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SAT0718-HPR ARE THERE SYMPTOMS DISTINGUISHING FIBROMYALGIA FROM CHRONIC PAIN THAT ARE MISSING FROM THE 2016 CRITERIA?

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Background: Fibromyalgia (FM) patients have a wide range of symptoms.

Objectives: Herein we analysed 20 common symptoms to determine those that best discriminate between FM patients and chronic pain patients without FM (Chronic Pain).

Methods: 352 patients (mean age 50+/16.3 years, 70% female) scheduled for a routine examination in two primary care practices were studied. 50 patients (14.2%) had FM (based on 1990 ACR) and 108 patients (30.7%) had Chronic Pain. All subjects completed a survey of 20 symptoms commonly found in FM patients – 10 were from the Symptom Impact Questionnaire (SIQR).

Results: Table 1 presents the 20 symptoms ranked by magnitude of Somers' D. This is a statistic that provides an estimate of predicting a diagnosis of fibromyalgia versus no fibromyalgia (OR: 1.87–8.00; $p < 0.001$). The top 10 symptoms showed strong correlations with diagnosis ($D = 0.49$ to 0.64) and large mean differences between the 2 groups (Means: 2.8–4.3). Notably, there was a 4.3 score difference in Persistent Deep Ache and only a 1.4 difference in SIQR Pain ($p < 0.001$). Using a 4-point criterion as a clinical cut-off (0–10), symptoms best discriminating patients with FM from Chronic Pain were: Persistent Deep Aching (86% vs. 36%), Environmental Sensitivity (82% vs. 38%), Poor Balance (82% vs. 35%), Tenderness to Touch (84% vs. 39%) and Pain after exercise (96% vs. 54%). The symptoms of Pain, Unrefreshing Sleep, Muscle Stiffness and Low Energy were high in both groups, thus they are not good discriminators.

Abstract SAT0718HPR – Table 1. Twenty common fibromyalgia symptoms ranked by Somers' D. The top 10 symptoms are shaded. SIQR symptoms are italicised.

Symptom	Somers'D (rank)	FM Mean (%)	Chronic Pain Mean (%)	Mean difference
Persistent Deep Aching	.641 (1)	7.40 (86)	3.14 (36)	4.26
Intolerance to Noise	.592 (2)	6.98 (86)	3.27 (34)	3.71
Environmental Sensitivity	.574 (3)	6.82 (82)	3.04 (38)	3.78
Poor Balance	.552 (4)	6.26 (82)	3.06 (35)	3.20
Pain after Exercise	.534 (5)	8.08 (96)	4.07 (54)	4.01
Muscle Weakness	.524 (6)	6.92 (88)	3.77 (42)	3.15
Tenderness to Touch	.511 (7)	6.82 (84)	3.61 (39)	3.21
Muscle Stiffness	.505 (8)	7.68 (94)	4.86 (57)	2.82
Intolerance to Bright Lights	.492 (9)	6.58 (72)	3.41 (33)	3.17
Tender Muscles	.491 (10)	7.90 (94)	4.94 (56)	2.96
Non-refreshing Sleep	.452 (11)	7.54 (84)	4.60 (52)	2.94
Poor Memory	.421 (12)	5.66 (66)	3.03 (37)	2.63
Intolerance to Cold	.414 (13)	6.62 (74)	3.82 (40)	2.80
Irritable Bowel Symptoms	.412 (14)	5.68 (64)	3.05 (31)	2.63
Swollen Joints	.409 (15)	6.16 (76)	3.78 (41)	2.39
Depression	.398 (16)	5.44 (64)	3.17 (42)	2.27
Stiffness	.396 (17)	6.92 (88)	4.54 (53)	2.38
Chronic Headaches	.390 (18)	5.62 (66)	3.45 (38)	2.17
Low Energy	.349 (19)	6.82 (84)	4.92 (61)	1.90
Pain Level	.320 (20)	6.54 (94)	5.12 (69)	1.42

Conclusions: In this sample from 2 primary care practices, Persistent Deep Aching, Tenderness to Touch, Environmental Sensitivity, Poor Balance and Pain after Exercise were the best discriminators between FM patients and patients with Chronic Pain. Notably: Depression, Headaches, Poor Memory and Irritable Bowel symptoms were weak discriminators; in fact, none of the top 10 discriminators appear in the 2016 Fibromyalgia Diagnostic Criteria.

