

Conclusions: The study demonstrated that disease activity and structural changes consistently contributes to physical function impairment in both early and late stages of disease. Fatigue does not associate with physical function at early stages of the disease, but it increases in contribution to functional impairment as disease duration increases.

Disclosure of Interest: None declared

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AB0865 DO ASAS, ASDAS AND BASDAI THERAPY RESPONSE EVALUATION TRANSLATE THE SAME INFORMATION?

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Background: The ASAS-EULAR recommendations for the continuation of biological Disease-Modifying Anti-rheumatic Drugs (DMARD) suggest the evaluation of patients after at least 12 weeks of treatment by either the Ankylosing Spondylitis (AS) Disease Activity Score – C reactive protein (ASDAS-CRP) or by the Bath AS Disease Activity Index (BASDAI). For ASDAS-CRP, a Minimal Clinical Important Difference (MCID) ≥ 1.1 is necessary, while for the total BASDAI score a 50% reduction or a change of ≥ 2.0 points is considered clinically relevant. In clinical trials, the Assessment in Ankylosing Spondyloarthritis (ASAS) response criteria – ASAS 20, ASAS 40 and ASAS 70 – are still the most frequent primary outcome measures to evaluate improvement in treatment response. However, in clinical practice the BASDAI is still routinely used.

Objectives: The aim of this work was to assess the concordance/agreement between different therapeutic outcome measures, such as the ASAS response criteria, Δ ASDAS-CRP and BASDAI 50.

Methods: Data from 54 patients who fulfilled the modified New York criteria for AS were collected at baseline, weeks 2 and 14 post-treatment with Adalimumab. Pearson's correlation (PCCs) and the Cohen's Kappa coefficients were calculated for the three scores.

Results: A strong correlation was found between the three scores throughout the visits: $\rho = -0.676$ for ASDAS/ASAS, $\rho = -0.807$ for ASAS/BASDAI, and $\rho = 0.786$ for BASDAI/ASDAS (all PCCs with $p < 0.001$). Additionally, when the categorization in different disease activity states and response levels was performed, PCCs revealed significant concordance/agreement between the three scores' cut-offs (see table 1).

The individuals categorised as responders, by either BASDAI50 or Δ ASDAS ≥ 1.1 , have shown similar clinical characteristics (Erythrocyte Sedimentation Rate, CRP, AS Quality of Life Scale and Bath AS Functional Index).

Importantly, when more stringent measures of ASAS response criteria and ASDAS were used (i.e. ASAS 70 and ASDAS ≥ 2.1) the agreement with BASDAI values decreased.

Abstract AB0865 – Table 1. Summary information of the Agreement and Cohen's kappa.

Concordance/agreement	n	Agreement	Cohen's κ	p-value
Δ ASDAS ≥ 1.1 and ASAS20	130	76.92%	0.496	<0.001†
Δ ASDAS ≥ 1.1 and ASAS40	130	74.62%	0.492	<0.001†
Δ ASDAS ≥ 1.1 and ASAS70	133	57.14%	0.259	<0.001†
Δ ASDAS ≥ 2.1 and ASAS20	130	61.54%	0.310	<0.001†
Δ ASDAS ≥ 2.1 and ASAS40	130	73.08%	0.462	<0.001†
Δ ASDAS ≥ 2.1 and ASAS70	133	75.19%	0.365	<0.001†
BASDAI50 and ASAS20	150	82.67%	0.638	<0.001†
BASDAI50 and ASAS40	152	84.21%	0.687	<0.001†
BASDAI50 and ASAS70	156	61.54%	0.301	<0.001†
BASDAI50 and Δ ASDAS ≥ 1.1	134	79.85%	0.571	<0.001†
BASDAI50 and Δ ASDAS ≥ 2.1	134	64.93%	0.351	<0.001†

†p-value < 0.05, n: number of visits

Conclusions: Our results suggest that the ASAS response criteria, Δ ASDAS-CRP and BASDAI 50 report the same clinical information. Hence, the clinician's decision should still be consistent independently of the score adopted. However, this study also highlights the importance of establishing a new and more stringent BASDAI cut-off, in alignment with ASDAS-CRP ≥ 2.1 and ASAS 70.

