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ACCELERATED CORONARY ATHEROSCLEROSIS – A MAJOR CAUSE OF MYOCARDIAL INFARCTION IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background Patients with Systemic Lupus Erythematosus (SLE) are at increased risk of premature mortality due to myocardial infarction (MI). The underlying mechanisms are not fully understood. This study aims to generate new hypotheses on these mechanisms through description of MI subtypes and locations and by identifying risk factors for MI.

Methods We identified 35 SLE patients with and a first-time non-procedural MI (MI-SLE). We matched these 35 MI-SLE patients to 35 patients with MI but not SLE (MI-nonSLE) and 35 patients with SLE but not MI (nonMI-SLE) for gender, age and geographical location. Patients and controls were matched individually (1:1:1). Detailed retrospective medical file review was performed.

Results Median age was 62 years and 89% were female in all groups. Prevalence of ST-elevation MI was similar in MI-SLE patients and MI-nonSLE patients (27% vs 36%; $p=0.80$). The left ventricle was the most commonly infarcted in both MI-SLE and MI-nonSLE - 77% vs 59% according to coronary angiography and 42% vs 55% according to echocardiography. The left ventricular ejection fraction was similar in MI-SLE and MI-nonSLE patients ($p=0.62$). MI with coronary atherosclerosis was trends wise more common in MI-SLE patients compared to MI-nonSLE patients (88% vs 66%; $p=0.065$). Previous cardiovascular disease (43%, 5.7%, 14%; $p<0.001$), coronary artery disease (31%, 2.9%, 2.9%; $p<0.001$) and low plasma albumin levels (35 g/L, 40 g/L, not determined; $p=0.001$) distinguished MI-SLE patients from MI-nonSLE and nonMI-SLE patients.

Conclusion Coronary atherosclerosis was present in a large majority of MI-SLE patients at the event of MI. In addition, coronary artery disease preceding MI was more prevalent in SLE patients than in the general population, indicating accelerated coronary atherosclerosis as a cause of increased MI prevalence in SLE. Among SLE patients, low albumin levels were a risk factor for MI.

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UPDATE ON THE REAL-TIME COLLECTING SYSTEM DATA OF SLE TREATMENT AND RESEARCH GROUP (CSTAR) REGISTRY: CLINICAL FEATURES AND REMISSION OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS IN CHINA

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Background A new real-time collecting system were set up from 2017 based on the first registry cohort in China. This study was an update on the clinical features and remission status of recent results.

Methods CSTAR registry was first launched in 2009. Based on CSTAR, a new mobile application program (APP) platform was established to collect real-time data in clinic with pre-designed electronic case report form. All data were generated and uploaded in clinic directly without secondary collection, including demography, clinical manifestations, disease activity (SLEDAI-2K), organ damage (SLICC Damage Index), lab results, imaging and medications. Biological samples were preserved for future study at first clinic visit. Meanwhile, data cleaning and validation was managed by a professional back-stage statistician.

Results A total of 22807 SLE patients from 295 different centers have been registered up to Sep 2019. Male to female rate was 1:12. The most common manifestations at entry were mucocutaneous (59.8%), arthritis (55.3%), hematologic (37.9%) and lupus nephritis (34.6%). In addition, neuropsychiatric disorder and pulmonary arterial hypertension took up