Figure 2. Absolute number of peripheral Th17 and Treg cells in SSc patients with different performance and disease activity. (B1 and B2) The absolute number of Treg cells was significantly reduced in patients with SSc, particularly more pronouncedly in patients with dcSSc. (B3) The ratio of Th17/Treg cell was increased in SSc patients. (C1) The absolute number of Th17 cells was not significantly changed but (C2 and C3) that of CD4Treg cells in active group with SSc decreased significantly, thus causing an increase in the ratio of Th17 and Treg cells. * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$. lcSSc: localized sclerosis, dcSSc: diffuse sclerosis.

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EFFECTIVENESS OF SPECIALIZED AND INTENSIVE ADL TRAINING IN PATIENTS WITH IDIOPATHIC INFLAMMATORY MYOPATHIES – PRELIMINARY RESULTS OF A ONE-YEAR CONTROLLED STUDY

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Background: Idiopathic inflammatory myopathy are characterized by muscle weakness, caused by inflammation and immune changes in the affected muscles, which lead to a limitation in the execution of day-to-day activities (ADL). The aim of our study was to investigate the impact of specialized and intensive ADL training on muscle strength and endurance, depression and QoL of IIM patients.

Objectives: The study included a total of 50 IIM patients who fulfilled the Bohan and Peter 1975 criteria and had skeletal muscle involvement. 27 patients were recruited into the intervention group (IG) and 23 patients into the control group (CG). Both groups received an educational material for home exercise, but only the IG underwent a 6-month intensive training with a subsequent 6-month follow-up period.

Methods: Patients were assessed by a physician and a physiotherapist blinded to intervention at months 0, 3, 6, and 12. Patients also filled out patient reported outcomes questionnaires and provided blood for routine laboratory analysis and bio-banking. Data analysis was performed between groups and within the group.

Results: Compared to the observed statistically significant deterioration in the CG over the intervention period, we found a statistically significant improvement in the IG in objectively assessed strength and endurance of muscles as well as in subjectively assessed functional abilities and depression (Table). During the follow-up period, there was a significant

deterioration or stagnation of the achieved positive results in the IG. Nevertheless, improved functional ability during the intervention period persisted in the IG in the follow-up period as well. Only numerical improvements in the IG during the intervention compared to the numerical deterioration in CG, that did not reach statistical significance, were observed in some subjectively assessed domains of QoL (SF-36) and fatigue (FIS – in physical dimension).

Parameter (unit)	Intervention group Mean ± SEM	Control group Mean ± SEM	Intra-group analysis (Friedman +Dunn)		Inter-group analysis (2WA)
			Intervention gr.	Control group	
MMT8	m0: 54.7 ± 2.6	m0: 63.6 ± 2.0	m0-3: $p < 0.01$	m0-3: $p < 0.05$	$p < 0.0001$
	m3: 60.7 ± 2.4	m3: 57.9 ± 1.9	$p < 0.0001$	m3-6: NS m0-6: $p < 0.0001$	
	m6: 69.1 ± 1.9	m6: 54.2 ± 1.9	$p < 0.0001$	m6-12: NS	
	m12: 64.0 ± 2.5	m12: 56.5 ± 2.2	m6-12: $p < 0.05$		
		m0: 30.0 ± 4.4		m0-3: NS m3-6: NS m0-6: $p < 0.01$	
		m3: 46.9 ± 4.7		m6-12: NS	
		m6: 70.6 ± 4.9			
		m12: 58.4 ± 5.8			
		m0: 0.9 ± 0.2		m0-3: NS m3-6: NS m0-6: NS m6-12: NS	
		m3: 0.7 ± 0.1			
FI-2 (%)	m0: 0.9 ± 0.2	m0: 1.3 ± 0.2	m0-3: NS m3-6: NS m0-6: NS m6-12: NS		$p = 0.0002$
	m3: 0.7 ± 0.1	m3: 1.4 ± 0.2			
	m6: 0.6 ± 0.1	m6: 1.4 ± 0.2			
	m12: 0.8 ± 0.2	m12: 1.5 ± 0.2			
		m0: 11.9 ± 2.1		m0-3: NS m3-6: NS m0-6: NS m6-12: NS	
	m3: 10.7 ± 1.7	m3: 14.3 ± 1.7			
	m6: 8.9 ± 1.5	m6: 15.7 ± 1.0			
	m12: 10.5 ± 2.0	m12: 16.0 ± 2.0			
		m0: 11.9 ± 2.1		m0-3: NS m3-6: NS m0-6: NS m6-12: NS	
	m3: 10.7 ± 1.7	m3: 14.3 ± 1.7			
BDI-II	m0: 11.9 ± 2.1	m0: 13.0 ± 1.4	m0-3: NS m3-6: NS m0-6: NS m6-12: NS		$p = 0.0025$
	m3: 10.7 ± 1.7	m3: 14.3 ± 1.7			
	m6: 8.9 ± 1.5	m6: 15.7 ± 1.0			
	m12: 10.5 ± 2.0	m12: 16.0 ± 2.0			
		m0: 11.9 ± 2.1		m0-3: NS m3-6: NS m0-6: NS m6-12: NS	
	m3: 10.7 ± 1.7	m3: 14.3 ± 1.7			
	m6: 8.9 ± 1.5	m6: 15.7 ± 1.0			
	m12: 10.5 ± 2.0	m12: 16.0 ± 2.0			
		m0: 11.9 ± 2.1		m0-3: NS m3-6: NS m0-6: NS m6-12: NS	
	m3: 10.7 ± 1.7	m3: 14.3 ± 1.7			

Conclusion: Our specialized and intensive ADL workout led to a significant improvement in the observed parameters that was clinically significant in a substantial proportion of patients, and prevention of the expected worsening of muscle weakness and QoL.

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