REFERENCES:

- [1] Kiltz U, van der Heijde D, Cieza A, Boonen A, Stucki G, Ustun B, et al. Developing and validating an index for measuring health in patients with ankylosing spondylitis. *Rheumatology (Oxford)*. 2011;50(5):894–8.
- [2] Kiltz U, van der Heijde D, Boonen A, Bautista-Molano W, Burgos-Vargas R, Chiowchanwisawakit P, et al. Measuring impairments of functioning and health in patients with axial spondyloarthritis by using the ASAS Health Index and the Environmental Item Set: translation and cross-cultural adaptation into 15 languages. *RMD Open*. 2016;2(2):e000311.

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AB0862

ANTERIOR THORACIC FATTY CORNER LESIONS ARE USEFUL IN AXIAL SPONDYLOARTHRITIS (SpA) DIAGNOSIS—DATA FROM A MULTICENTER BACK PAIN-MRI COHORT IN HONG KONG

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Background: A fatty corner lesion (FCL), as defined by fat infiltration at the vertebral corner in T1 Magnetic Resonance Imaging (MRI) sequence, has been reported to be useful in Spondyloarthritis (SpA) diagnosis.

Objectives: Our objective is to systematically evaluate the diagnostic utility of FCLs in a large, multicenter back pain-MRI cohort in Hong Kong.

Methods: Three hundred and one patients with back pain were recruited from 3 rheumatology centres. Clinical, biochemical and radiological parameters were collected and all patients underwent a whole spine and sacroiliac (SI) joints MRI. FCLs from C4 to L5 levels were scored. Results were compared to expert-diagnosed axial SpA to determine the usefulness of FCLs in disease diagnosis.

Results: Anterior FCLs of whole or thoracic spine were found to be useful in axial SpA diagnosis. (AUC 0.622; $p=0.003$, AUC 0.640; $p=0.001$ respectively) Applying FCLs to the Modified New York (MNY) criteria and Assessment of SpondyloArthritis international Society (ASAS) axial SpA criteria, a minimum of 5 FCLs at whole spine level had a sensitivity of 66.4% and 91.6%, specificity of 98.4% and 91.9% respectively. Applying a minimum of 3 FCLs at thoracic spine level to the MNY criteria and ASAS axial SpA criteria yielded a sensitivity of 68.5% and 92.0%, specificity of 95.2% and 93.5% respectively. Three FCLs improves both classification criteria.

Conclusions: FCLs are useful in axial SpA diagnosis. A minimum of 3FCLs at the thoracic level is useful for the disease diagnosis.

Disclosure of Interest: None declared

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AB0863

ANALYSIS OF THE FREQUENCY OF UVEITIS IN SPONDYLOARTHRITIS PATIENTS AND ASSOCIATIONS WITH CLINICAL PARAMETERS OF THE DISEASE

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Background: Acute anterior uveitis is the most common extra-articular manifestation of spondyloarthritis (SpA). The ocular inflammation in SpA is restricted to the uvea, usually unilateral and in some cases may precede the clinical characteristics of SpA.

Objectives: The aim of this study is to analyse if the presence of uveitis is associated with a different clinical manifestation, laboratorial, radiological and therapeutic among spondyloarthritis patients.

Methods: This was an observational retrospective study with 153 patients with spondyloarthritis attended in the period from 1997 to 2017 in Florianópolis, Brazil. It was analysed demographic, laboratorial, clinical and therapeutic data in spondyloarthritis patients with or without uveitis.

Results: 26,8% of the patients with spondyloarthritis presented uveitis. The presence of complications was rare, with cataract occurring in only four patients and glaucoma in two of them. A higher frequency of acute anterior uveitis in males ($p=0.06$) was observed in patients with a family history ($p=0.19$) and HLA-B27 positive ($p=0.14$). Patients with spondyloarthritis and uveitis more frequently used anti-TNF ($p=0.04$) and presented sacroiliitis on imaging tests ($p=0.02$). There was no association between uveitis and cardiovascular ($p=0.44$), cutaneous ($p=0.13$) or gastrointestinal involvement ($p=0.10$).

Conclusions: Uveitis in patients with spondyloarthritis is common, predominantly in males and more frequently, in HLA-B27 positive patients. Ocular manifestation in spondyloarthritis has a low degree of complication when compared to uveitis from other etiologies. The use of immunobiological agents such as anti-TNF is common in patients with uveitis.

