Considering the bone status, patients with Hcy showed a significantly lower TBS ($p=0.03$); the average values of BMD on the lumbar spine ($p=0.79$) and femoral neck ($p=0.13$) were found lower compared to, but without any statistical significance. Furthermore, no significant differences were observed in bone turnover markers according to Hcy levels.

Conclusion: The study demonstrates a relationship between higher levels of Hcy and lower TBS values within SSc patients, particularly in those with most severe microvascular damage at NVC ("Late" SSc pattern). Therefore it is concluded that higher serum levels of Hcy associate to both bone microarchitectural and microvascular damage in SSc.

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AB0439

CAPILLAROSCOPIC PATTERNS IN PATIENTS WITH SYSTEMIC SCLEROSIS-POLYMYOSITIS/ DERMATOMYOSITIS (SSc-PM/DM) OVERLAP SYNDROME

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Background: Impaired microcirculation is one of the leading factors in local and general pathogenesis of SSc. Widefield nail-fold video-capillaroscopy (NFVC) stands as the most informative and at the same time simple method used for evaluation of capillary circulation.

Objectives: To identify characteristic and specific for SSc- PM/DM capillaroscopic features.

Methods: Both hand II – V fingers of 68 pts with SSc-PM/DM were subjected to widefield NFC, evaluated using a binocular 20x magnification Olympus microscope and analyzed in view of specific skin lesions discriminating diffuse and limited SSc forms.

Results: SSc-specific dilatations of capillary loops were the most common for SSc-PM/DM and were found in all pts; 50% of them had signs of active scleroderma pattern, such as capillary loss or "avascular areas" (50%) and hemorrhages (51.5%), associated with generalized microvascular spasm in early disease and capillary sclerosis in advanced disease. The morphological capillary abnormalities such as varying degrees of capillary loops tortuosity/vascular inhomogeneity were present in 63% of examined nailfolds, branching bushy behavior of capillary loops and mega-capillaries predominated; architectural disorientation/disarrangement of capillary loops with formation of subcutaneous plexus was seen in more than 50% of them. Capillaroscopic changes consistent with active scleroderma pattern were present in 54 % and were associated with lab signs of inflammatory muscle syndrome and immunological disorders: giant capillaries ($p<0.02$), disorientation of capillary loops ($p<0.02$) and ramified/ bushy capillaries ($p<0.04$) were significantly more frequent in patients with severe muscle syndrome, increased CPK, ANF -positivity and hemorrhages ($p<0.03$).

Conclusion: Thus, widefield NFVC revealed a "mixed" nature of capillaroscopic changes, combining features specific for SSc (capillary dilation, avascular areas, hemorrhages) and for PM/DM (bushy and giant capillaries, disorientation of capillary loops of the nailfold with formation of subcutaneous plexuses.)

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AB0440

CLINICAL AND IMMUNOLOGICAL FEATURES OF THE SYSTEMIC SCLEROSIS-OVERLAP SYNDROMES

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Background: Systemic Sclerosis (SSc) overlap syndromes (SSc with polymyositis / dermatomyositis (PM/DM), rheumatoid arthritis (RA), etc.) still remain a group of very heterogeneous and not very well studied clinical variants of SSc that are characterized by certain clinical and immunological features.

Objectives: Identify clinical and immunological features of the SSc-overlap syndromes

Methods: 80 pts with SSc-PM/DM and 35 pts with SSc-RA undergoing standard clinical examination and laboratory immunological evaluation.

Results: ANA Hep2 was positive in 98% of SSc-PM/DM pts; a-Scl-70 was in 34%, a - PM-Scl and RF were in 20%. ACA (6%), a-RNP (9%), and a - Jo-1 (5%) were significantly less common. Correlation analysis showed significant prevalence of conduction abnormalities in pts with a-Scl-70- ($p<0.03$); PM-Scl was rarely associated with cardiac arrhythmia ($p<0.02$) and pericarditis ($p<0.03$), but there was an association between ACA and presence of digital ischemia ($p<0.04$). Three pts

with limited skin had Scl-70 and PM-Scl antibodies, two of them manifested clinical features of DM. A-Jo-1 was found in 3 pts with a longstanding disease (14, 10 and 7 years), and one of these pts was also positive for a-Scl-70. All pts had limited skin and two had interstitial lung disease with FVC values of 79% and 74.8%.

