findings with the capillaroscopic patterns (early, active, and late, according to Cutoio’s classification [2]).

Methods: we recruited 125 SSC patients (M/F: 14/111, mean age 55±12.7 years, median disease duration 11 years) in 3 Rheumatology Centres in Sicily, Italy, from January to December 2019. Transthoracic echocardiogram with aortic root diameter measurement was carried out in all patients. Moreover, videocapillaroscopy with identification of early, active, or late SSC patterns was performed in the whole case series. Patients with early SSC pattern formed the subgroup 1, while those with the active or late patterns (both characterized by the reduction of capillary density) were included in the subgroup 2.

Results: we identified 8 (6.4%) SSC patients with aortic root dilation (diameter > 35 mm). Their age and their frequencies of cardiovascular risk factors were similar to the whole series. Moreover, videocapillaroscopy showed 62 (49.6%) early, 47 (37.6%) active, and 16 (12.8%) late SSC patterns.

Aortic root dilation was observed in only one patient in the subgroup 1 (1/62, 1.6%), and in 7 cases of the subgroup 2 (7/63, 11.1%); p=0.03.

Conclusion: in this multicentre study, we found that aortic root dilation is significantly associated with the reduction of capillary density at nailfold capillaroscopy (active or late SSC patterns). On the basis of these findings, we might argue that SSC-related microangiopathy of vasa vasorum could contribute to aortic wall damage, at least in a subset of SSC patients.

References:

Disclosure of Interests: Michele Colaci: None declared, Claudia Schinocca: None declared, Ylenia Dal Bosco: None declared, Maria Letizia Aprile: None declared, Alessandra Azzurra Russo: None declared, Domenico Sambataro: None declared, Gianluca Sambataro: None declared, Lorenzo Malatino: None declared.

DOI: 10.1136/annrheumdis-2020-eular.4348

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HEART VALVULAR ALTERATIONS IN A MULTICENTRE ITALIAN COHORT OF SSC PATIENTS


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Background: systemic sclerosis (SSc) in a chronic autoimmune disease characterized by endothelial dysfunction, diffuse microangiopathy, and fibrosis of skin and visceral organs. Typical cardiac involvement may include microvascular ischemia, contraction band necrosis, and patchy fibrosis, leading mainly to arrhythmias and conduction defects, diastolic dysfunction, or right ventricular failure (secondary to pulmonary arterial hypertension) [1]. Valvular diseases are poorly described and generally not considered a typical feature of SSC.

Objectives: we aimed to describe valvular alterations in a multicentre cohort of SSC patients.

Methods: we consecutively recruited 118 SSC patients (M/F: 14/104, mean age 56.7±12.4 years, median disease duration 10 years, limited/diffuse skin subsets: 59/23, anti-centromere/anti-Scl70/others autoantibodies: 35/37/46) in 3 Rheumatology Centres in Sicily, Italy, from January to December 2019. Considering the cardiovascular risk factors, 40 (34%) patients were smokers, 7 (6%) diabetics, 12 (10%) showed hypercholesterolemia, 38 (32%) arterial hypertension, while none was obese. Transthoracic echocardiogram was carried out in all patients during their follow-up.

Results: valvular abnormalities were as follow: mitral valve: insufficiency 85 (72%) cases - mild in 77/85, stenosis 2 (2%) - mild in 25/28, sclerosis/ticken- ing 36 (30%), and calcification 9 (8%) patients; aortic valve: insufficiency 28 (24%), stenosis 4 (3%), sclerosis 29 (25%), and calcification 7 (6%) patients; tricuspid valve: insufficiency 91 (77%) cases, no cases of stenosis, sclerosis 5 (4%), and calcification 1 (1%) patients; pulmonary valve: insufficiency in 13 (11%) patients.

As expected, tricuspid insufficiency (TI) was associated with pulmonary arterial hypertension (PAH) (moderate TI in 20% of patients with every TI and PAH vs. 4% of patients with TI without PAH, p=0.019).

Aortic sclerosis (AS) was associated with the presence of arthritis (AS in 35% of patients with arthritis vs. 16% of patients without, p=0.023).

No association was found with age, gender, disease duration, skin subset, autoantibodies, capillaroscopic patterns, presence of digital ulcers, lung, renal, or digestive involvements.

Conclusion: in this multicentre SSC cohort study, we found that cardiac valve alterations are very common, even though generally not clinically relevant. The presence of PAH was associated with more severe TI. Finally, AS was associated with arthritis that could be considered sign of chronic inflammatory state, which is often linked with accelerated atherosclerosis and remodeling process of aortic valve [5].

References: