years, although SSc may also start in both young and elderly patients. Few data have been reported on patients suffering from late-onset SSc.

Objectives: To characterise clinical and immunological features of early and late-onset SSc in a tertiary referral hospital.

Methods: We analysed data from 178 patients followed at our SSc clinic. All the patients fulfilled the ACR/EULAR 2013 classification criteria for SSc or the LeRoy's criteria for the classification of early SSc.

Based on the mean of age of onset of the whole series (50±15 years), ages extremes were defined as younger than 35 versus older than 65 years of age at onset. Disease characteristics as well as clinical and immunological features were evaluated.

Results: The early and the late-onset groups included 35 and 31 patients, respectively. Patients' current mean age was 42.8±14.1 vs. 75.8±6.2 with a mean disease duration of 14.5±14.7 vs. 4.3±4.6 years. The most common first manifestation of disease was Raynaud phenomena followed by arthritis/inflammatory arthralgia, in both groups. However, the time between clinical onset and SSc diagnosis was higher in the late-onset group ($p=0.034$). A higher number of diffuse and pre-SS was observed in the early group but this difference didn't prove statistically significant. There was a higher prevalence of centromere antibodies in the late-onset group ($p=0.001$). Clinical manifestations and target-organ damage didn't differ between groups, except for a higher prevalence of heart conduction abnormalities in the late-onset group ($p=0.02$). In multivariate analyses, age alone ($OR=1.04$; 95% CI 1.0, 1.1), but not disease duration ($OR=0.99$; 95% CI 0.9–1.0), was an independent predictor for the presence of heart conduction abnormalities.

Abstract SAT0501 – Table 1. Demographic, clinical and immunological features of Early and Late-Onset SSc Patients. Abbreviations: yr = years; SSc = Systemic Sclerosis. * confirmed by esophageal manometry. ** Based on pulmonary function tests with diffusing capacity of lung for carbon monoxide. *** Diagnosed with echocardiography and confirmed by right heart catheterization wherever available.

	Early-Onset Group (≤ 35 yr), n=35	Late-Onset Group (≥ 65 yr), n=31	<i>p</i>
Sex (male:female)	6:29	5:26	0.912
Age at diagnosis (yr)	28.3 ± 5.4	71.4 ± 4.7	< 0.001
Time until diagnosis (yr)	4.3	8.5	0.034
First manifestation (%)			
- Raynaud	82.9	62.1	0.061
- Arthritis/Arthralgia	14.3	20.7	0.499
Type of SSc (%)			
- Pre-SSc	37.1	25.8	0.324
- Limited	34.3	41.9	0.523
- Diffuse	22.9	12.9	0.295
Capillaroscopy pattern (%)			
- SSc specific	51.7	52.9	0.936
- Unspecific	31.0	41.2	0.486
- Normal	17.2	5.9	0.270
Raynaud phenomena (%)	100	92.9	0.113
Digital ulcers (%)	48.5	30.8	0.169
Arthritis/arthralgia (%)	63.6	44.4	0.137
Esophageal involvement (%)*	31.2	33.3	0.865
Interstitial lung disease (%)**	28.1	26.9	0.919
Pulmonary arterial hypertension (%)***	12.5	29.6	0.103
Heart conduction alteration (%)	18.8	48.1	0.016
Anticentromere antibodies (%)	45.7	87.1	< 0.001
Anti-Scl 70 antibodies (%)	17.1	3.2	0.067
Anti-nuclear antibodies (%)	94.3	100	0.401

Conclusions: In line with findings from other studies, late-onset SSc shows a distinct clinical and immunological presentation. The present study confirms that late-onset is associated with longer diagnostic delay, positive centromere and heart conduction abnormalities. These observations may be due to age and potential age-associated confounders, rather than the disease itself. Knowledge of these different characteristics can help to improve the management of the disease.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3984

SAT0502

COMPARISON OF THE CREATININE-BASED AND THE CYSTATIN C-BASED ESTIMATED GLOMERULAR FUNCTION (eGFR) IN PATIENTS WITH SYSTEMIC SCLEROSIS PATIENTS

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Background: Kidney involvement is common in systemic sclerosis (SSc) and proteinuria or renal crisis are associated risk factors for increased mortality in SSc.

