immunosuppressive treatments may modify gut microbiota in SSc. Overall these findings support the involvement of altered immune recognition of specific gut bacteria in early SSc.

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THU0349

THE RELATIONSHIP BETWEEN DISEASE ACTIVITY AND SEVERITY IN SYSTEMIC SCLEROSIS: A PROSPECTIVE ANALYSIS OF 278 PATIENTS

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Background: Evaluating disease activity and severity in systemic sclerosis (SSc) is crucial to define the patients who are candidate for treatment options.

Objectives: We aimed to investigate the relationship between disease activity and severity in SSc in a large cohort.

Methods: This is a cross-sectional prospective analysis of 278 (253 females) patients fulfilling ACR/EULAR (2013) classification criteria for SSc. Disease activity and severity were calculated separately for cutaneous subsets (EscSG and Medsger). The patients were grouped as inactive if EscSG score=0, mildly active if EscSG score>0<3, active if EscSG score≥3.

Results: The mean age, duration of Raynaud's and non-Raynaud features were 48.5±13.1, 12.1±9.8 and 8.3±7.5 years respectively. Characteristics of the SSc patients were summarized in table-1.

Table-1: Characteristics of SSc patients

	All patients n=278(%)
ANA	223(80.2)
anti-centromer	128(46.0)
anti-Scl70	39(14.0)
Anti-RNAPol3	29/165(17.6)
limited cutaneous pattern	143 (51.4)
diffuse cutaneous pattern	135(48.6)
digital ulcers	101(36.3)
Synovitis	56(20.1)
flexion contractures	81(29.1)
Myositis	40(14.4)
lung involvement	140(50.4)
PAH	9(3.2)
GIS involvement	166(59.2)
renal crisis	8(2.9)
immunosuppressives	173(62.2)
Steroids	156(56.1)
specific vasodilatory drugs	47(16.9)

Ninety-three (34%) and 151(54%) patients were evaluated as having active and mildly active disease. Only 34(12%) patients had inactive disease. The patients with diffuse cutaneous involvement (dcSSc) who were active had higher modified Rodnan Skin score(mRSS) and severity scores of general, skin and joint-tendon involvements; the patients who had mildly active disease also had higher scores of mRSS and severity scores of skin compared to those with inactive disease (table-2). The patients with limited cutaneous involvement (lcSSc) who were assessed as having active disease had higher mRSS and higher severity scores of general, skin, peripheral vascular, lung, joint-tendon and gastrointestinal involvements; the patients who had mildly active disease

also had higher scores of mRSS and severity scores of skin, lung, joint-tendon and gastrointestinal involvements compared to those with inactive disease (table-2).

Table-2: Severity scores of dcSSc and lcSSc patient groups according to activity of disease.

	dcSSc				lcSSc			
	inactive n=7	mildly active n=72	active n=64	*p	inactive n=27	mildly active n=79	active n=29	*p
mRSS	7.0±3.6*	16.3±7.6**	20.4±8.4*	<0.001	4.0±4.1*	7.9±5.1**	9.9±7.5*	<0.001
Severity Score								
General	1.0±1.6	0.4±0.7*	0.8±0.8*	0.004	0.4±0.6*	0.4±0.6	0.7±0.7*	0.004
PVI	1.5±0.6	1.8±0.8	2.1±0.9	NS	1.3±0.6*	1.6±0.7**	2.1±0.9*	<0.001
Skin	0.8±0.4*	1.7±0.7**	1.8±0.7*	0.003	0.7±0.5*	1.1±0.4**	1.2±0.6*	<0.001
Joint/tendon	0.5±0.8*	1.5±1.0	1.9±1.3*	0.023	0.3±0.7*	1.0±1.0	1.2±1.1*	0.003
Myositis	0.3±0.8	0.2±0.4	0.2±0.5	NS	0.1±0.6	0.1±0.4	0.2±0.5	NS
GIS	0.3±0.5	0.7±0.6	0.7±0.6	NS	0.3±0.5*	0.6±0.5**	0.7±0.5*	0.003
Lung	1.0±0.63	1.3±1.1	1.6±1.4	NS	0.3±0.7*	1.2±1.0**	1.5±1.1*	<0.001
Heart	0.2±0.4	0.1±0.6	0.1±0.5	NS	0.0±0.0	0.1±0.5	0.0±0.0	NS
Renal	0.0±0.0	0.0±0.0	0.9±0.46	NS	0.0±0.0	0.1±0.6	0.0±0.0	NS

*when inactive and mildly active group compared; p=0.005 for mRSS, p=0.036 for skin severity in dcSSc;

p=0.005 for mRSS, p=0.012 for skin, p=0.004 for joint/tendon, p=0.021 for GIS and p<0.001 for lung severity.

**when active and mildly active group compared p=0.004 for PVI severity.

Conclusion: One third of our cohort was found to have active disease despite treatment and only 12% had inactive disease. Skin involvement and severity of different organs were shown to be higher in patients with active disease in both cutaneous subsets, together with severity of lung, peripheral vascular and gastrointestinal involvements in active lcSSc. LcSSc and dcSSc patients who had mildly active disease also had severe disease similar to those with active patients. Disease activity and severity should be assessed as separate measurements to highlight the course of the disease and may guide to the management of patients with SSc.

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THU0350

LOGOPEDIC TESTING IN SSC PATIENTS REVEALS HIGH FREQUENCY OF OROPHARYNGEAL DYSFUNCTION: A MONOCENTRIC EXPERIENCE

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Background: Up to 98% of patients with systemic sclerosis (SSc) show involvement of the gastrointestinal system (GI) [1]. While meteorism, heartburn and GI dysmotility are very common and accessible to pharmacologic treatment on an evidence based level [1–3], checking for oropharyngeal dysfunction is usually not part of the standard diagnostic algorithm. However, in a survey of the German Network for Systemic Sclerosis (DNSS) patients reported coughing and/or a sore voice in up to 78% [1]. As impairment in speaking or swallowing for example does not only substantially reduce quality of life, it can also be very stigmatizing. In addition, the usual prokinetic therapy of GI-involvement, e.g. metoclopramide, does not appear to improve these symptoms. As the first step to approach this problem is the qualitative and quantitative description, we evaluated the oropharyngeal function in our cohort of SSc patients by detailed logopedic assessment.

Objectives: To evaluate the frequency and type of oropharyngeal dysfunction, e.g. swallowing or speaking, in patients with SSc and to elucidate the correlating and associated factors, e.g. disease duration or modified Rodnan Skin Score.

Methods: After obtaining written consent, oropharyngeal function using a standardized assessment protocol was evaluated in patients with SSc fulfilling the ACR/EULAR criteria by a speech therapist. Furthermore, we investigated whether oropharyngeal dysfunction is associated with patients' characteristics. In addition, all patients received instruction for a training program to treat their individual oropharyngeal dysfunction.

Results: 37 patients with d/SSc were assessed for eligibility. 34 patients met the inclusion criteria (3 patients did not speak German) and written consent was obtained.

Oropharyngeal dysfunction (impairment of speaking, swallowing, breathing or oropharyngeal muscle function) was found in 29 of 34 (85%) of both l/dSSc patients. Neither the subtype of SSc, disease duration nor mRSS were significantly correlated with oropharyngeal dysfunction in general. Only GI involvement in general was associated with oropharyngeal dysfunction.

After logopedic therapy, 28 of the 34 (82%) patients with oropharyngeal dysfunction reported a benefit after 3 days of training and were motivated to continue logopedic training at home.