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AB0866 ADVANCED METROLOGY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS: LUMBAR OR THORACIC +LUMBAR MEASUREMENTS FOR SPINAL MOBILITY ASSESSMENT?

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Background: Advanced technologies for measuring human mobility have recently emerged: motion capture, inertial measurement units (IMU) and wearable devices. Some of them are used for mobility assessment of rheumatic patients.¹ Certain devices analyse only lumbar mobility of the patients. Axial Spondyloarthritis (axSpA) reduces spinal mobility at all levels and not only at the lumbar level.

Objectives: To analyse what is the contribution of the thoracic spine to spinal mobility, and if this contribution should be taken into account in the metrological assessment of patients with axSpA.

Methods: 20 patients with axSpA and 20 age, BMI and sex-matched healthy subjects were recruited. An IMU sensor-based system (ViMove©) was used to measure spinal mobility. This system uses two IMU sensors and the angle between both is obtained in real time. Two tests were recorded: one with the recommended anatomical location (pelvis and L1) and another one aimed at combining lumbar +thoracic movement (pelvis and T3). Conventional metrology, radiographic structural damage (axSpA patients) and PROs were also collected.

Results: The table shows the results obtained for measuring only lumbar or lumbar +thoracic mobility, in both groups. The contribution of the thoracic spine is expressed in% of the total movement. Pearson correlation coefficients (only for patients) with conventional metrology (BASMI), PRO questionnaires (BASDAI, BASFI and ASQoL) and structural damage (mSASSS) scores are also presented.

Abstract AB0866 – Table 1

	Anterior Flexion	Extension	Lateral Left Flexion	Lateral Right Flexion	Rotation Left	Rotation Right
<i>AxSpA (n=20)</i>						
Lumbar	40.8 (17.2)	8.9 (7.4)	22.4 (9.3)	19.4 (8.8)	12.9 (4.9)	8.2 (4.9)
Lumbar +Thoracic	49.2 (19.9)	18.2 (12.9)	30.1 (12.6)	28.2 (11.7)	41.6 (11.5)	35.5 (12.4)
Contribution of T spine	17%	50%	26%	33%	68%	76%
<i>Control (n=20)</i>						
Lumbar	54.4 (8.6)	11.1 (5.7)	29.4 (6.1)	25.6 (5.2)	15.4 (5.2)	10.5 (2.6)
Lumbar +Thoracic	62.6 (11.9)	22.2 (9.6)	40.4 (4.6)	37.9 (4.4)	45.5 (7.9)	37.3 (8.2)
Contribution of T spine	13%	50%	27%	32%	66%	72%
<i>Correlations (Lumbar/Lumbar+Thoracic)</i>						
BASMI	-0.82***/ -0.76***	0.50†/ 0.71***	0.89***/ 0.94***	-0.87***/ -0.89***	0.46†/ 0.69***	-0.67**/ -0.60**
BASDAI	-0.14/- 0.21	0.44/ 0.58**	0.30/0.40	-0.35/- 0.45*	0.26/ 0.38	-0.49†/ -0.71***
BASFI	-0.46†/ -0.48*	0.4/0.64**	0.54†/ 0.71***	-0.59**/ -0.65**	0.39/ 0.47*	-0.67**/ -0.50*
ASQoL	-0.19/- 0.30	0.43/0.53*	0.39/0.50*	-0.36/-0.41	0.26/ 0.33	-0.44/- 0.58**
mSASSS	-0.74**/ -0.76**	0.49/0.59	0.74**/0.56	-0.69†/ -0.78**	0.07/ 0.64*	-0.28/- 0.47

***p < 0.001; **p < 0.01; *p < 0.05.

Conclusions: Thoracic +Lumbar results reflect better the spinal mobility impairment of axSpA patients compared to lumbar spine assessments only. Compared to isolated lumbar spine assessment, the combined assessment showed better correlations with conventional metrology, disease activity, physical function, health-related quality of life and spinal structural damage. Despite this, the magnitude of the differences is not enough to reject the use of a system that only considers assessment of lumbar spinal mobility.

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