Table 2. Clinical profile of patients with Tuberculosis

Clinical profile of Tuberculosis cases				
Clinical parameter	Adult lupus (n=8,%)	Pediatric lupus (n=10,%)	Myositis (n=24,%)	P (SLE vs. IBM)
Cases on high dose steroid*	3 (37.5)	4 (40.0)	5 (20.8)	0.15
Disease duration <=1 year	4 (50)	4 (40)	8 (33.3)	0.50
Pulmonary: Extra-pulmonary	4:4	5:5	5:7	0.76
Tissue/Fluid diagnosis	1 (12.5)	7 (70)	10 (41.7)	1.00
Active underlying disease	4 (50)	7 (70)	12 (50)	0.54
Relapse of TB	2* (25)	0	2 (11.8)	0.76
Resistant Tuberculosis				
MDR suspect	0	0	2	0.09
Pre-XDR	0	0	1	1.00
Death	1 (12.5)	1 (12.5)	0	0.09

*(>0.5mg/kg) * One patient each had CKD and family history of TB

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AB0582

DIAGNOSING SYSTEMIC SCLEROSIS WITH PHOTOACOUSTIC AND HIGH-FREQUENCY ULTRASOUND IMAGING

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Background: Vasculopathy is already evident in early systemic sclerosis (SSc); Raynaud's phenomenon and typical nailfoldcapillaroscopic findings are part of the criteria of very early diagnosis of SSc (VEDOSS) (1). As not all early SSc patients have alterations in their nailfoldcapillaries, there is need for other diagnostic tools. Photoacoustics(PA) and high-frequency ultrasound (HFUS) might be able to fulfill this need (2). The former can measure the oxygen saturation of hemoglobin by using short pulsed laser light while the latter can provide high-resolution images that allow measuring skin thickening distal from DIP joint, which could be used to determine skin involvement early.

Objectives: We hypothesize that photoacoustics and high-frequency ultrasound can distinguish (early) SSc patients from individuals with primary Raynaud's phenomenon (PR) by measuring the oxygenation (by PA) of the fingertip and skin thickening (by HFUS).

Methods: In our cross-sectional study, we compared measurements of the third finger in (early)SSc patients with individuals with PR and healthy volunteers. Smoking and beta-blockage were exclusion criteria. The level of oxygenation (by PA) and skin thickness (by HFUS) were compared between groups. Nailfoldcapillaroscopy was performed on all subjects and analyzed for the pattern.

Results: Thirty-one adult subjects participated in this study: twelve patients with SSc, 5 patients with early SSc, 5 volunteers with PR and 9 healthy controls.

We found a significant difference in median (IQR) oxygen saturation between earlySSc patients 75.9% (IQR 75.1%-86.6%) and subjects with PR 94.1% (IQR 93.1%-94.5%) (p=0.0002) using the Wilcoxon rank-sum test (figure 1).

Figure 1. Boxplot of saturation (%) per group.

Measurements of skin thickening also showed a significant difference in early SSc patients compared to subjects with PR, respectively 0.5mm (IQR 0.4mm-0.5mm) vs. 0.3mm (IQR 0.3mm-0.3mm), P=0.0002 (figure 2).

Figure 2. Boxplot of skin thickness (mm) per group.

Conclusion: Our results demonstrate that photoacoustic and high-frequency ultrasound can distinguish between (early)SSc and PR in both oxygenation saturation and skin thickening. In a larger prognostic study we want to determine the value of photoacoustic and high frequency ultrasound in diagnosing earlySSc.

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AB0583

COMPARISON OF THE RITUXIMAB (RTM) IN MONOTHERAPY REGIMEN AND CYCLOPHOSPHAMIDE (CYP) EFFICACY AND SAFETY IN SYSTEMIC SCLEROSIS (SSC) WITH INTERSTITIAL LUNG DISEASE (ILD)

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Background: CyP is considered as a drug of choice for the treatment of ILD in the patients with SSc. However, the use of CyP leads to rather limited and transient improvement of the pulmonary fibrosis. RTM is considered as a promising therapeutic agent for treatment of ILD in the patients with SSc. However, the limited number of RTM-treated patients, considerably different dose regimens, cumulative doses, and observation periods does not allow univocal conclusions on RTM efficacy or definitive recommendations on RTM use in the patients with SSc.

Objectives: To compare the impact of CyP and RTM a single-agent therapy on SSc clinical manifestation and activity, and the safety of these agents in the open-label prospective non-randomized study.