For the measurement of the kidney function (glomerular filtration rate, GFR) the creatinine-based estimation formula of the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) and the Modification of Diet in Renal Diseases (MDRD)-formula are commonly used.

Cystatin C has a higher diagnostic sensitivity to show a reduction of GFR. As it is not being influenced by muscle mass or diet it has an advantages over the creatinine-based measurements.

Objectives: Comparison of the creatinine-based and cystatin C-based eGFR in systemic sclerosis patients.

Methods: Single-centre, retrospective analysis of SSc patients between 2015–2017 which were parallel tested for serum creatinine and cystatin C.

108 patients (78 females, 30 males), 21 patients with diffuse systemic sclerosis (dcSSc), 76 patients with limited systemic sclerosis (lcSSc) and 11 patients with overlap syndrome. Medium age 58,8 (±16,1 years), age span 17–83 years.

For the calculation of the estimated glomerular filtration rate (eGFR) the following formulas were used: MDRD-Study Equation, CKD-EPI Creatinine Equation 2009. CKD-EPI Cystatin C Equation 2012

Results: The mean eGFR according to the CKD-EPI Creatinine Equation was 84,4 ml/min (±23,5), according to the MDRD formula it was 80,24 ml/min (±22,8) ($p<0,001$) and 65,3 ml/min (±21,7) ($p<0,001$) when the CKD-EPI Cystatin C Equation was used. According to the KDIGO stages of chronic renal impairment a stage G2 (eGFR <90 ml/min) was present in 39,8% of the patients (43/108) using the CKD-EPI Creatinine Equation, in 47,2% (51/108) using MDRD and in 48,1% (52/108) using the CKD-EPI Cystatin C Equation.

A relevant chronic kidney impairment stage G3 (eGFR <60 ml/min) or higher was present in 14,8% of the patients (16/108) calculated by CKD-EPI Creatinine Equation, in 17,6% (19/108) of the patients according to MDRD Equation and in 38,8% (42/108) according to CKD-EPI Cystatin C Equation.

Patients with a higher difference (>18 ml/min) between creatinine-based and cystatin C-based eGFR did not differ in age, body mass index (BMI) or disease subset from patients with a lower difference but a higher difference occurred significantly more often in men ($p=0,012$).

Conclusions: Many patients with SSc showed a significant difference using cystatin C for the calculation of GFR compared to the creatinine-based formulas. As reduced muscle mass is common in SSc this could be due to sarcopenia in the context of the underlying disease. Early detection of impaired kidney function might be useful to monitor disease progress and is important for the management of immunosuppressive drugs like methotrexate and cyclophosphamide which are commonly used in the disease but need to be adjusted to the renal function.

A prospective study with measurement of GFR and comparison of different formulas in this patient population seems necessary.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4675

SAT0503

ASSESSMENT OF PROSTANOIDS (ILOPROST, ALPROSTADIL) EFFICACY IN TREATMENT OF ULCERS IN PATIENTS WITH SYSTEMIC SCLEROSIS

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Background: The prostanoids are currently regarded as the most effective agents in treatment of ischaemic lesions in patients with rheumatic diseases. However, the efficacy of Alprostadil is underexplored, especially in comparison with Iloprost.

Objectives: To evaluate the efficacy of Alprostadil (Vazaprostan®) and Iloprost (Ilomedin®) in treatment of digital ulcers in SSc pts using modern assessment tools (questionnaires and designated forms) of digital ulcers.

Methods: This 1 year study included 42 patients with systemic scleroderma (SSc) aged >18 y, having digital ulcers. Standard evaluation procedures and questionnaire to assess therapy, as well as scales and questionnaires for assessment of digital ulcers were used at baseline and after 12 months. The therapeutic regimens were as follows: Alprostadil at 20 mg/kg i/v drip rate infusion during 10 days, 1 course in 6 mo (totally 2 courses). Iloprost at 20 mg/kg i/v via infusion pump during 5 days each 3 months (totally 2 courses).

