RISK OF CORONARY ARTERY DISEASE AND STROKE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS USING JAPANESE HEALTH INSURANCE DATABASE

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Background: Patients with systemic lupus erythematosus (SLE) have higher risk of coronary artery disease (CAD) and stroke than the general population. Because these comorbidities influence on patients’ vital prognosis and quality of life, it is essential for rheumatologists to manage them appropriately. Considering differences in life style and ethnicity, it is of great interest and needed to investigate risk of these comorbidities in Asia. However, to date, such evidence is scarce.

Objectives: To estimate incidence rate (IR) and identify risk factors of CAD and stroke in patients with SLE using a Japanese health insurance database.

Methods: This retrospective longitudinal population-based study was conducted using claims data provided by Medical Data Vision Co., Ltd (Tokyo, Japan). We defined individuals as SLE cases if they met all of the following: 1) had at least one ICD10 code (M321 or M329); 2) had at least one prescription of oral corticosteroids (CS), methyprednisolone (mPSL) pulse therapy, immunosuppressive drugs (IS) (azathioprine, mizoribine, tacrolimus, mycophenolate mofetil, cyclophosphamide, methotrexate), biologics (belimumab, rituximab) or hydroxychloroquine between April 2008 and July 2017; 3) were 16 years old or over. The start of observation was defined by the first month in which cases met all of the above criteria. Patients were followed until the earliest of date of first CAD event or stroke, date of loss of follow-up, or the end of follow-up (June 2018). CAD and stroke were defined as follows: for CAD, at least one ICD10 code (I20.x or I21.x or I23-24.x) and either percutaneous coronary intervention, coronary artery bypass procedure, or thrombolytic agents during hospitalization: for stroke, at least one ICD10 code (I60-62.x or I63-64.x) and either cerebrovascular procedures, thrombolytic agents, or antiplatelet drugs during hospitalization. Patients were excluded if they had a previous diagnosis of CAD or stroke and were prescribed antiplatelet drugs or anticoagulants during the first 3 months. We defined baseline characteristics using the data from the first 3 months, and calculated IR and adjusted hazard ratio (HR) of risk factors for CAD or stroke after adjusting for baseline characteristics using a Cox proportional hazard model.

Results: In this study, 19,138 cases were included. The median age was 53 years and 81.3% were female. Median observation period was 3.1 years. IR [95% CI] of 1,000 patient-years (PY) of CAD or stroke was 1.41 [1.11-1.77] and 4.10 [3.56-4.70], respectively. IR of any CAD or stroke was increased age-dependently (2.06 [1.47-2.80] for 16-39 years-old, 5.07 [4.36-5.86] for 40-49, 13.0 [10.9-15.5] for 50-). Adjusted HR [95% CI] was 1.37 [95% CI, 1.27-1.47] for age by decade, 3.34 [1.78-6.28] for CS use, 1.46 [1.16-1.84] for presence of hypertension (HT), 1.38 [1.04-1.85] for diabetes mellitus (DM), 1.73 [1.25-2.38] for chronic kidney disease (CKD), and 1.95 [1.15-3.32] for atrial fibrillation (AF).

Conclusion: This is the first study investigating the risk of CAD or stroke in Japanese patients with SLE using a large health insurance database. Older age, use of CS, and presence of HT, DM, CKD, and AF were identified as significant risk factors of these comorbidities.

REFERENCES

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**AB0555**

**POTENTIAL ROLE OF PAROTID ELASTOGRAPHY IN DIAGNOSIS AND CLASSIFICATION OF PATIENTS WITH PRIMARY SJÖGREN’S SYNDROME**

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**Background:** Despite the improvements in classifying patients with primary Sjögren’s syndrome with usage of the new 2016 ACR/EULAR classification criteria, there remains to be a need for improvement and investigating the value of new modalities in diagnosing as well as classifying these patients. Objectives: To investigate potential role of parotid elastography in diagnosis and classification of patients with primary Sjögren’s syndrome (pSS). Methods: This is a cross sectional analysis of patients with primary Sjögren’s syndrome followed up in our out-patient Rheumatology clinic. We performed chart reviews and retrospectively investigated the available data on files to search whether or not our clinically diagnosed patients satisfied the 2002 AEG and/or 2016 ACR/EULAR criteria sets. Ultrasonographic and elastographic evaluation of parotid and submandibular glands bilaterally were performed on consecutive patients with clinical diagnosis of pSSs and contributions of these findings to classification criteria sets were interpreted.

