Results: 270 SSc patients were selected, from which we identified a final population of 28 (10%) anti-Ro-positive patients. The anti-SSA/Ro group included more women (26/28) with a mean age of 47.3 ± 13.7 years, most of them with diffuse subset (16/30). The presence of anti-SSA/Ro antibodies was positively correlated with presence of anti-Scl 70 antibodies (p = 0.012), elevated modified Rodnan score (p = 0.041), myositis (p = 0.013), and lower DLCO (p = 0.019). Moreover, associations were strongest for elevated CRP levels (p < 0.001) and calcinosis cutis (p < 0.001). Compared to non-anti-SSA/Ro patients, both groups were similar regarding demographic data, age at diagnosis, disease duration and type of skin involvement. As expected, the anti-SSA/Ro group had significantly more frequent erosive synovitis (p = 0.002), myopathy (p = 0.010), gastrointestinal involvement and interstitial lung disease (ILD) (p = 0.001). No statistically significant differences were found regarding frequencies of Raynaud’s phenomenon, pulmonary hypertension, renal, vascular and cardiac involvement, nor neoplasia. There was a greater proportion of digital ulcers and calcinosis in the anti-SSA/Ro group (42% vs 17% and 58% vs 14%), but without statistical significance. Furthermore, among those patients, a much higher proportion (64% vs 42%) was treated with immunosuppressive agents. No differences in mortality were found between the groups.

Conclusion: Anti-SSA/Ro antibodies seem to characterize a distinct group of SSc patients who are almost exclusively female, express elevated CRP levels, have a high prevalence of ILD, myositis, joint involvement and calcinosis, and commonly receive immunosuppressants.

REFERENCE:

Acknowledgements: NIL.
Disclosure of Interests: None Declared.
DOI: 10.1136/annrheumdis-2023-eular.5034

POS1321

ABSENCE OF NAILFOLD CAPILLAROSCOPY FINDINGS DEFINES A CLINICALLY DISTINCT SYSTEMIC SCLEROSIS SUBSET

Keywords: Organ damage, Systemic sclerosis, Outcome measures

Background: In systemic sclerosis (SSc), a specific nailfold videocapillaroscopy (NVC) pattern is observed in 90% of cases and seems to be associated with severity and progression of the disease. Data about SSc patients with normal/non-specific NVC are scarce [1].

Objectives: This study aims to investigate the clinical and immunologic characteristics of SSc patients with normal or non-specific NVC and to compare them to those with a sclerodermat NVC pattern.

Methods: This was a single-center retrospective study which enrolled 270 SSc patients referred for NVC since January 2000, in our rheumatology department. Demographic and clinical features, symptoms and parameters related to a specific organ involvement according to MEDS evaluation sheets were evaluated in all patients.

Results: 270 SSc patients were selected in the database, from which we identified a final population of 19 (7%) patients with normal/non-specific NVC pattern. The group comprised 14 females and 5 males, with a mean age of 52.7 (±17.4) years, most of them with diffuse subset (12/19). Among the cases, 8 (42%) had normal NVC and 11 (58%) had non-specific NVC changes, characterized by isolated ramified capillaries in 42%, curved capillaries in 33%, giant capillaries in 16% and focal microhemorrhages in 8% of patients. The mean Raynaud phenomenon’s (RP) duration was longer (18.4 ± 14.4 years) compared to the other cases (10.2 ± 1.5 years). The difference was not significant (p = 0.107). Significantly higher percentages of cases had lower overall frequency of digital ulcers (28% vs 51%, p = 0.04). Presence of synovitis (p = 0.010) and myositis (p < 0.001) was positively correlated with normal/non-specific NVC changes. Regarding other organ involvement, the cases also had less severe pulmonary involvement, less frequent digestive involvement and/or pulmonary arterial hypertension than controls, but these differences did not reach significance. No differences in mortality were found between the groups.

Conclusion: SSc patients with normal/non-specific NVC changes have less organ involvement and less overall disease severity than those with a typical SSc specific NVC pattern, with no between-group differences. Musculoskeletal involvement was the only factor independently associated with normal/non-specific NVC. It is possible that SSc with normal NVC may be at lower risk of progression to severe visceral and skin involvements, but prospective studies are required.
Low CD32 expression accounts for the association of CD21low B cells with digital ulcers in systemic sclerosis

**Keywords:** Systemic sclerosis


**Agenda:** Aberrations of B cells have been implicated in the pathogenesis of systemic sclerosis (SSc) [1] and CD21low B cells, which express high levels of activation markers, have recently been associated with vascular manifestations in SSc [2]. CD32 (FcγRII), comprised of three isoforms A, B, and C, is involved in B cell regulation and antibody production. B cells do not express FcγRIIA and mainly express the inhibitory FcγRIIB isoform [3].

