were evaluated against the clinical diagnosis of SLE as judged by the expert panel on the sensitivity and specificity, which was calculated by 2x2 contingency tables ("condition positive" = clinical diagnosis of SLE; "test positive" = criteria positive for SLE) with standard formulas (sensitivity = true positive/[true positive + false negative]; specificity = true negative / [true negative + false positive]). Receiver operating characteristic (ROC) curve was used to study the optimal cut-off points from the EULAR/ACR criteria for the highest summation of specificity and sensitivity.

Results: 3967 patients were screened; 1542 patients who were positive for ANA ($\geq 1:80$) were included (88.3% women). The mean age of these patients at first rheumatology clinic attendance was 45.6 ± 15.0 years and the duration of follow-up was 7.5 ± 7.0 years. A total of 567 patients were judged to have SLE by the expert panel (discrepancy of clinical diagnosis in 135 patients resolved with voting). The sensitivity and specificity of the three SLE classification criteria in our patients are listed in Table 1. ROC analysis showed that the best cut-off for a clinical diagnosis of SLE using the EULAR/ACR criteria was 10 points (area under the curve [AUC] 0.977; sensitivity 89.2% and specificity 89.6%). Similar figures were obtained for subgroups of patients stratified by gender and different age ranges.

Conclusion: In our cohort of Hong Kong Chinese patients, the 2019 EULAR/ACR criteria is more sensitive but less specific when compared with 1997 ACR criteria for classifying SLE. On the other hand, the EULAR/ACR criteria is less sensitive but more specific than the 2012 SLICC criteria. The specificity of the EULAR/ACR criteria for SLE is higher in male than female patients. In our patients older than 50 years, the EULAR/ACR criteria is less sensitive but more specific for a classification of SLE. Overall, the performance of the EULAR/ACR criteria for a diagnosis of SLE in our study is similar to that reported in recent Asian studies although the sensitivity is lower, which may be related to the inclusion of ANA+ patients only.

REFERENCES:

Classification criteria	Sensitivity	Specificity
1997 ACR	85.9%	94.4%
2012 SLICC	97.5%	86.4%
2019 EULAR/ACR with 10 points as cut-off	89.2%	89.6%
2019 EULAR/ACR with 9 points as cut-off	93.6%	68.7%
2019 EULAR/ACR with 11 points as cut-off	86.9%	92.4%
2019 EULAR/ACR with 10 points as cut-off (men)	88.9%	94.5%
2019 EULAR/ACR with 10 points as cut-off (women)	89.2%	88.8%
2019 EULAR/ACR with 10 points as cut-off (age >50 years)	78.7%	94.1%
2019 EULAR/ACR with 10 points as cut-off (age ≤ 50 years)	91.7%	84.1%

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POS0772

PREVALENCE AND RISK FACTORS FOR HERPES ZOSTER REACTIVATION IN 1542 PATIENTS WITH RHEUMATIC DISEASES

C. C. Mok¹, L. Y. Ho¹, S. M. Tse¹, K. L. Chan¹, C. H. To². ¹Tuen Mun Hospital, Medicine, Hong Kong, Hong Kong (SAR); ²Pok Oi Hospital, Medicine, Hong Kong, Hong Kong (SAR)

Objectives: To study the prevalence and risk factors of herpes zoster (HZ) infection in patients with rheumatic diseases.

Methods: Medical records of patients with rheumatic diseases who attended our out-patient rheumatology clinics between 2019 March and 2019 August were retrospectively reviewed. Patients who were using biological or targeted DMARDs were excluded. Episodes of HZ infection since disease diagnosis were identified and the prevalence over time was calculated. Laboratory parameters (total white cell count, neutrophil-to-lymphocyte ratio, serum albumin, globulin & creatinine), history of diabetes mellitus and the highest doses of immunosuppressive medications within 6 months of the first episode of HZ infection were compared with those within 6 months of last follow-up in patients who did not have HZ infection. Cox regression analysis was performed to identify factors associated with the first HZ infection in all patients.

Results: 1542 patients were studied (88% women, age 46.4 ± 15.0 years). The underlying diseases were systemic lupus erythematosus (SLE) (38%), rheumatoid arthritis (26%) and other rheumatic diseases (36%). After a total follow-up of 11,515 patient-years since diagnosis (7.5 ± 7.0 years), 122 (7.9%) patients developed 146 episodes of HZ infection, giving an overall prevalence of 1.27/100-patient years. The prevalence rates of HZ in SLE, RA and non-SLE/RA patients were 1.70, 0.64 and 0.76 per 100 patient-years, respectively. Patients who experienced HZ reactivation were younger (41.6 ± 14.7 vs 46.8 ± 15.0 years; $p < 0.001$), more likely to have SLE (74% vs 35%; $p < 0.001$) and diabetes mellitus (17% vs 7.3%; $p = 0.01$), and had a significantly lower albumin (38.6 ± 5.6 vs 41.3 ± 3.5 ; $p < 0.001$) and higher neutrophil-to-lymphocyte ratio (4.9 ± 6.2 vs 2.8 ± 2.6 ; $p < 0.001$). More patients with HZ reactivation were treated with prednisolone (54% vs 22%;

