was significantly higher than in groups 1,2 ($p < 0,01$ and $p < 0,04$ accordingly) at the end of the study.

Conclusion: Mean values of EScSG-AI score associated with and were accompanied by progression pulmonary alterations in pts SSc so EScSG-AI score can be used as valuable tool for long-term follow-up studies.

Disclosure of Interests: None declared

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AB0218 CORRELATION BETWEEN IMMUNOLOGICAL PARAMETERS AND PULMONARY FUNCTION PARAMETERS IN THE PATIENTS WITH SSC AND ILD OVER 5 YEARFOLLOW UP STUDY

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Background: Interstitial lung disease (ILD) is related to specific radiographic features in lung imaging and/or the presence of restrictive disorders in pulmonary function tests (PFTs). ILD is one of the leading causes of death in systemic sclerosis patients. Major risk factors of ILD associated with SSc (SSc-ILD) include male sex, diffuse type of cutaneous SSc and presence of anti-Scl-70 antibodies.

Objectives: Taking into account that anti-Scl-70 antibody is an unfavorable predictor of ILD, we have assessed the time course of FVC and DLco in anti-Scl-70-positive and anti-Scl-70-negative patients.

Methods: It was a longitudinal study involving 77 pts with SSc-ILD (mean age was $46,2 \pm 13,4$; 69% have limited subset of the disease; 93% were female). The mean duration of follow up was $58,9 \pm 11,4$ months. Pts. were investigated with HRCT twice (at first visit and at the end of the study) and according the CT-changes were divided into 3 groups: the 1st group (16 pts) with improvement; 2nd group (39 pts) without any changes and 3rd group (22 pts) with worsening of fibrosis. We evaluated the forced vital capacity (FVC), diffusing capacity of carbon monoxide (DLCO) in one year and in 5 years and anti-Scl-70 antibodies at the end of the study.

Results: In anti-Scl-70-negative patients the average FVC remained unchanged within a year ($91,4 \pm 17,4\%$ и $91,6 \pm 17\%$, respectively), however, within 5 years FVC significantly increased to $99,1 \pm 20\%$ ($p < 0,001$), while in anti-Scl-70-positive patients the average FVC was lower at the baseline and remained virtually unchanged both 1 year and 5 years later ($85,4 \pm 17,3\%$. $85,5 \pm 17$ и $86 \pm 21\%$, respectively), as a result in 5 years' time the average FVC in anti-Scl-70-negative patients was significantly higher than in anti-Scl-70-positive patients ($p = 0,009$).

At the baseline average DLco were below normal and were similar in anti-Scl-70-positive and anti-Scl-70-negative patients: $60 \pm 19\%$ и $61,2 \pm 14,3\%$ respectively ($p 0,05$). Within 1 year DLco significantly decreased in all patients, however anti-Scl-70-positive patients demonstrated more pronounced DLco decrease to $53,4 \pm 17,2\%$ ($p 0,0001$), while in anti-Scl-70-negative patients it was less pronounced to $57,2 \pm 12,8\%$ ($p < 0,05$), respectively. Within 5 years significant DLco decrease was found only in anti-Scl-70-positive patients: $53,9 \pm 16,4\%$ ($p < 0,001$).

The time courses of DLco in anti-Scl-70-positive and anti-Scl-70-negative patients by group are shown in Table 1.

Significant DLco decrease over the 5-year period was observed in Group 2 and Group 3, and the lowest DLco ($<50\%$) were observed in Group 3.

Table 1: The time course of DLco in anti-Scl-70-positive and anti-Scl-70-negative patients by group over the 5 year observation period

Observation period	Group 1		Group 2		Group 3	
	With anti-Scl-70 (n = 4)	Without anti-Scl-70 (n = 11)	With anti-Scl-70 (n = 19)	Without anti-Scl-70 (n = 17)	With anti-Scl-70 (n = 17)	Without anti-Scl-70 (n = 3)
In 1 year (M $\pm$ δ)	78.5 $\pm$ 18	61.5 $\pm$ 18	62 $\pm$ 19	64.1 $\pm$ 11	52 $\pm$ 17	64 $\pm$ 1.8
In 5 years (M $\pm$ δ)	70 $\pm$ 12.5	57 $\pm$ 14	56 $\pm$ 14	61.5 $\pm$ 9	45 $\pm$ 16	52 $\pm$ 7
P	> 0.05	> 0.05	< 0.05	> 0.05	< 0.05	> 0.05

Conclusion: Therefore, the presence of anti-Scl-70 antibodies was associated with significantly lower pulmonary function parameters specifically in pts with progressive ILD.