**Objectives:** The aim of our study was to assess the expression of CD32 in CD21low B cells in SSc patients with digital ulcers (DUs).

**Methods:** Thirty patients, 23 women (median age 56 years), Intervertebral range 32-81 and 7 men (median age 60 years, Intervertebral range 52-79) fulfilling the ACR/EULAR 2013 criteria for SSc were included in the study. Peripheral blood mononuclear cells from patients were analyzed with multicolor flow cytometry using anti-CD19 monoclonal antibody (moAb), anti-CD21 moAb, and anti-CD32 moAb, that recognizes both the FcγRIIA and FcγRIIB isoforms.

**Results:** The percentage of CD21low B cells was significantly increased in patients with DUs compared to patients without DUs (difference between means: 24.6, 95% CI 5.37-43.8, p = 0.014). The percentage of CD21lowCD32low B cells were significantly increased in patients with DUs compared to patients without DUs (difference between means: 23.24 ± 7.364, 95% CI 8.152-38.32, p = 0.0076) (Figure 1A). The percentage of CD21lowCD32low B cells was significantly increased in the DUs group (difference between means: -26.61 ± 9.312, 95% CI -45.69 to -7.539, p = 0.0080) (Figure 1B).

**Conclusion:** Our study suggests that low expression of CD32 accounts for the association of CD21low B cells with DUs in SSc and implies that CD32 may have an inhibitory effect on CD21low B cells.

**Acknowledgements:** NIL.

**Disclosure of Interests:** None Declared.

**DOI:** 10.1136/annrheumdis-2023-eular.5034

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Body composition in patients with systemic sclerosis: Results of a computed tomography study

**Keywords:** Imaging, Systemic sclerosis

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**Background:** Subclinical primary muscular involvement and malnutrition may occur in a significant percentage of patients with systemic sclerosis (SSc), and they are potential risk factors for the development of sarcopenia [1]. Sarcopenia is defined as age-associated loss of muscle mass, strength, and function, and unlike other chronic inflammatory disorders, it has been poorly investigated in SSc patients. In recent years, some imaging methods have emerged for the evaluation of sarcopenic markers such as altered muscle composition and fat infiltration (myosteatosis).

**Objectives:** To evaluate the occurrence of myosteatosis and the prognostic role of body composition, assessed by computed tomography, in patients affected with SSc.

**Methods:** Patients affected with SSc (2013 EULAR/ACR criteria) referring to our tertiary center from 2015 to 2021 who underwent chest computed tomography to assess pulmonary involvement were included. A semi-automatic segmentation of the human thorax was performed using a software and the following body composition variables were assessed: body area, paravertebral muscle Hu. Myosteatosis was considered as Hu values >30. The Student’s t-test was used to evaluate if any differences in BCV occurred between males and females. Logistic regression analysis was applied to assess the role of the BCV on the overall survival while the Spearman correlation coefficient was used to evaluate the relationship between the BCV and the skin score. For all the analyses the applied significance level was p<0.05.

**Results:** Sixty SSc patients were included (51 females; mean age 55.63±14 years). Most patients were positive for anti-nuclear antibodies (ANA, 90%), with anti-topoisomerase I specificity in 61.6% of them; twenty-nine patients (48.3%) were affected by the diffuse cutaneous form of the disease. At baseline, the mean modified Rodman skin score (mRSS) was 10.22 ± 8.8 and the mean revised EUSTAR activity index was 2.08 ± 1.4. Signs of myosteatosis were detected in forty-seven (78.3%) SSc patients. Males showed significantly greater muscle areas (males 9732±3019 vs. females 6599±1328 mm²; p<0.001) and less hypodense subcutaneous fat (males 76±18 vs. females 88±16 Hu; p=0.027). Overall, seven patients deceased at a 5-year follow-up. No correlation was found between BCV and the mRSS. None of the radiological variables emerged as a predictor of survival.

**Conclusion:** Most patients with SSc are affected by myosteatosis, even those without symptoms of muscle involvement, while overall body composition does not appear to predict survival. The results of our pilot study may open the door to evaluating the role of body composition in SSc patients/larger longitudinal studies looking at different time-points in the disease course may provide further insights.

**Acknowledgements:** NIL.

**Disclosure of Interests:** None Declared.

**DOI:** 10.1136/annrheumdis-2023-eular.5100

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**REFERENCES:**


[Acknowledgements: NIL.]

[Disclosure of Interests: None Declared.]

[DOI: 10.1136/annrheumdis-2023-eular.5100]