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SAT0719-HPR PERFORMANCE-BASED PHYSICAL FUNCTION MEASURE WAS MORE SENSITIVE TO DETECT RESPONDERS THAN SELF-REPORTED MEASURE AFTER A PHYSICAL THERAPY EXERCISE INTERVENTION IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Physical function is regarded as an important outcome in axial spondyloarthritis (axSpA) and the self-reported questionnaire Bath Ankylosing Spondylitis Functional Index (BASFI) is recommended for the evaluation. However, it is shown that BASFI may not be sufficiently sensitive to detect changes after physical therapy. Based on BASFI a disease-specific performance-based measure has been developed; the Ankylosing Spondylitis Performance-based Improvement (ASPI).

Objectives: To compare the proportion of patients with axSpA considered as responders in the performance-based function measure ASPI and the self-reported BASFI after a physical therapy exercise intervention.

Methods: This study was part of the ESAP-study (Exercise for SpondyloArthritis) which examines the effect of 12 weeks, supervised high intensity exercise intervention. Patients with axSpA were included from 4 centres in Scandinavia. Physical function was assessed with ASPI and BASFI at baseline and after 3 months. The ASAS20 response criteria were used to categorise patients as intra-individual responders or non-responders. In BASFI, patients were classified as responders if they showed an improvement of $\geq 20\%$ and ≥ 1 unit. In ASPI, patients were classified as responders if they showed an improvement of $\geq 20\%$ on 1 or more subtest(s) and the absence of deterioration on the potential remaining test. Deterioration was defined as a worsening of $\geq 20\%$ in 1 or more subtest(s). The proportion of patients categorised as intra-individual (non-) responders was examined with Chi square test.

Results: A total of 58 patients (intervention $n=30$, control $n=28$) with complete data on ASPI and BASFI were included in the analyses, 41% were male, mean age (SD) was 45 (10.7) years, 55% had radiographic axSpA and mean disease activity (ASDAS) (SD) was 2.6 (0.7). In BASFI, a score of < 1 was present in 14% at baseline and in 22% at 3 months, indicating a ceiling effect (figure). The proportion of responders in the total group was 53% in ASPI and 36% in BASFI, $p=0.13$ (table 1). In the intervention group, 70% were responders in ASPI and 43% were responders in BASFI, $p=0.02$.

Table. Number of responders measured with performance-based function test (ASPI) and self-reported physical function (BASFI) according to study sub-group

	All patients (n=58)	Intervention (n=30)	Control (n=28)
ASPI			
Responder	31 (53%)	21 (70%)	10 (36%)
Non-responder	27 (47%)	9 (30%)	18 (64%)
BASFI			
Responder	21 (36%)	13 (43%)	8 (29%)
Non-responder	37 (64%)	17 (57%)	20 (71%)
p-value*	0.13	0.02	0.45

Values are number (percentages). *Chi square test between (non-) responder in ASPI and BASFI within groups

Abstract SAT0719HPR – Figure 1. Distribution of BASFI scores and time in seconds in ASPI assessed at baseline and at 3 months follow-up ($n=58$). Lower values indicates better physical function in both measures

Conclusions: The performance-based physical function measure ASPI was more sensitive to detect responders than the self-reported measure BASFI according to the ASAS20 response criteria in patients with axSpA after a high intensity exercise intervention. Our findings suggest that the performance-based physical function (ASPI) measure is preferable when evaluating physical function after exercise interventions with physical therapy.

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SAT0720-HPR MORE PRECISE MEASUREMENTS OF SPINAL MOBILITY WHEN ASSESSED WITH A SENSOR IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Rotation of the spine is one of the principal movements of spinal motion. Cervical rotation (CR) is included in the assessment for monitoring axial spondyloarthritis (axSpA). Thoracolumbar rotation (TLR) is also known to be a valid measure for axSpA specific changes, but is seldom used due to lack of easy feasible measures. Goniometer or myrinometer (compass) is traditionally used to evaluate rotation. A sensor with excellent criterion validity and reliability for rotation in the range of motion from 10 to 120 degrees, that are able to detect changes of ≤ 1 degree, has recently been developed¹.

Objectives: To examine the concurrent validity between the sensor and compass in CR and TLR and to evaluate the usability and satisfaction with the sensor.

