AB0451

TO EVALUATE THE PREVALENCE OF INTERSTITIAL LUNG DISEASE (ILD) AND/OR PULMONARY ARTERIAL HYPERTENSION (PAH) IN PATIENTS AFFECTED BY SYSTEMIC SCLEROSIS (SSC) AND TO DETERMINE THE FACTORS ASSOCIATED WITH ILD

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Background: Systemic sclerosis (SSc) is a chronic autoimmune disease that carries significant mortality. Despite diagnostic and therapeutic advances in recent years, there is still a significant percentage of patients who do not present a complete clinical response, with the associated increase in morbidity and mortality. Specifically, pulmonary disease is frequent and entails a poor prognosis, with interstitial lung disease (ILD) and pulmonary hypertension (PAH) being the two most important complications, the first and second cause of mortality, respectively.

Objectives: To evaluate the prevalence of ILD and/or PAH in patients affected by SSc and to determine the factors associated with ILD.

Methods: Cross-sectional observational study of 102 patients diagnosed with SSc (Limited, Diffuse, SSc without scleroderma or Pre-scleroderma), treated between 1975 and 2020 at the Reina Sofia University Hospital in Córdoba. A descriptive study of the cohort was carried out and factors independently associated with ILD were evaluated using a multiple logistic regression model.

Results: 102 patients were included, 87.3% of these were female with an average age of 50.8 (14) years. There were 20 deaths (19.8%), from which 55% died because of SSc and the main reason was ILD and/or PAH. Respiratory complications (as ILD or as PAH) were present in 59 patients (57.8%), of whom 52 were diagnosed with ILD (90.4% with a pattern of non-specific interstitial pneumonia) and 25 PAH, whose mean pulmonary artery systolic pressure was 47.16 (18.54) mmHg. Anti-topoisomerase I antibodies were positive in 34.6% of patients who developed ILD, while anticentromere antibodies were more frequent in SSc without interstitial lung disease (80%). Independent factors associated with ILD were type of SSc, proximal skin involvement, anticentromere antibodies, current treatment with corticoids and the death.

Conclusion: Just over half of the patients with SSc have lung disease (as ILD or as PAH). The main risk factors associated with ILD are proximal skin involvement and treatment with glucocorticoids, probably in the context of more severe forms that require more treatment. Anticentromere antibodies are more prevalent in patients with Limited SSc and their expression decreases the risk of developing ILD in these patients.

REFERENCES:

- Orlandi M, Barsotti S, Lepri G, et al. Clin Exp Rheumatol 2018 Jul-Aug; 36 Suppl 113: 3-23
- Hao Y, Hudson M, Baron M, et al. Arthritis Rheumatol. 2017;69(5):1067-1077.
- Furue M, Mitoma C, Mitoma H, et al. Immunol Res. 2017 Aug; 65: 790-7.
- Nihtyanova SI, Schreiber BE, Ong VH, et al. Arthritis Rheumatol. 2014 Jun; 66: 1625-35.

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.3524

AB0452

GENDER FEATURES IN PSYCHOLOGICAL STATUS IN PATIENTS WITH LUNG ULTRASOUND SYNDROME

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Background: The use of lung ultrasound (LUS) in the management of patients with ILD has the advantage of lower cost and the absence of x-ray radiation.

Objectives: to establish the relationship between ultrasound manifestations of interstitial syndrome and indicators of psychological status in patients with secondary ILD in patients with rheumatic diseases.

Methods: 25 patients with secondary ILD in patients with rheumatic diseases (15 patients with systemic scleroderma, 8 patients with ANCA associated systemic vasculitis, 2 patients with dermatomyositis) were investigated. All patients underwent a standard clinical examination, high-resolution RCT of lungs. To assess depression and anxiety were used the following scales: State-Trait Anxiety Inventory, symptomatic questionnaire SCL-90-R, Beck Depression Inventory. LUS was carried out for the evaluation of the location and number of B-lines on both right and left hemithoraces using commercially available echographic equipment with a 5-12 MHz linear transducer (Accuvix A30, Samsung Medison).

Results: Most patients had an average number of B-lines 24,5[11,5;34,0]. In woman the total number of B-lines correlated with the situational anxiety

($r=-0,71$, $p<0,05$), with the personal anxiety ($r=-0,6$, $p<0,05$) and with somatization ($r=-0,67$, $p<0,05$). Also there was a trend between somatic ($r=-0,49$, $p=0,08$) and affective ($r=-0,51$, $p=0,07$) subscales, general depression ($r=-0,48$, $p=0,1$), but did not achieve statistical significance, probably due to the small number of patients. Among patients, including men and women, no statistically significant correlation was found.