REFERENCES:

- [1] Stolwijk C, van Tubergen A, Castillo-Ortiz JD, Boonen A. Prevalence of extra-articular manifestations in patients with ankylosing spondylitis: a systematic review and meta-analysis. *Ann Rheum Dis*. 2013;74(1):65–73
- [2] Rosenbaum JT. New developments in uveitis associated with HLA B27. *Curr Opin Rheumatol*. 2017;29(4):298–303.
- [3] Pasadhika S, Rosenbaum JT. Update on the use of systemic biologic agents in the treatment of noninfectious uveitis. *Biol Targets Ther*. 2014;8:67–81.
- [4] Khan MA, Haroon M, Rosenbaum JT. Acute Anterior Uveitis and Spondyloarthritis: More Than Meets the Eye. *Curr Rheumatol Rep*. 2015;17(9).
- [5] Cantini F, Nannini C, Cassarà E, Kaloudi O, Niccoli L, Cassara E, et al. Uveitis in Spondyloarthritis: An Overview. *J Rheumatol Suppl*. 2015;93:27–9.
- [6] Rosenbaum JT. Uveitis in spondyloarthritis including psoriatic arthritis, ankylosing spondylitis, and inflammatory bowel disease. *Clin Rheumatol*. 2015;34(6):999–1002.

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AB0864

THE IMPACT OF DISEASE ACTIVITY, STRUCTURAL DAMAGE, AND FATIGUE ON PHYSICAL FUNCTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS: DIFFERENCES IN EARLY AND LATE DISEASE

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Background: In patients with ankylosing spondylitis (AS), the physical function impairment caused by the disease is among the biggest concerns for both patients and clinicians. Previous studies have shown that disease activity and structural damage are the main underlying causes for physical function impairment. There is accumulating evidence that suggests fatigue as well contributes to functional limitations. However, the differential impact of these factors on physical function at early and late stage of disease remains unclear.

Objectives: Study the strength of association in AS patients with varying disease duration, between physical function and the three potential determinants of interest: disease activity, structural damage, and fatigue.

Methods: AS patients satisfying the modified New York criteria were followed from 2003 to 2017. Patients completed a standardised annual protocol including demographic and clinical factors, with radiographic data collected biennially. Baseline physical function (BASFI) was analysed for association with factors including disease activity (BASDAI), radiographic changes (mSASSS), and fatigue (FSS). The same analysis was conducted again with patients sub grouped with respect to disease duration (<5 years, 5–9 years, 10–20 years, >20 years), and again with respect to change in BASFI between the first and last patient visit. Multivariable regression analysis was performed to identify independent predictors of physical function at baseline and the change with time.

Results: A total of 611 patients were followed and completed the standard protocol (mean age at initial visit 38.2 years; 74% male; 76.5% HLA-B27+). At baseline BASFI was independently associated (table 1) with BASDAI ($p<0.0001$), CRP ($p<0.0001$), mSASSS ($p<0.0001$), and FSS ($p<0.0001$). In the disease duration subgroup analysis, BASFI was independently associated with BASDAI ($p<0.05$) and mSASSS ($p<0.05$) in all disease durations, and with FSS in subgroups with disease duration of 5 years or greater ($p<0.05$). In the longitudinal analysis, change in BASFI was independently associated with changes in BASDAI ($p<0.0001$) and FSS ($p<0.05$), but not with change in mSASSS ($p=0.283$).

Abstract AB0864 – Table 1

	Univariable analysis		Multivariable analysis	
	β (95% CI)	P	β (95% CI)	P
Sex	0.001 (–0.063–0.066)	0.975	–0.01 (–0.07–0.05)	0.776
CRP	0.282 (0.200–0.364)	<0.0001	0.15 (0.09–0.21)	<0.0001
BASDAI	0.728 (0.672–0.783)	<0.0001	0.62 (0.51–0.73)	<0.0001
mSASSS	0.294 (0.204–0.378)	<0.0001	0.24 (0.18–0.31)	<0.0001
BASDAI	0.61 (0.54–0.67)	<0.0001	0.06 (–0.6–0.17)	0.313
Q1				

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.

REFERENCE:

- [1] Garrido-Castro JL, et al. Assessment of spinal mobility in ankylosing spondylitis using a video-based motion capture system. *Man Ther.* 2012 Oct;17 (5):422–6.

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