The following questionnaires/forms to evaluate the therapy of digital ulcers were used: 1/VAS for pain assessment, 2/SSc-HAQ, 3/Cochin hand function scale, 4/ the total hand pain score, 5/global patient's assessment of ulcers, 6/global

physician's assessment of ulcers, 7/patient's evaluation of changes in ulcers, 8/ physician's evaluation of changes in ulcers 9/number of digital ulcers. The patients were evaluated after the drug infusion and 1 year later. Clinical and demographic characteristics of patients treated with vasoactive drugs are presented in table 1.

Results: Table 1. Clinical and demographic characteristics of patients with digital ulcers

	Ilomedin®	Vazaprostan®
N	22	20
Females (%)	100	90
Age	46.7 (±9.9)	41.9 (±12.9)
Diffuse SSc (%)	36.4	14.3
SSc duration (yy)	12.9	10.8
N of ulcers (baseline)	3.3 (±2.2)	1.7 (±1.03)

*Mean ±SD

Results: The results obtained show improvement of ischaemic lesions in both groups.

The comparison of results speaks in favour of Vasoprostan vs Ilomedin in terms of significant pain reduction, table 2.

Abstract SAT0503 – Table 2. Comparative characteristics of scores and values from different assessment tools in groups treated with Vasoprostan and Ilomedin (post-treatment).

	Ilomedin®	Vazaprostan®
HAQ-SSc	1.49	1.18
HAQ	1.22	1.18
Cochin score	16.38	22
VAS	46.61*	27.12*
Physicians Global assessment	3.8	3.5
patients Global assessment	4.61	3.75
Ulcers N	3.07	1.16

*p<0.05

Conclusions: It should be noted that certain degree of positive dynamics in healing of ulcers was established by practically all assessment tools. VAS looks like the most sensitive tool in evaluation of pain. Of importance is the fact, that despite marked ischaemic lesions and digital ulcers, the Cochin score reflecting hand functional capacity did not exceed average values at baseline and did not change significantly post-treatment.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5079

SAT0504 THE ASSOCIATION OF MYOSITIS SPECIFIC ANTIBODIES IN PATIENTS WITH INFLAMMATORY MYOSITIS: PRELIMINARY DATA IN INDIAN PATIENTS

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Background: Studies in Autoimmune Inflammatory Myositis (AIM) have shown that certain antibodies have a role in the diagnosis and prognosis of patients with myositis. This ongoing study presents the preliminary data of 48 patients of Indian AIM.

Abstract SAT0504 – Table 1. Myositis Antibody distribution according to clinical features.

	Proximal muscle weakness (%) (n=46)	Pharyngeal muscle weakness (%) (n=17)	Rash (%) (n=28)	Mechanic hands (%) (n=5)	Raynaud's (%) (n=11)	Digital Ulcer (%) (n=2)	Arthritis (%) (n=13)	ILD (%) (n=11)	Total (n=48)
Myositis Specific Antibodies									
MI-2	6 (13)	2 (11.7)	6 (21.4)	0	1 (9)	0	1 (7.6)	0	6 (12.5)
JO-1	4 (8.6)	1 (5.8)	3 (10.7)	3 (60)	2 (18.1)	0	3 (23)	4 (36.3)	5 (10.4)
NON JO-1 ARS (PL-7)	1 (2.1)	0	2 (7.1)		2 (18.1)	0	0	1 (9)	2 (4.1)
SRP	2 (4.3)	0	0	0	0	0	0	1 (9)	2 (4.1)
MDA-5	0	0	1 (3.5)	1 (20)	1 (9)	1 (50)	1 (7.6)	0	1 (2)
NXP2	1 (2.1)	1 (5.8)	1 (3.5)	0	0	0	0	0	1 (2)
TIF1γ	1 (2.1)	0	0	0	0	0	0	1 (9)	1 (2)
SAE1	0	0	0	0	0	0	0	0	0
SAE2	0	0	0	0	0	0	0	0	0
Myositis Associated Antibodies									
RO52	14 (30.4)	4 (23.5)	10 (35.7)	4 (80)	6 (54.5)	1 (50)	3 (23)	5 (45.4)	16 (33.3)
PM SCL	1 (2.1)	0	0	0	0	0	0	1 (9)	1 (2)
RNP	2 (4.3)	1 (5.8)	1 (3.5)	0	2 (18.1)	1 (50)	2 (15.3)	2 (18.1)	2 (4.1)
Ku	0	0	0	0	0	0	0	0	0

Objectives: To study the prevalence of Myositis specific and Myositis Associated antibodies (MSA and MAA respectively) in Indian patients with AIM and to correlate these antibodies with clinical features.

