.319–3.252	0.002						
Steroid dose	1.034	0.994–1.076	0.099						
Current Mycophenolate Mofetil	7	2.455–19.957	0	3.028	0.141–64.874	0.479			
Current Biologic Use	3.5	1.152–10.633	0.027	1.572	0.128–19.295	0.724			

patients had been either recommended or given PV 23 in the preceding 5 years. Univariate correlates were older age, higher education, Caucasian race, having a PCP, rheumatologists SLE patient volume, greater number of ACR criteria met, longer disease duration, higher SLEDAI and SDI scores, lupus nephritis class III-V, treatment with steroids (ever), current mycophenolate mofetil or biologic use. On multivariate analysis none retained independent significance. On stepwise analysis odds of being recommended/receiving PV were twice with every increase in Rheumatologists SLE patient volume by 50.

Conclusions The volume of lupus patients seen by rheumatologists is independently associated with pneumococcal vaccination. Physician and patient education towards importance of preventive measures in SLE are needed to meet this important quality index.

Funding Source(s): None

36 EVALUATION OF RELAPSE RATE AND LIFE PROGNOSIS AFTER INDUCTION THERAPY IN PROLIFERATIVE AND MEMBRANOUS LUPUS NEPHRITIS

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10.1136/lupus-2019-lsm.36

Background Systemic lupus erythematosus (SLE) is a complex autoimmune disorder with a broad spectrum of clinical and immunologic manifestations, among which lupus nephritis (LN) is the most common cause of morbidity and mortality. Here we evaluated the relapse rate and life prognosis after induction therapy in proliferative and membranous LN.

Methods One hundred fifty-one cases who underwent renal biopsy at our hospital and community hospitals from 1993 to 2016 were enrolled in this study. We retrospectively analyzed the complete response (CR) rate at 6 and 12 months after induction therapy and evaluated the predictive factors for CR, relapse rate and life prognosis in proliferative and membranous LN.

Results In 140 cases, we were able to examine the therapeutic response, relapse rate and life prognosis at 6 and 12 months after therapy was introduced. Most of the patients were female (84.3%). The median age at onset of LN was 34.0 years (interquartile range [IQR] 25.345.0 years), and the disease duration of SLE was 42 months (IQR 2.0121.0 months). The median follow-up duration after renal biopsy was 96 months (IQR 44.0168.0 months). The renal pathology of 99 (70.7%) patients was classified as ISN/RPS Class III or IV, and 41 (29.3%) patients were ISN/RPS Class V. Thirty-five patients (35.4%) in Class III or IV and 41 patients (29.3%) in Class V achieved CR at 6 months, and 50 patients (50.5%) in Class III or IV and 22 patients (53.7%) in Class V achieved CR at 12 months. Multivariate analysis showed that lower index of chronicity as assessed by the NIH histological scoring system in Class III or IV, and neutrophil infiltration and CH50 in Class V were predictive factors for achieving CR at 12 months. Kaplan-Meier analysis showed that relapse rate and life prognosis were not different between proliferative and membranous LN.

Conclusions Our results suggested that the predictive factors for CR at 12 months after induction therapy were lower index of chronicity in class III or IV and neutrophil infiltration and CH50 in Class V. In general, proliferative LN is more immunologically active than membranous LN, however there were no difference in the achieving CR at 6