Methods: 71 patients with the confirmed SSc diagnosis and ILD evidence based on multispiral computed tomography findings were enrolled into the study. All patients received low-dose and moderate-dose glucocorticoids regimens. Group A (n=35) received RTM as a single therapy agent over the follow-up period 13.3±2.3 months in a total dose 1.35±0.5g (the patient's average age was 45.0±15 years, with female proportion 80%; SSc duration 6.3±2.3 years; diffused/localized forms 1.3/1). Group B (n=36) received parenteral CyP for 12±6 months at total dose 10.6±5g (the average age 47±12 years, females 92%, SSc duration 5.0±4.8 years, diffused/localized forms 1.6/1). The age, gender proportion, SSc form and SSc duration, FVC, were similar in the both groups. The time courses of FVC, modified skin count (mRss, points), activity index (EScSG, points) were assessed in the study.

Results: The glucocorticoids starting dose that patients received at the time of inclusion in the study was significantly higher in group B compared to group A (p=0.03). Only after a year of CyP therapy, the dose of glucocorticoids was reduced to the starting dose in group A.

In Groups A and B the therapy was associated with significant decrease in mRss ($p=0.02$ and 0.009 , respectively) and EScSG ($p=0.00017$ and 0.000165 , respectively).

Evaluation of FVC time course in Groups A and B revealed significant FVC increase ($p=0.002$ and 0.034 , respectively), with median increment about 5%.

The 10% FVC increase and decrease was similar in both groups.

The therapy was better tolerated in RTM-treated group: during RTM therapy adverse reactions emerged in significantly lower proportion of the patients (4/11%) compared with CyP-treated group (19/53%), $p=0.0000$.

Parameters	Group A	Group B
Activity Index 1 M ± SD	2.8±1.4*	3.2±1.9*
Activity Index 2 M ± SD	1.4±1.2*	1.6±1.3*
Skin count 1 M ± SD	11.5±9.5 *	11.0±9.3 *
Skin count 2 M ± SD	8.2±6.2 *	7.2±5.6 *
FVC 1 M ± SD	78.7±20.0 *	76±20.3*
FVC 2 M ± SD	84.2±20.0*	82.7±22.5*
Δ FVC %	5.3 [0.8; 11.1]	5.7 [0; 11.2]
FVC increment by ≥10%, n/%	9/26	14/31
FVC decrement by ≥10% n/%	2/5.7	2/4.4
Dose of glucocorticoids 1, mg	11.6±4.7	10.4±4.6
Dose of glucocorticoids 2, mg	15.3±8.5*	10.9±5.4*

Notes: in Parameters column 1 = before treatment, 2 = after treatment; M ± SD = mean value and standard deviation; * = significant difference between the values measured before and after the treatment

Conclusion: Both agents effectively alleviated skin induration and EScSG, and significantly improved FVC. However, the glucocorticoids doses that needed to be used during anti-B cell therapy were significantly lower compared to CyP treated patients. The RTM single therapy was better tolerated compared to CyP. The study findings substantiate potential use a RTM single therapy both as a first-line agent for ILD treatment in the patients with SSc, and in the event of CyP inefficacy of poor tolerability.

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AB0584

DOES ANTI-ACID TREATMENT INFLUENCE DISEASE PROGRESSION IN SYSTEMIC SCLEROSIS INTERSTITIAL LUNG DISEASE (SSC-ILD)? DATA FROM THE GERMAN SSC-NETWORK

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Background: Gastroesophageal reflux (GER) is common in SSc and thus treatment with anti-acid therapy (AAT) is frequent. An association between GER and the development / progression of SSc-ILD has been hypothesized. However, outcomes of AAT on disease progression in SSc-ILD has only sparsely been studied.

Objectives:

Methods: The German Network for Systemic Scleroderma (DNSS), which includes SSc pts. prospectively, was analyzed for SSc-ILD. Those without progression at ILD 1st diagnosis were categorized in AAT vs. no-AAT users and disease outcome was assessed.

Results: SSc-ILD was reported in 1165 (28.2%) out of 4131 pts. 712 of SSc-ILD pts had no disease progression at ILD 1st diagnosis. 567 used AAT while 145 did not. Baseline characteristics were similar between groups with regards to age (mean 54.7 years), BMI, time since SSc diagnosis and immunosuppressant use. Significant differences in no-AAT vs. AAT were found for gender (male 18% vs. 25%, $p=0.05$), SSc subtype ($p=0.002$, diffuse more common in AAT), lung function (DLCO 66% vs. 58%, $p=0.001$; FVC 86% vs. 77%, $p=0.001$), mRSS (8 vs. 11.5, $p<0.01$), esophageal involvement (32% vs. 56%, $p<0.01$) and steroid use (30% vs. 43%, $p=0.005$). While mortality did not differ between groups (3.9%, $p=0.59$), disease progression was more common in the AAT group than in no-AAT users (24.5% vs. 13%, $p=0.03$). Furthermore, there was a significant difference in decline of FVC≥10% with 30% in the AAT compared to 14% in no-AAT ($p=0.018$); a decline in DLCO≥15% was more common in the AAT group by trend (23% vs. 14%, $p=0.087$).

Conclusion: While results may have partially been biased by differences in baseline characteristics, this current analysis disfavors the approach of AAT use for SSc-ILD.

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