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A. Fetal loss without treatment

B. Fetal loss with treatment

C. Live births (irrespective of treatment)

Figure 1. Forest plot of studies included in the meta-analysis regarding pregnancy and treatment outcomes.

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POS0768

THE IMPACT OF ANTI-RO ANTIBODIES IN PREGNANT PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND SJÖGREN'S SYNDROME

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Background: The presence of anti-Ro antibodies in female patients diagnosed with systemic lupus erythematosus (SLE) and primary Sjögren syndrome (SS) in their fertile years raises concern among the medical team due to the risk of neonatal lupus in their newborns (NB). (1)

Objectives: The aim of this study was to determine whether there are differences between the outcome of anti-Ro positive pregnancies in SLE and SS.

Methods: This is a retrospective observational study carried out in a Rheumatology tertiary center. We included anti-Ro positive female SLE and SS patients, who were diagnosed before or during pregnancy and followed in our clinic between 2003-2020. The diagnosis of SLE or SS was established according to the 2012 SLICC criteria and the 2016 EULAR/ACR criteria, respectively. Clinical, immunological and pregnancy parameters were recorded before (where available), during and after pregnancy, as well as maternal risk factors (smoking, BMI,

disease and medication history). Statistical analysis for continuous variables were performed with T-student test and categorical variables with Person Chi-square test, using IBM SPSS Statistics version 20.

Results: Eleven out of 65 anti-Ro positive SLE patients and 10 out of 153 anti-Ro-positive SS patients met the inclusion criteria and had 13 and 12 pregnancies, respectively. The mean age at diagnosis was 24.75 ± 5.19 years for SLE and 31.92 ± 4.05 years for SS, and the mean pregnancy age was 28.33 ± 4.05 years for SLE and 33.17 ± 3.63 years for SS. Nine (81.81%) SLE patients were diagnosed before pregnancy, while 6 (60%) of the SS patients were diagnosed during pregnancy. Two (18.18%) SLE and 1 (10%) SS were smokers, median BMI was 21 for both SLE and SS (1 SS patient was obese), 2 (18.18%) had a history of lupus nephritis, 6 (54.54%) LES patients had secondary antiphospholipid syndrome, out of which 1 had a previous miscarriage. In the SS group there were 3 previous miscarriages, one patient had a history of parotid lymphoma. The majority of both SLE and SS patients had moderate anti-Ro antibody titers (<200 U/ml) before as well as during pregnancy: 6 (46.5%) and 8 (61.53%) in SLE, 5 (41.6%) and 7 (58.3%) in SS. More preterm NB and stillbirths were encountered in SLE mothers, possibly due to the association of secondary antiphospholipid syndrome, both groups encountered 1 pregnancy loss, and cesarean delivery outweighed vaginal ones in both SLE and SS patients. (Table 1)

Table 1. Gestational age and delivery type according to maternal disease

Gestational age	SLE number (%)	SS number (%)
Full-term pregnancy	4 (30.76%)	10 (83.33%)
Late preterm births	4 (30.76%)	1 (8.33%)
Very preterm births	2 (15.38%)	0
Stillbirth	2 (15.38%)	0
Pregnancy loss	1 (7.69%)	1 (8.33%)
Delivery type		
Vaginal	3 (25%)	4 (36.36%)
Cesarean	9 (75%)	7 (63.63%)

Distribution of pregnancy outcome is exhibited in figure 1. There were 4 (33.33%) NB with cutaneous neonatal lupus all from SS mothers, 3 of whom used HCQ before and/or during pregnancy; and there were 5 NB with complete fetal atrioventricular block (AVB), 3 (25%) from SS mothers and 2 (15.38%) from SLE mothers. A history of HCQ usage was recorded in 3 out of these 5 mothers, and all 5 NB with complete fetal AVB were treated with dexamethasone, without success. Two NB died (both from SLE mothers) and 3 NB (all from SS mothers) needed pacemaker implantation. From the latter, 1 developed pacemaker cardiomyopathy and 1 developed sepsis.

