INCIDENCE AND PREDICTORS OF ATHEROSCLEROTIC VASCULAR EVENTS IN A MULTICENTRE INCEPTION SLE COHORT

Murray Urowitz, Dafna D Gladman, Jiandong Su, Vern T Farewell, Systemic Lupus International Collaborating Clinics (SLICC) Group. University of Toronto, Toronto, Canada

Background/Purpose The prevalence of atherosclerotic vascular events (AVE) in published literature of an inception cohort with SLE is 10%. We aimed to investigate the accrual and the associated factors of AVE in a multinational multiethnic inception cohort of patients with SLE.

Methods A large 33-centre multinational inception cohort of SLE patients was followed yearly according to a standardized protocol between 1999–2017. AVEs are attributed to atherosclerosis on the basis of SLE being inactive at the time of the event, and the presence of typical atherosclerotic changes on imaging or pathology and/or evidence of atherosclerosis elsewhere. Analysis included descriptive statistics, rate of AVE’s per 1000 patient-years and univariable and multivariable relative risk regression models.

Results Of the 1848 patients enrolled, 1710 that had at least one follow up visit after enrolment comprised of the study sample. 88.6% were female, 49.4% Caucasian, 16.4% Black, 15.0% Asian, 15.5% Hispanic and 3.7% other. Disease duration at enrolment was 5.7 ± 4.2 months, mean age at enrolment was 34.7 ± 13.4 years and SLEDAI-2K was 5.4 ± 3.4. The prevalence of AVEs was 3.6% and the rate per 1000-patient years was 4.6. Sixty-one patients had atherosclerotic events after the enrolment; their detailed events and numbers are listed in table 1.

Two multivariable models including the predictors with significant effects in the single factor analyses, one without the aCL/LA variable and one with this variable are presented in table 1. The inclusion of aCL/LA led to the exclusion of 405 patients. Prior other nonatherosclerotic vascular events and high BMI were predictive of first AVE while only antimalarial therapy demonstrated a highly significant protective effect, [HR (95%CI): 0.54 (0.32, 0.91)], after adjustment for the other factors in the model.

Conclusion More effective control of classic atherosclerotic risk factors and more frequent use of antimalarial may have both contributed to controlling AVEs in this inception cohort.

Abstract O27 DEVELOPMENT AND VALIDATION OF A MULTIVARIABLE MODEL FOR 5-YEAR SURVIVAL IN SYSTEMIC LUPUS ERYTHEMATOSUS-ASSOCIATED PULMONARY ARTERIAL HYPERTENSION: CSTAR-PAH COHORT STUDY

Jingge Qu, Jinyan Qian, Jiliang Zhao, Qian Wang, Mengtai Li, Xiaofeng Zeng on behalf of CSTAR-PAH collaborators. Dept. of Rheumatology, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, National Clinical Research Center for Immunological Diseases, Ministry of Science and Technology, Key Laboratory of Rheumatology and Clinical Immunology, Ministry of Education, Beijing, China

Background Pulmonary arterial hypertension (PAH) is the major mode of death in systemic lupus erythematosus (SLE), but there is no validated algorithm to identify those at highest risk.

Methods A prognostic model was developed from a multicenter, longitudinal cohort study of 310 consecutively evaluated patients with SLE-associated PAH. The study was conducted from November 2006 to January 2019. Death was the primary outcome. The model was developed using Cox proportional hazards regression modeling. We developed a prognostic index (PI), summing the number of risk points corresponding to weighted covariates, which were used to configure the nomogram. Internal validation of the nomogram was assessed by discrimination and calibration using bootstrapping.

Results Of the 310 patients included in the study, 68 deaths (22.2%) occurred at a median follow-up of 4.9 (interquartile range [IQR] 3.2–6.3) years. The final prognostic model included 6 variables: N terminal-pro brain natriuretic peptide (NT-proBNP), Lactic Dehydrogenase (LDH), Direct Bilirubin