$p < 0.001$), azathioprine (20% vs 8%; $p < 0.001$), mycophenolate mofetil [MMF] (21% vs 12%; $p = 0.006$), cyclophosphamide [CYC] (4.9% vs 0.1%; $p < 0.001$) and hydroxychloroquine (48% vs 34%; $p = 0.002$) in the preceding 6 months compared with those who did not have HZ infection. Among those using immunosuppressive drugs, the doses of MMF (1.42 ± 0.64 vs 1.02 ± 0.31 ; $p = 0.005$) and prednisolone (15.6 ± 15.9 vs 5.5 ± 4.5 mg; $p < 0.001$) were significantly higher in those with HZ infection. The cumulative risk of having HZ reactivation in SLE patients at 24 and 48 months since diagnosis was 5.9% and 8.6%, respectively, which was significantly higher than that in non-SLE patients (1.9% and 2.5%, respectively; $p < 0.001$ by log rank test). Cox regression analysis revealed that having a diagnosis of SLE (HR 1.97 [1.17-3.31]), albumin level (HR 0.93 [0.90-0.97] per g/L; $p = 0.001$), serum creatinine (HR 0.995 [0.990-1.00] per $\mu\text{mol/L}$), higher neutrophil/lymphocyte ratio (HR 1.08 [1.05-1.11]) and the use of CYC (HR 6.69 [2.56-17.5]) and prednisolone (HR 1.61 [1.02-2.45]) in the preceding 6 months were independently associated with the development of HZ infection.

Conclusion: Reactivation of HZ is fairly common in patients with rheumatic diseases. Underlying SLE, prednisolone/cyclophosphamide therapy and the neutrophil/lymphocyte ratio, but not age, sex or other laboratory parameters, are the major risk factors for HZ reactivation.

Disclosure of Interests: None declared

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POS0773

CLINICAL PRESENTATION AND OUTCOMES OF THE ANTIPHOSPHOLIPID SYNDROME (APS) IN SOUTHERN CHINESE PATIENTS: THE HONG KONG APS REGISTRY

C. C. Mok¹, C. Lee², M. C. Leung³, Y. K. Tang⁴, C. Ho⁵, S. Woo⁶, M. L. Lee⁷, M. C. Wan⁸, M. Y. Lee⁹ on behalf of Hong Kong APS registry working group. ¹Tuen Mun Hospital, Medicine, Hong Kong, Hong Kong (SAR); ²Pok Oi Hospital, Medicine, Hong Kong, Hong Kong (SAR); ³United Christian Hospital, Medicine, Hong Kong, Hong Kong (SAR); ⁴Kwong Wah Hospital, Medicine, Hong Kong, Hong Kong (SAR); ⁵Queen Mary Hospital, Medicine, Hong Kong, Hong Kong (SAR); ⁶Ruttonjee Hospital, Medicine, Hong Kong, Hong Kong (SAR); ⁷Yan Chai Hospital, Medicine, Hong Kong, Hong Kong (SAR); ⁸Tai Po Hospital, Medicine, Hong Kong, Hong Kong (SAR)

Objectives: To report the clinical presentation and outcomes of the APS in Hong Kong Chinese patients.

Methods: The HKAPS registry was established in early 2020 by the Hong Kong Society of Rheumatology to study the outcomes of Chinese patients with APS treated in public hospitals in Hong Kong. Patients aged ≥ 18 years were identified by the Hospital Authority Clinical Data retrieval system using the ICD-10 diagnostic code of APS. The medical history and APS diagnosis was verified by sub-investigators in different hospitals using the 2006 modified consensus criteria for the APS. Eligible patients were classified into definite APS or probable APS, which was further categorized into primary (without underlying rheumatic diseases) and secondary types. The presentation, treatment and outcomes of these patients were summarized.

Results: 232 APS patients (76.3% women) were identified. All were ethnic Chinese. A total of 160 patients fulfilled the 2006 criteria for APS (definite APS) while 72 patients had probable APS (anti-phospholipid [aPL] antibodies positive once or with non-criteria manifestations). In those with definite APS, the mean age at diagnosis was 44.9 ± 15.8 years and the female to male ratio was 3.1:1. APS was primary in 82 patients while 78 patients had concomitant rheumatic diseases (SLE in 95% of patients). 130(81%) patients had thromboembolic manifestations, 20(13%) had obstetric morbidities and 10(6%) had both. In patients with secondary APS, 23% thrombotic or obstetric manifestations occurred before diagnosis of the rheumatic diseases (ie. evolved from primary APS). Lupus anticoagulant was present in 81(51%) patients, moderate/high titers of anti-cardiolipin were present in 90(56%) patients and anti- β_2 -glycoprotein-1 was present in 6(4%) patients. Sixteen (10%) patients were double positive while 1 patient was triple positive for these aPL antibodies. Among the thromboembolic manifestations, arterial thrombosis (n=84) (ischemic stroke 77%, myocardial infarction 4.8%, peripheral vascular disease with limb/digital gangrene 2.4%, retinal artery 2.4%, splenic artery 1.2%, bowel infarct 1.2%) was more common than venous thrombosis (n=73) (calf vein thrombosis $\pm$ pulmonary embolism 86%, cerebral veins 2.7%, inferior vena cava/iliac veins 6.8%, retinal vein 2.7%, splenic vein 1.4%). The following treatment regimens were used in our APS patients: warfarin (71%), aspirin plus subcutaneous heparin (4%), aspirin + warfarin (3.1%), aspirin alone (17%) and the direct oral anticoagulant (DOAC) (5%). Bleeding complications developed in 35(22%) patients. Over a mean follow-up of 9.9 ± 7.0 years, recurrence of thromboembolic or obstetric manifestations recurred in 39(24%) and 6(4%) patients, respectively. A total of 29(18%) patients succumbed (median time to death: 6.4 years) and the causes of death were: pneumonia (24%), septicemia (17%), intracranial hemorrhage (14%), myocardial infarction (10%), ischemic stroke (3%), bowel infarct (3%), pulmonary hypertension (6.9%) and sudden death with unknown causes (14%).