ANA Hep2 was positive in 96% of SSc-RA pts; a-Scl-70 – in 28%, and a-RNP - in 30%. RF-positivity was in 72% of pts, and Anti-CCP - in 27%. Simultaneous Anti-CCP and a-Scl-70 was found in one case, and Anti-CCP - anti-RNP – in another, both were associated with low RF titers. All pts had early joint involvement which became prevailing in subsequent years, and onset of the disease between 30 and 36 years. There was a correlation between laboratory signs of inflammatory activity and immunological disorders: ESR and a-Scl-70 ($p<0.03$). Anti-CCP and a-Scl-70 co-positivity was a significantly less frequent phenomenon ($p<0.04$). There was a remarkable 28% proportion of a-Scl-70 cases in SSc-RA with limited cutaneous which is usually characterized by ACA-positivity.

Conclusion: SSc-PM/DM and SSc-RA appear to be an active disease from the immunological point of view, confirming therefore an important role of immune alterations in disease progression. Laboratory findings display specific pathogenetic features of SSc-overlap syndromes; laboratory abnormalities can be used to measure the activity and specify characteristics of the pathological process.

Disclosure of Interests: None declared

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AB0441

NAILFOLD CAPILLAROSCOPY AND CANDIDATE BIOMARKER LEVELS IN SYSTEMIC SCLEROSIS-ASSOCIATED PULMONARY HYPERTENSION; PROFILING OF NON-INVASIVE MARKERS, A COHORT STUDY

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Background: Systemic sclerosis (SSc) is characterized by inflammation, vasculopathy and progressive fibrosis. Pulmonary Hypertension (PH) is one of the leading causes of death in SSc (1). Currently, most patients with SSc are screened for the presence of PH, and focus lies on early detection and early treatment. Recent literature describes potential for both nailfoldcapillaroscopy (NCM) and several biomarkers to serve as non-invasive tools to identify SSc patients at risk for developing PH (2). Ideally this could attribute to further improvement of risk stratification in SSc and PH screenings algorithms.

Objectives: To explore NCM characteristics and plasma levels of selected candidate biomarkers in a cross-sectional cohort of SSc patients with and without different forms of PH.

Methods: From 02-2018 until 02-2019 we included 40 consecutive SSc patients with associated PH (30 (75%) were female, 32 (80%) LcSSc, median age 72 years (IQR 69-77), median SSc duration 10.7 years (IQR 4.3-17.8), median PH duration 3.9 years (IQR 1.5-7.06)) and 40 without PH (28 (70%) were female, 26 (65%) had a LcSSc, median age 59 years (IQR 51-71), median SSc duration 6 years (IQR 3.1-8.6)). In each group NCM characteristics (both quantitative and qualitative) and plasma levels of IL4, IL6, IL8, IL13, PDGFAA, PDGFAB-BB, 6CKine, sTRAIL, MMP1, MMP7, sICAM1, sVCAM, CCL19/MIP3b, Endostatin, sVEGFR1, sVEGFR2, sVEGFR3, CXCL4, Endothelin1, FGF1, FGF2, VEGF-A, VEGF-C, and VEGF-D using Luminex kits, and vascular auto-antibodies AT1R and ETAR using ELISA (Celltrend GmbH, Luckenwalde, Germany) were determined. NCM characteristics were compared using t-tests, biomarker levels were compared by using Mann-Whitney U tests.

Results: We observed no differences in mean capillary density, number of abnormally shaped capillaries, number of fingers with density <3 capillaries/mm and in overall NCM pattern between patients with and without PH. Plasma levels showing significant differences between the two groups are presented in table 1.

Conclusion: We found significant differences in several of the selected biomarkers in SSc patients with and without PH, but not in NCM characteristics between the groups. However, we did observe a tendency toward more morphologic abnormalities and an overall late pattern in the SSc-PH group. Future longitudinal research should explore the added value of these NCM parameters and biomarkers in personalized risk stratification for the development of PH.

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