Methods: This study was part of the MOSKUS-study (Mobile mosculO Skeletal User Self-management). Patients with axSpA were included from two rheumatology outpatients' clinics and examined by experienced physiotherapists. CR and TLR were assessed three times with both the sensor and compass; mean score are used in the analyses. The measuring order was randomised. The sensor was considered gold standard. Group differences were assessed with paired sample t-test or Wilcoxon signed rank test, and agreement with Bland Altman plot. Time to conduct the test (instruction, conducting and note of results) was recorded for the 10 last included patients. Satisfaction was assessed both by the patients and assessors with numeric rating scale (NRS), (0–10, 10=highest satisfaction).

Results: A total of 60 patients with axial SpA and 2 assessors participated. Of the included patients 60% were male, median (min-max) age was 39^{20–73} years and 77% had radiographic axSpA. There were statistically significant differences in measure of rotation between the sensor and the compass of 3.7° in CR, $p=0.01$ and 9.2° in TLR, $p<0.001$ (table 1). The Band Altman plots show that the compass systematically measured lower rotation than the sensor in both CR and TLR (figure). There was no difference in time used to conduct the measurements. Patients satisfaction in CR measured with the sensor was mean (SD) 7.8 (2.4) and compass 6.7 (2.6), $p<0.001$ and in TLR 7.8 (2.4) and 7.3 (2.3), $p=0.08$ respectively. Assessors satisfaction in CR measured with the sensor was 9.0 (1.2) and compass 5.6 (2.8) $p<0.001$ and in TLR 8.1 (2.2) and 3.6 (2.2) $p<0.001$, respectively.

Abstract SAT0720HPR – Table 1. Characteristics of rotation measures, agreement and time to conduct measurements

Mobility	Measure	n	Mean (SD)	Mean difference (SD)	p-value	Time in sec, median (min-max), n=10	p-value
Cervical	Sensor	59	69.2 (18.2)			96 (44–216)	
	Compass	59	65.4 (18.2)	3.7 (10.0)	0.01	96 ^{62–150}	0.36
Thoraco-lumbar	Sensor	56	47.8 (11.8)			107 (36–200)	
	Compass	56	38.6 (10.3)	9.2 (9.5)	<0.001	86 ^{46–158}	0.92

Conclusions: Measure of CR and TLR were significantly lower when measured with a traditional compass compared to a digital sensor. There were no difference in time use and both patients and assessors were more satisfied with the sensor. The results suggest that the sensor gives more precise measurements of rotation and allow a feasible way to assess TLR in daily clinical practise.

Abstract SAT0720HPR – Figure 1. Bland Altman plot of cervical rotation and thoracolumbar rotation measured with the sensor and compass.

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SAT0721-HPR IMPROVEMENT IN CLINICAL RESULTS BY ENHANCING ADHERENCE TO A HEALTHCARE MODEL IN RHEUMATOID ARTHRITIS

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Background: A Centre of Excellence (CoE) healthcare model aims to obtain a high quality results from the appropriate and minimal use of resources in rheumatoid arthritis (RA); Enhancing adherence of patients to healthcare model and treatment using a Treat to Target approach and patient education has demonstrated the improvement of patient conditions and clinical results.¹

Objectives: To describe the adherence patterns to a centre of excellence model and clinical outcomes in patients with RA in a specialised centre. For this study researchers defined adherence as the attendance to an appointment with our healthcare team for more than three times during 12 months.

Methods: We reviewed the clinical records of patients with RA in a specialised centre during a 12 month period. We included socio demographic variables and the attendance to consultations to rheumatology, psychiatry, physical therapy, occupational therapy, nutrition, and psychology consultations. Descriptive epidemiology was done, percentages and averages were calculated We analysed bivariate association with Pearson's χ^2 .

Results: We included 5413 patients, where 83% were female and 17% were male; mean age was 59 years $\pm$ 12. Mean DAS28 of patients was 2.82 $\pm$ 0.84, where 46% of patients were on remission, 27% in low disease activity, 24% in moderate disease activity and 3% in severe disease activity. The specialty where the adherence was higher was in rheumatology 98%, followed by psychiatry 33%, psychology 29%, physical therapy 28%, occupational therapy 20% and nutrition 13%. In our study 47% of patients were considered as adherents; from all patients who were adherent 75% were in remission or low disease activity. When we compared disease activity with the attendance to all specialties there was statistical association between disease activity and the patients who attended to more than four visits.

Conclusions: Patients who attend satisfactory to a multidisciplinary healthcare approach team can achieve better results compared to those who doesn't attend to all medical specialties; thus it is relevant to implement patient education