Conclusion: The relationship between situational, personal anxiety, somatization and the total number of B-lines among women with secondary ILD was found. More research is needed to clarify details.

REFERENCES:

- Dietrich CF, Mathis G, Blaivas M, Volpicelli G, Seibel A, Wastl D, Atkinson NS, Cui XW, Fan M, Yi D. Lung B-line artefacts and their use. J Thorac Dis 2016;8(6):1356-1365. doi: 10.21037/jtd.2016.04.55
- Tatiana Barskova, Luna Gargani, Serena Guiducci, et al. Lung ultrasound for the screening of interstitial lung disease in very early systemic sclerosis Ann Rheum Dis 2013;72:390-395. doi:10.1136/annrheumdis-2011-201072

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.3546

AB0453

THE CHARACTERISTICS OF SSC-ILD PATIENTS WITH ACTIVE THERAPY IN DIFFERENT PROGNOSIS INTERVALS BASED ON DISCRIMINANT ANALYSIS

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Background: Interstitial lung disease (ILD) frequently complicates SSc and can be a debilitating disorder with a poor prognosis. Several risk factors for progressive SSc-ILD have been identified and prognostic scoring systems have identified predictors of mortality. It's important to develop treatment recommendation.

Objectives: To use the discrimination function for pts with SSc-ILD and highlight pts with different prognosis.

Methods: It was a longitudinal study involving 140pts with SSc-ILD. The mean age was 46.7±13.9ys, females 82%, SSc duration 6.2±5.8ys, diff subset-54%. The mean duration of follow up was 73,2±27.8months. All pts received low- and moderate-dose glucocorticoids (Gc), RTM (the mean dose 3,14±2,38g) and 77 pts had received parenteral CyP (mean dose 15,9±15,6g).

We have got the discrimination function that included: ground glass opacities (GGO)(1—the absents of GGO; 2—the presents of GGO); index EScSG (the digital value); FVC(FVC≥75=0, FVC<75=1); the maximum daily dose of Gc (the digital value,mg); Gamma globulins (the digital value,%); cyclophosphamide (CYC) (the absence of CyP=0, the treatment of CYC=1);DLco(DLco<52%=0, DLco≥52=1). We assessed all parameters at the entry in the study except DLco evaluated after one year of follow up. Based on this analysis the equation was developed. The equation of prognosis is 3.14GGO+0,70index EScSG-1,326 FVC-0,1 the maximum daily dose of glucocorticoids+0,136 Gamma globulins+1.066 CYP-1.075DLco≤5,8.

Value of equation of prognosis to 5.8 corresponds to stabilization or good prognosis and value after 5.8 corresponds to poor prognosis.

Results: On results of discrimination function pts were distributed in the following order: 22 pts(16%) were into zone of stabilization(Group 1) and 118(84%) - in zone of poor prognosis, among which 13pts died during the study. That's why pts in zone of poor prognosis were divided into group 2 - survived pts (n=105(75%)) and group 3— died pts(n=13 (9%)). So we have got 3groups; the age, SSc duration, gender proportion and SSc forms, were similar in the all groups($p>0,05$).

Table 1. Baseline characteristics of the groups

Parameters	Group 1 (n=22) M±SD	Group 2 (n=105) M±SD	Group 3 (n=13) M±SD
CRP mg/ml	9,4±10,4	11,5±23,4	21,5±27,1
ME [25%/75%]	7,5 [1,9;11,2]	5 [1,6;10,4]	9,9 [5;32,8]
ESR mm/h	17±16,35	23,6±17	22,9±14,3
a-Scl-70 u/ml	62,5±85*	118,6±93,09*	102,1±96
Skin score	9,63±7,7	11,5±9,9	9±9,23
Index EScSG	1,9±1,7**	3,4±1,9**	2,9±1,1
Mean PAP mm hg	31,9 ±7β ββ	35±11,9 β	47,5±23,3ββ
Cumulative dose of CyP g	1,5±3γ γγ	11,4±14,4γ	18,9±23,3γγ
ME [25%/75%]	0 [0;2]	4,9 [0;17]	4 [0;46,5]
Cumulative dose of RTM, g	3,15±1,6	2,63±1,36	2,2±1,5

* - $p=0,01$; ** $p=0,0008$; β - $p=0,006$; ββ - $p=0,03$; γ - $p=0,002$; γγ - $p=0,0018$ Mean level a-Scl-70, Index EScSG were significantly lower in group 1 vs group 2. Mean value of PAP and dose of CyP were significantly increased in group 3. It should be noted that pts with good prognosis have had low level of all parameters and high dose of RTM.