Disclosure of Interests: None declared

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AB0219 BIOMARKER EXPRESSION IN MONOCYTE SUBPOPULATIONS IN SSC PATIENTS

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Background: Systemic sclerosis (SSc) is a chronic autoimmune disease characterized by vasculopathy and fibrosis, which can be classified into diffuse cutaneous (dSSc) and limited cutaneous (lSSc) subtypes. Monocytes are key agents in the pathophysiology of systemic autoimmune diseases, including systemic sclerosis (SSc). M1 cells (CD14++CD16-) represent a predominantly pro-inflammatory phenotype and M2 cells (CD14-/+CD16+/++) are more associated to an regulatory/pro-fibrotic phenotype.

Objectives: Our aim was to evaluate circulating blood monocyte subpopulations [classical (M1), intermediate and non-classical (M2)] and analyze the expression of CD163, CD169, CD206 and HLA-DR (function and activation monocytes receptors).

Methods: Fifty consecutive patients fulfilling the 2013 ACR/EULAR classification criteria for SSc were included in a cross-sectional study. Monocyte subpopulations were identified and characterized according to the expression of CD64, CD16, CD14, CD163, CD169, CD206 and HLA-DR. Thirty-eight age- and sex-matched healthy individuals were recruited as a control group.

Results: SSc patients mean age was $57,2 \pm 12,8$ years (HC $55,2 \pm 11,4$) and 94% were female. Limited form of disease was present in 72% of SSc patients and. SSc patients had an increased number of circulating peripheral blood monocytes compared to healthy subjects (table 1). Absolute counts of CD16+ (intermediary and non-classical) monocyte subpopulations were higher in SSc patients compared to HC [$79,9$ ($53,4-103,5$)/mm³ vs. $55,9$ ($26,8-85,8$)/mm³, $p=0,003$]. HLA-DR intensity of expression was higher in all monocyte subsets from lSSc and dSSc patients when compared to control. There was a higher percentage of classical [$1,56$ ($0,84-2,98$) vs. $0,68$ ($0,37-1,88$); $p=0,003$] and intermediate monocytes [$15,9$ ($9,5-29,9$) vs. $6,1$ ($3,7-11,5$); $p<0,001$] with CD206 expression in SSc patients compared to HC, and a higher percentage of CD169 expression in dSSc patients compared to control and lSSc groups ($p<0,01$).

Table 1. Absolute value (/mm³) about monocytes subpopulations in all systemic sclerosis (SSc) patients compared to healthy controls (HC) and in limited (lSSc) and diffuse (dSSc) systemic sclerosis subtypes.

Monocytes subpopulations	SSc patients (n=50)	HC (n=38)	p *	lSSc (n=36)	dSSc (n=14)	p * (lSSc x HC)	p * (lSSc x dSSc)	p * (dSSc x HC)
Classical monocytes	346.2 (260.9-450.8)	209.8 (146.1-287.1)	<0.001	363.2 (262.9-451.8)	326.5 (231.2-461.9)	0.779	<0.001	0.003
Intermediate monocytes	38.2 (24.6-47.1)	25.4 (12.6-41.2)	0.005	38.5 (24.7-47.5)	37.1 (22.1-49.1)	0.795	0.009	0.069
Non-classical monocytes	41.2 (20.8-58.3)	28.3 (11.5-46.1)	0.006	42.5 (20.8-69.0)	37.1 (20.8-47.3)	0.310	0.005	0.201

Data are shown as median (interquartile range- IQR). * Mann-Whitney U test

Conclusion: In our study, SSc patients show greater monocytes counts than HC with a predominantly regulatory/pro-fibrotic phenotype (M2). dSSc seems to be more associated to CD169 than lSSc.

REFERENCES:

- [1] Trombetta AC, Soldano S, Contini P, Tomatis V, Ruaro B, Paolino S, et al. A circulating cell population showing both M1 and M2 monocyte/macrophage surface markers characterizes systemic sclerosis patients with lung involvement. *Respir Res*. 2018.
- [2] Lescoat A, Lecureur V, Rousseau M, Sunnam BL, Ballerie A, Coiffier G, et al. CD16-positive circulating monocytes and fibrotic manifestations of systemic sclerosis. *Clin Rheumatol*. 2017.

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