

**Disclosure of Interest:** H. Maki: None declared, M. Hatano Grant/research support from: Ministry of Health, Labour and Welfare, Bayer Japan, Nippon Shinyaku Co., Ltd, GlaxoSmithKline K.K., Speakers bureau: Actelion pharmaceuticals Japan Ltd, Bayer Japan, S. Minatsuki: None declared, T. Inaba: None declared, I. Komuro Grant/research support from: Actelion pharmaceuticals Japan Ltd, Y. Asano Grant/research support from: Ministry of Health, Labour and Welfare, S. Sato Grant/research support from: Ministry of Health, Labour and Welfare  
**DOI:** 10.1136/annrheumdis-2017-eular.4271

**AB0636 A COMPARISON STUDY OF PREVALENCE OF TRADITIONAL CARDIOVASCULAR RISK FACTORS AND FRAMINGHAM RISK SCORE IN SYSTEMIC SCLEROSIS PATIENTS AND MATCHED CONTROLS**

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**Background:** In Systemic Sclerosis (SSc), data on prevalence of traditional cardiovascular (CV) disease risk factors is scarce and conflicting (1). Therefore, SSc patients CV risk attributed to traditional CV risk factors remains an issue of debate.

**Objectives:** To evaluate if patients with SSc have a higher prevalence of traditional CV disease risk factors and a higher risk of long-term CV events based on the risk prediction tool of the Framingham risk score (FRS) in comparison with age, race and sex matched control subjects.

**Methods:** The study comprised patients diagnosed with SSc, fulfilling both the 1980 ACR and the 2013 ACR/EULAR criteria for the disease, and followed-up at our Rheumatology Department and a group of age, race and sex-matched controls. Inclusion criteria were age 30 to 74 and no history of CV events in order to calculate FRS. In total, 46 out of 62 patients were eligible for the study. Traditional CV disease risk factors (diabetes, arterial hypertension and smoking) were compared among the 46 patients with SSc and 51 matched controls. Systolic blood pressure (SBP) values and total and high-density lipoprotein (HDL) cholesterol levels were also collected. The 10-year risk for CV events according to FRS was calculated and means of patients and controls were compared. Subjects' distribution into 3 categories of risk – low (<10% risk), medium (10–20% risk) and high (>20% risk) was also compared. Parametric and nonparametric tests were used for comparison between groups. P value <0.05 was defined as statistically significant.

**Results:** Mean risk for CV events in 10-years assessed by FRS was 10.00%±8.61 for SSc patients and 7.76%±8.30 for matched controls. Differences were not statistically significant (p=0.196). Additionally, prevalence of diabetes, arterial hypertension and smoking did not differ significantly between the two groups (p=0.890, p=0.443, p=0.651, respectively). Total and HDL cholesterol levels were also similar between groups (p=0.963 and p=0.506, respectively). Only SBP values (mmHg) of SSc patients were significantly higher (128.50 mmHg [113.5 to 139.3]) (median [interquartile range]) compared with controls (120.00 [110 to 130]), p=0.031. Subjects' distribution into the 3 groups of risk defined was similar for both groups (p=0.205).

**Conclusions:** In our study, prevalence of traditional CV disease risk factors and 10-year risk for CV events based on FRS assessment tool did not differ significantly between SSc patients and age, sex and race matched controls.

**References:**

[1] Psarras A, Soulaïdopoulos S, Garyfallos A, Kitis G and Dimitroulas T. A critical view on cardiovascular risk in systemic sclerosis. *Rheumatol Int.* 2017 Jan;37(1):85–95.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.4528

**AB0637 SUBCLINICAL ATHEROMATOSIS AND VITAMIN D DEFICIENCY IN PATIENTS WITH SCLERODERMA**

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**Objectives:**

To study whether patients with systemic sclerosis (SSc) have an increased cardiovascular risk (CVR), measured on the basis of analytical, angiodynamic and/or vascular lesions on carotid ultrasound.

The carotid IMT is a marker of cardiovascular morbidity and mortality, allowing measurement and monitoring of atherosclerosis in asymptomatic individuals, being surrogate markers of future coronary disease, stroke and general death in the general population and in inflammatory rheumatologic diseases.

**Methods:** Epidemiological and analytical data were collected, including the determination of the RCV SCORE index.

Vascular ultrasound protocol included assessment of carotid intima-media thickness (IMT), presence of atheromatous plaques, and exploration of peripheral arteriopathy using the ankle arm index (ABI).

**Results:** Seventy adult patients with ES diagnosis (ACR-EULAT 2013 criteria) were included.

94% of the women had a mean age of 50.2±12.5 years, and an average evolution time of 3.0±4.4 years.