**Results:** There were 95 pSS patients and 30 healthy gender and age matched controls. Mean age in patients was 49.6 ± 15 years and 24.5 ± 8 years in controls. Strain ratio, shearwave velocity and Pascal values of the glands were examined. Parotid strain ratio, submandibular gland strain ratio and submandibular pascal values were statistically significantly different compared to healthy controls (Table-1.86% of patients considered clinically as Sjögren’s syndrome satisfied 2016 ACR/EULAR (criteria patients and 84 satisfied 2002 AEG classification criteria. We grouped patients with respect to parotid strain ratio taking 1.0875 as the cut-off value. Those patients who did not satisfy 2016 ACR/EULAR criteria, but clinically diagnosed as pSSs (non criteria pSSs patients), also had significantly higher parotid strain ratio and submandibular velocity compared to healthy controls (p=0.016 and p<0.001 respectively). Interestingly, both criteria and non-criteria pSSs patients had similar parotid strain ratio and submandibular velocity (p=0.892 and p=0.260, respectively).

**Conclusion:** Parotid shear elastography is an easy and noninvasive method and can be a useful tool for the diagnosis and classification of patients with pSSs (1).

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**AB0556**

**PARTICULARITIES OF PULMONARY HYPERTENSION IN SYSTEMIC LUPUS ERYTHEMATOSUS**

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**Background:** Systemic lupus erythematosus (SLE) is an autoimmune disease that primarily affects young women. It is characterized by the production of autoantibodies and immune complexes. Vascular pulmonary involvement has long been considered rare, a consequence of thromboembolic events. It is in fact a proper entity, often of multifactorial mechanism, with spontaneous evolution to pulmonary arterial hypertension (PAH), which makes its gravity.

**Objectives:** The objective of our study is to determine the particularities of PAH during SLE.

**Methods:** We conducted a mono-centric, retrospective and descriptive study of the follow up of patients in the internal medicine department of the Military Hospital of Tunis for LES (diagnosis according to the ARA criteria) between January 2010 and December 2015. All patients underwent external echocardiography or during their stay in the department.

**Results:** We collected 87 patients diagnosed with SLE. PAH was recorded in 16 patients (38%) including 6 men and 10 women with a F/M sex ratio of 1.66. The average age was 37.23 years with extremes ranging from 16 to 70 years old. Clinically, we observed dyspnea in 10 patients (62%), chest pain in 7 cases (43%), dry cough in 2 cases (12%), palpitations in 1 case (6%) and 1/9 right heart failure in 1 case (6%). At cardiac auscultation, 5 patients were tachycardic (31%), 5 had a tricuspid systolic murmur and 1 had an irregular rhythm. A burst of B2 in the pulmonary focus was noted in 3 patients (18%). Nine of the 16 patients with PAH had electrical signs: five had sinus tachycardia (31%), two had signs of right ventricular hypertrophy. A complete arrhythmia with atrial fibrillation was noted in one patient. The chest X-ray showed cardiomegaly in 6 patients (37%). Among the 16 patients, there was a tricuspid valve insufficiency associated with PAH in 7 patients (43%), 2 had mitral valve insufficiency (12%), 6 patients had pericarditis, one patient had endocarditis (6%) and myocarditis was found in another one (6%). PAH was isolated in 12% of cases. In Immunological tests, NAs were positive in all patients. Three quarters of the patients (12) had native anti-DNA positive (75%) and ¼ of the patients (4) had anti-Sm positive and anti-RNP positive antibodies (25%). The complement was consumed in 5 cases (31.2%). Anti-phospholipid antibodies were noted in 4 cases (25%). Added to non-specific measures (smoking cessation, elimination of intense physical effort ...) adopted for all patients, oxygen therapy was indicated in four patients. Diltiazem 180 mg/day vasodilator therapy was prescribed in 3 patients. Effective anti-vitamin K anticoagulation was prescribed in a patient with severe PAH at 80 mg/Hg.

**Conclusion:** Pulmonary arterial hypertension (PAH) is a rare complication of systemic lupus erythematosus, its prevalence varies from 0.5 to 17.5% depending on the series. SLE is the second leading cause of PAH in connective tissue disease after systemic sclerosis. This vascular involvement is essential for the prognosis and is an important evolutionary step in the management.

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**AB0557**

**NON-CORONARY CARDIAC MANIFESTATIONS OF SYSTEMIC LUPUS ERYTHEMATOSUS IN ADULTS**

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**Background:** Systemic lupus erythematosus (SLE) is a common chronic multi-system autoimmune disorder of unknown etiology causing injury to non-organ specific systems. It predominantly affects young women. Cardiac manifestations develop in the majority of patients with SLE at some time during the course of their disease. Objectives: The aim of our study is to assess cardiac abnormalities in patients with systemic lupus erythematosus (SLE) by echocardiography and to compare the 2 groups of patients with and without cardiac manifestations. Methods: We have performed a transversal, descriptive study of SLE patients hospitalized in the Internal Medicine department at the Military Hospital of Tunis between January 2016 and June 2018. Diagnosis of SLE was made according to the criteria of ACR. All patients underwent a cardiac ultrasound externally or during their stay in our department.