Conclusion: Neonatal lupus seems to be more prevalent in anti-Ro positive SS patients than SLE patients, even though no difference was seen in anti-Ro titer between the two diseases. Fetal cardiac arrhythmia may lead to SS diagnosis. Dexamethasone did not improve the outcome of the fetal AVB.

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POS0769

VALIDATION OF THE SIMPLE INDEX FOR DISEASE ACTIVITY OF SYSTEMIC LUPUS ERYTHEMATOSUS IN CHINESE PATIENTS

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Objectives: To validate the SIMPLE index for systemic lupus erythematosus (SLE) disease activity assessment in Chinese patients.

Methods: Adult patients (age ≥ 18 years) who fulfilled the 2013 SLICC criteria for SLE and were followed in the Rheumatology clinics of Tuen Mun Hospital, Hong Kong were recruited in a cross-sectional study. Participants were invited to complete the SIMPLE questionnaire before seeing doctors on the same day. The two laboratory results were supplemented by research nurses. Physicians, who were blinded to the SIMPLE results, were asked to complete disease activity assessment by the SELENA-SLEDAI and physicians' global assessment (PGA) after consultation. Correlation was made between the SIMPLE score and the SLEDAI/PGA scores by Spearman's rank correlation test. Receiver operating characteristic (ROC) analysis was performed to find the best cut-off SIMPLE score that predicted a clinical SLEDAI score of 1-6 (mild SLE activity) and ≥ 7 (moderate/severe activity).

Results: 364 SLE patients were studied (94% women; age 45.4 ± 13.4 years; disease duration 13.2 ± 8.0 years). The proportion of patients having a history of neuropsychiatric and renal disease that required immunosuppressive therapies was 9.3% and 56%, respectively. At the time of questionnaire completion, 69 (19%) patients had SLEDAI ≥ 6 and 192 (53%) had SLEDAI 1-5. The mean SLEDAI was 3.04 ± 2.85 and PGA score was 0.62 ± 0.55 . A total of 161 (44%) had SDI score ≥ 1 . The mean SIMPLE index was 26.0 ± 12.9 . SIMPLE index correlated significantly with SLEDAI ($p=0.76$; $p<0.001$) and PGA score ($p=0.48$; $p<0.001$). ROC analysis showed that a SIMPLE index of >27 points best predicted a clinical SLEDAI score of 1-6 (area under the curve [AUC] 0.78[0.73-0.84]; sensitivity 0.75; specificity 0.71), and >36.8 points best predicted a clinical SLEDAI score of ≥ 7 (AUC 0.87[0.69-1.00]; sensitivity 0.88, specificity 0.85).

Conclusion: SIMPLE shows a good correlation with SELENA-SLEDAI and PGA. It is a simple tool that enables patients to self-report disease activity and communicate with the health care team more efficiently.

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POS0770

DIFFERENTIAL CLINICAL PRESENTATION BETWEEN SLE RUPHUS PATIENTS AND SLE NON-RUPHUS PATIENTS: A CASE-CONTROL STUDY

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Background: Rhus is a term that describe the coexistence of systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). Rhus patients have symmetrical, erosive arthritis, characteristic SLE manifestations and an array of autoantibodies including rheumatoid factor (RF), anti-cyclic citrullinated peptides (anti-CCP), anti-dsDNA, and anti-Sm.¹ Joint involvement is common in SLE patients (90%), but only 1% to 9.7% have rhus.² Due to its low prevalence, there is still a lack of evidence on its presentation and differences with other SLE patients without rhus.

Objectives: To examine the rhus prevalence and to compare the clinical and serological characteristics between rhus, and non-rhus SLE patients (SLE with arthritis (SLEa), and SLE without arthritis (SLEwa)).

Methods: We performed a case-control study. Rhus patients (cases) were matched 1:1 with non-rhus SLE patients (controls). Descriptive statistics were calculated and rhus, SLEa, and SLEwa were compared.