Methods: All consecutive patients with Inflammatory myositis (satisfying the Bohan and Peter criteria, 1975 attending the Rheumatology and Clinical Immunology department of Medanta hospital from November 2016 to October 2017 were included prospectively and divided into groups as Dermatomyositis (DM), Polymyositis (PM), CTD associated myositis (CTD-M), Cancer associated myositis (CAM) and Juvenile Myositis (JM). Their clinical data and sera were collected after obtaining informed consent. Sera was analysed for IgG antibodies against Jo-1, PL-7, PL-12, EJ, SRP, Mi-2, MDA-5, TIF1γ, SAE1, SAE2, NXP2 and SSA/RO52kD using the microELISA technique (BlueDriver Dot Myositis¹² SAE IgG kit). Their ENA was also recorded (Blue DriverQuantrix-ANA25 Screen IgG kit d-tek). Results were read by the BlueScan scanner and value ≥10 were considered positive. The study was approved by the Ethics committee of Medanta hospital.

Results: There were 48 patients in the cohort (M:F=12:36) with the mean age of 41.3 years and a median disease duration of 30 months. Nineteen of them were DM, 19 were PM, 5 were CTD-M, 2 were CAM and 3 were JM. 58.3% were ANA positive and MSA were positive in 37.5% of the cohort, MSA being mutually exclusive. Antibodies against Mi-2 were present in 6 patients (12.5%), Jo-1 antibodies in 5 (10.4%), 2 (4.1%) patients each had PL-7 and SRP antibodies. One patient (2%) each had MDA-5, NXP2 and TIF1γ antibodies. MAAs were seen in 39.5% of the cohort with antibodies against Ro, RNP and PM- Scl seen in 16 (33.3%), 2 (4.1%) and 1 (2%) respectively. Mi-2 antibodies were seen only in DM and JM group. The lone patient who had MDA-5 antibody had amyopathic DM. Malignancy screening was negative in NXP2 and TIF1γ antibody positive patients.

Conclusions: MSA were present in almost 40% of the cohort. Mi-2 antibodies were associated with rash and none had ILD whereas Jo-1 antibodies were associated with mechanic hands, arthritis and ILD. With further recruitment of patients in this ongoing study, we hope to get more robust data in future.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1867

SAT0505 COMPARISON OF LONG-TERM CYCLOPHOSPHAMIDE (CY) AND MYCOPHENOLATE MOFETIL (MMF) EFFICACY AND SAFETY IN PATIENTS WITH SYSTEMIC SCLEROSIS (SSC) AND INTERSTITIAL LUNG DISEASE (ILD)

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Background: CY is considered to be the drug of choice for ILD therapy in patients with SSC. However, based on published evidence, only temporary and modest improvement of pulmonary fibrosis is usually achieved, therefore search for new more effective and safe agents is ongoing, with specific attention given to MMF.

Objectives: To compare CY and MMF effects on SSC clinical manifestations and activity, and safety of both agents in an open prospective non-randomised study.

Methods: The study included patients with a documented SSC diagnosis and ILD signs based on HRCT data. All patients were treated with immunosuppressants in combination with low and medium doses of glucocorticoids. 36 pts (mean age 47 ±12 years, m/f 1/1,1, SSc duration 5.0±4.8 years, diffuse/limited – 1/1,6) were administered parenteral CY during 12±6 months, with a cumulative dose of 10.6 ±5 g. 45 pts (mean age 49±13 years, m/f – 1/10, SSc duration 7.6±6.3 years, diffuse/limited – 1/1,3) were administered MMF at 2 g/day during 13±2 months. The