The distribution by subgroups was: limited SSc (48%), diffuse SSc (34%), pre-SSc (4.2%), sine SSc (2.8%), MCTD (5.7%) and overlap syndrome (4.2%). The mean SSRm was 9.3±7.0 (range 0–42).

The ANA were positive in 91.4%, ACA (51.4%), ATA (10%), RNA polymerase (4.2%).

4% were DM, 7% were obese, 11% were active smokers, 13% were HTN, and 28% were ex-smokers.

28% had hypercholesterolemia with a mean total cholesterol of 192.5 (SD ± 31.9) and LDL of 102.4 (SD ± 29.4 mg/dL).

57% received vasodilators, most of them ARA-II. 10% bosentan, 4.2% sildenafil, and a 2.8% combination therapy.

The percentage of immunosuppressive drugs was corticoid (50%), MTX (34%), mycophenolate (3%), AZA (11%), HCQ (14%), CP (%).

The IMT presented pathological values (>0.9 mm) in 39% of the sample, 23% had atheroma plaques (being bilateral in 40%). Subclinical atheromatosis affected 41.4% (patients without cardiovascular events, pathological IMT and/or atheroma plaques). The ABI had pathological values (<0.9) in 17% of the patients.

In the bivariate analysis, the pathological GIM was related to the presence of ACA antibodies (OR =3.80, 95% CI: 1.15–12.52, p=0.028) and with the SCORE index of CVR (OR =2.93, 95% CI: 1.12–7.64, p=0.028); And the presence of atherosclerotic plaques was associated with increased SSRm score (OR 1.09, 95% CI 1.00–1.19, p=0.046), and the highest CVR SCORE index (OR 3.90, 95% CI: 1.31–11.56, p=0.014).

In the multivariate analysis, the serum vitamin D concentration showed a protective effect on IMT (OR =0.94, 95% CI 0.89–0.99, p value =0.025); And the main determinant of atheromatous plaques is the SCORE index, since the increase of one unit in SCORE index multiplies by 4 the probability of presenting plaques (OR =4.06, 95% CI: 1.31–12.60; P=0.015), once the effect of SSRm was controlled.

**Conclusions:**

- 40% of the patients had pathological IMT values, showing association with the presence of positive AAC and the SCORE risk index.
- The serum concentration of 25-OH-vitamin D showed a protective effect on IMT. Sixty percent of the sample had vitamin D deficiency.
- The presence of atheromatous plaques (23% of patients) was associated with higher SSRm indexes and SCORE cardiovascular risk.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.6995

**AB0638 CARDIAC TRANSPLANT IN SYSTEMIC SCLEROSIS-ASSOCIATED CARDIOMYOPATHY: MONOCENTRIC EXPERIENCE OF 3 CASES**

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**Background:** Cardiac involvement in systemic sclerosis (SSc) is a frequent complication, but end-stage cardiac failure remains uncommon and represents a poor prognosis. Heart-lung and lung transplant is an established treatment option for SSc-related pulmonary disease. Due to the limited published data, no recommendations exist for cardiac transplant in the context of SSc.

**Objectives:** We present our monocentric experience of 3 patients with SSc who underwent cardiac transplant for SSc-related end-stage heart disease (multiple hospitalisations due to failure of medical therapy and life-threatening complications).

**Results:** Case 1 is a 59-year-old male with limited cutaneous SSc. Antinuclear antibody (ANA) was negative. He had vascular (digital ulcers) and cardiac (heart failure (left ventricular ejection fraction (LVEF) 20%, NYHA class IV)) involvement, without major gastrointestinal or pulmonary involvement (no interstitial lung disease (ILD) or pulmonary arterial hypertension (PAH: assessed by right heart catheterization (RHC))). He underwent a cardiac transplant at the age of 51, after a disease duration of 6 years. Post-transplantation immunosuppressant therapy consists of tacrolimus and mycophenolic acid, initially associated with methylprednisolone, which is the standard immunosuppression protocol at our institution.

Case 2 is a 55-year-old male with limited cutaneous SSc. ANA was positive,

	Case 1	Case 2	Case 3
Sex, age	Male, 59 years	Male, 55 years	Male, 50 years
Type of SSc	Limited	Limited	Diffuse
Disease duration at Tx	6 years	7 years	4 years
ANA	Negative	1/320, speckled, no SSc-specific antibody	Negative
Pre-Tx			
NYHA class	IV	III	III
LVEF	20%	40%	40%
RHC: mPAP in mmHg	26	20	31
RHC: PCWP in mmHg	20	14	28
Post-Tx			
NYHA class	I	I	I
LVEF	60%	55%	60%
RHC: mPAP in mmHg	19	13	21
RHC: PCWP in mmHg	12	8	12

Tx: Transplant; mPAP: Mean pulmonary artery pressure; PCWP: Pulmonary capillary wedge pressure.