Results: A total of 72 patients were included; 24 patients in each group; most were female (87.5%). The median age at rhus onset was 36.5 years (IQR 30-42.5). RA preceded rhus in half of the patients, 29% were initially diagnosed as SLE, and 21% were initially diagnosed as rhus. The median duration of RA was 66 months (IQR 30-144).

In the descriptive analysis of rhus patients, the most affected joints were the proximal interphalangeal and metacarpophalangeal joints (87.5%), followed by the wrists (79.1%). Regarding immunological findings, RF and anti-CCP were positive in 87.5% and 50% of the patients, respectively. As to radiographic findings, the median number of erosions in the hands and wrists was 2 (IQR 0-5) and the median number of joints with narrowed joint space was 7 (IQR: 1.5 - 13.5). In terms of treatment, 95.8% received corticosteroids (median 10 mg/day), 91.6% antimalarials, 79.1% methotrexate, 41.6% leflunomide, and 25.0% rituximab.

Patients with rhus were older and had less renal and hematological involvement than patients with SLEa and SLEwa. SLEa patients had higher seropositivity for anti-RNP and anti-Sm, higher neurological involvement, and higher SLEDAI-2K scores than rhus patients. Comparisons of other clinical and serological variables between SLE rhus and non-rhus patients are shown in table 1 and figure 1.

Table 1. Clinical and serological manifestations in rhus, articular SLE, and non-articular SLE

Variables	RHUPUS M (IQR)	SLE with arthritis M (IQR)	SLE without arthritis M (IQR)	P value RHUPUS vs. SLE with arthritis	p value RHUPUS vs. SLE with- out arthritis
Age (years) M (IQR)	40 (31.5 – 49)	29 (21.5 – 45)	33 (19.5 – 37.5)	0.043	0.013
CPR M (IQR)	2.3 (1– 8.5)	1.6 (0.3– 3.6)	0.9 (0.2– 2.5)	0.337	0.032
Positive anti-RNP N (%)	7 (29.1%)	14 (58.3%)	7 (29.1%)	0.042	1.000
Positive anti-Sm N (%)	5 (20.8%)	15 (62.5%)	6 (25%)	0.003	0.500
SLEDAI – 2K score M (IQR)	4.5 (1 – 7)	9 (2 – 18)	7 (3.5 – 15)	0.045	0.082

Figure 1. Differences in the frequencies of organic alterations. w/o: without.

Conclusion: Patients with rhus were older and had lower SLEDAI-2K scores compared with those non-rhus. Furthermore, renal, neurological, and hematological manifestations were more common in non-rhus patients than in rhus patients.

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POS0771

VALIDATION OF THE 2019 EUROPEAN LEAGUE AGAINST RHEUMATISM/AMERICAN COLLEGE OF RHEUMATOLOGY (EULAR/ACR) CLASSIFICATION CRITERIA FOR SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) IN HONG KONG CHINESE

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Objectives: To validate the 2019 EULAR/ACR classification criteria for SLE in Hong Kong Chinese patients and compare its performance with the 2012 Systemic Lupus International Collaborating Clinics (SLICC) and 1997 American college of rheumatology (ACR) criteria.

Methods: We retrospectively reviewed the medical records of consecutive patients who attended the Rheumatology clinics in Tuen Mun and Pok Oi hospitals between May and September 2019. Patients with anti-nuclear antibody (ANA) $\geq 1:80$ were included and patients with ANA $< 1:80$ or no ANA results were excluded. Patients were evaluated and cross-checked for the fulfilment of the 1997 ACR, 2012 SLICC and 2019 EULAR/ACR criteria by two investigators (YKC, CL). Medical records were then reviewed by an expert panel consisting of 3 senior rheumatologists, who were blinded for the results of the criteria evaluation, for a diagnosis of SLE based on the clinical judgement and therapeutic decisions. Teleconferences were arranged by the panel to discuss the discrepancies of the final diagnosis and agreement was made by voting. The three SLE criteria