significant different, absolute number of the Treg cells trended to decrease in patients treated with immunosuppressive agents. The use of IL-2 can effectively up-regulate Treg cells as well as increase Th17 to a certain extent, which restores the balance of Th17/Treg cells, but the long-term effect needs further investigation.

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THU0413

NORMALISATION OF NAILFOLD MICROVASCULATURE AFTER HEMATOPOIETIC STEM CELL TRANSPLANTATION IN SEVERE SYSTEMIC SCLEROSIS

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Background: Microangiopathy in Systemic Sclerosis (SSc), as visualised by nailfold capillary microscopy (NCM), is a dynamic and sequential process. Uncontrolled case-reports and a case-series report possible improvement of nailfold microangiopathy after hematopoietic stem cell transplantation (HSCT).

Objectives: To evaluate differences in nailfold microvasculature in patients with severe SSc treated with HSCT and those treated otherwise.

Methods: Severe SSc was defined as fulfilling criteria of the ASTIS trial.¹ For included patients two treatment groups were defined: 1. Patients treated with HSCT, 2. Patients treated otherwise (including cyclophosphamide, methotrexate, mycophenolate mofetil and rituximab). All available capillaroscopy images collected prior to and after treatment were scored independently by two trained observers, blinded for treatment. Scoring included categorical scores (0=no changes to 3≥66% alterations per millimetre) for capillary loss, neoangiogenesis, haemorrhages, dilatations, giants, disorganisation, together with a qualitative pattern and a VAS score for overall severity of microangiopathy.

Results: In total 55 patients were included, of whom 33 were female, mean age was 50±13 years and median mRSS of 20.¹⁵⁻²⁸ Twenty-nine patients were treated with HSCT. After treatment categorical score of capillary loss was lower with HSCT (median score 1.0 vs. 2.0, p=0.04) and VAS scores for severity of microangiopathy were better with HSCT (50.0 vs. 67.3, p=0.03). Compared to controls, a typical SSc pattern was less frequent in patients treated with HSCT (n=12/22, 55%, vs. n=18/20, 90% p=0.01).

In 25 patients (HSCT n=11, control n=14) images prior to treatment were available. Improvement in capillary loss (HSCT -0.5 [IQR -1 to 0] vs. control +0.3 [IQR -1.0 to 1.0] p=0.01;), dilatation (HSCT -1.5 [IQR -2.0 to -1.0] vs. control 0.0 [IQR -1.0 to 0.5] p<0.01) and VAS scores (HSCT median -32.5 [IQR -80.5 to -4.5] vs. - controls +2.0 [IQR -35.5 to +46.0] p<0.01; improved significantly more in the HSCT group.

Conclusions: In patients with severe SSc, microangiopathy as reflected by nailfold capillaroscopy images, is less severe after treatment with HSCT and shows more improvement over time compared to patients with severe SSc treated otherwise. In specific, improvement seems to be characterised by normalisation of the capillary diameter and capillary density. To our knowledge, this is the first study to report on changes in microangiopathy after HSCT in a controlled study design.

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THU0414

ASSOCIATION OF THE ESOPHAGEAL DILATION AND INTERSTITIAL LUNG DISEASE ON CHEST HIGH-RESOLUTION COMPUTED TOMOGRAPHY IN PATIENTS WITH IN SYSTEMIC SCLEROSIS: A CROSS-SECTIONAL STUDY

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Background: Esophageal dilation and dysfunction has been implicated in the pathogenesis of interstitial lung disease (ILD) in systemic sclerosis (SSc).

Objectives: The aims of this were to explore the association of the esophageal dilation and ILD on chest high-resolution computed tomography (HRCT) in patients with SSc and to establish a cut-off point for the esophageal dilation suggestive for the presence of a significant SSc-ILD.

Methods: The widest esophageal diameter (WED) was obtained on axial HRCT images. The parenchymal abnormalities on HRCT were coded and scored according to Warrick method. Patient-centred measures, pulmonary function tests (PFTs) and the single breath carbon monoxide diffusing capacity of the lung (DLco) were also obtained. Multivariate regression analyses were performed to identify factors associated with esophageal diameter on HRCT.

Results: 126 subjects with SSc were included in the analysis. The mean (±SD) WED was 13.5 (±4.2) mm, and in 76 (60.3%) participants WED was ≥11 mm. ILD was diagnosed in 86 SSc patients (Warrick score ≥7), while in 40 subjects the lung findings were normal. SSc patients with ILD had larger mean esophageal diameter than those without lung disease (19.4 mm vs. 14.1 mm, p<0.001). We observed a high correlation between WED and Gastroesophageal reflux disease questionnaire (GerdQ) (r=0.886, p<0.001), Borg score (r=0.705, p<0.001), Warrick score (r=0.614, p<0.001). WED negatively correlated with DLco (r=-0.508, p<0.001). Multivariate analysis demonstrated positive associations between mean esophageal diameter and GerdQ (p<0.0001), Borg index (p<0.0005), and total Warrick score (p=0.019).

Conclusions: In patients with SSc, an increased esophageal diameter (>11 mm) on chest HRCT is associated with pulmonary and esophageal symptoms, more severe ILD, and lower DLco.

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THU0415

ANTI-PM/SCl ANTIBODY CLINICAL ASSOCIATIONS IN PATIENTS WITH SYSTEMIC SCLEROSIS. ANALYSIS OF THE MULTICENTER EUSTAR COHORT

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Background: Antibodies to the PM/ScI complex are found in patients with Systemic Sclerosis (SSc), but also with Polymyositis, Dermatomyositis and overlap syndromes. Historically, the main clinical association of anti-PM/ScI antibodies in SSc, which include calcinosis, articular and muscle involvement, and interstitial lung diseases, were described by some large single-centre studies, or by multicenter studies which recruited a relatively small number of positive patients. Therefore, some unresolved issue deserves further research. In particular, scleroderma renal crisis was recently identified in a sizeable number of anti-PM/ScI +SSc patients in a large monocentric British cohort (4 out of 70; 5.7%), a somewhat unexpected finding since this antibody type is generally considered not to be associated with renal crisis.¹

Objectives: To evaluate clinical associations of anti-PM/ScI in patients with SSc in the large multicenter EUSTAR database, with specific focus on scleroderma renal crisis.

Methods: Patients from the EUSTAR database were included when the item anti-PM/ScI was fulfilled in at least one visit; clinical data were collected from the last visit available.

Results: Anti-PM/ScI status was available in 8,287 SSc patients from EUSTAR database: 295 were anti-PM/ScI +. After exclusion of 145 patients with multiple autoantibody positivity, 150 anti-PM/ScI+patients were compared with 7992 anti-PM/ScI -negative patients. Among these, 2530 were positive for anticentromere, 1933 for anti-topoisomerase I, 186 for anti-RNA polymerase III, and 220 for anti-U1Rnp antibodies.

Renal crisis was identified in 8 of 150 anti-PM/ScI+SSc patients (5.3%), and was significantly more frequent than in anti-PM/ScI-negative SSc patients (1.6%; p=0.0015). Positivity for anti-PM/ScI was also associated with male sex, diffuse cutaneous subsets, joint and muscle involvement, lung fibrosis at chest X-rays, heart conduction blocks, stomach and intestinal symptoms (table 1). However, in multivariate analysis, adjusted for age at disease onset, sex, and disease duration, the association of anti-PM/ScI with renal crisis was not significant, whereas