THU0393

PERFORMANCE OF THE ASAS CLASSIFICATION CRITERIA PRESENTING WITH UNDIAGNOSED BACK PAIN? DATA FROM THE SCREENING IN AXIAL SPONDYLOARTHRITIS IN PSORIASIS, IRITIS, AND COLITIS (SASPIC) COHORT

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Background: Classification criteria for axial spondyloarthritis (axSpA) that capture the spectrum of disease present challenges due to the frequency of back pain, the relative infrequency of axSpA, and limited physical and laboratory findings in early disease. Several cohorts have reported the performance of the ASAS classification criteria in settings where patients have been selected for certain features such as the presence of inflammatory back pain and/or short symptom duration.

Objectives: We aimed to test the performance of the ASAS classification criteria in unselected patients referred with undiagnosed back pain who have presented with acute anterior uveitis (AAU), psoriasis, or colitis to their respective specialists and whether performance varied according to demographic factors and symptom severity.

Methods: he multicenter Screening for Axial Spondyloarthritis in Psoriasis, Iritis, and Colitis (SASPIC) Study is aimed at early detection of axial SpA. Consecutive patients ≤45 years of age with ≥3 months undiagnosed back pain with any one of psoriasis, acute anterior uveitis (AAU), or colitis undergo routine clinical evaluation by a rheumatologist for axial SpA and MRI evaluation is ordered per rheumatologist decision. The rheumatologist determines the presence or absence of axial SpA and the degree of confidence in the diagnosis (-10 (definitely not SpA) to +10 (definite SpA)) at 3 consecutive stages: 1. After the clinical evaluation; 2. After the results of labs (B27, CRP) and radiography; 3. After the results of MRI evaluation. Assessment of imaging was conducted by local and central readers. We calculated the sensitivity and specificity of the ASAS criteria and the component imaging and clinical arms using the stage 3 diagnostic assessment by the local rheumatologist as gold standard.

Results: A total of 246 patients were recruited, 47.6% being diagnosed with axSpA (61.5% male, age 33.7 years, symptom duration 7.6 years, B27 positive 52.1%), after stage 3 evaluation. Sensitivity/specificity of the ASAS criteria, imaging arm, clinical arm were 74.4/79.8%, 55.6/93.8%, 50.4/82.2%, respectively (Table). For patients diagnosed with a high degree of confidence sensitivity/specificity was 87.5/82.7%, 68.8/94.5%, 56.3/84.5%, respectively. Specificity, especially for the clinical arm, was notably higher in patients with a higher degree of back pain (≥5/10), and in those with longer symptom duration (≥5 years).

Abstract THU0393 –Table 1.

Patient Category	Number	ASAS criteria		Imaging arm		Clinical arm	
		Sen	Spec	Sen	Spec	Sens	Spec
All patients	246	74.4	79.8	55.6	93.8	50.4	82.2
Patients diagnosed with confidence >7 for axSpA yes and <4 for not axSpA (-10 to +10 scale)	190	87.5	82.7	68.8	94.5	56.3	84.5
Patients with back pain ≥5 (0-10 scale)	165	74.7	83.7	54.4	94.2	51.9	84.9
Patients with back pain <5 (0-10 scale)	81	73.7	72.1	57.9	93.0	47.4	76.7
Patients with symptom duration ≥5 years	143	78.1	85.7	53.4	95.7	56.2	85.7
Patients with symptom duration <5 years	103	68.2	72.9	59.1	91.5	40.9	78.0
Males	129	73.6	78.9	61.1	89.5	48.6	84.2
Females	117	75.6	80.6	46.7	97.2	53.3	80.6

Conclusion: The performance of the ASAS criteria in the SASPIC cohort is comparable to the findings in the original ASAS classification study. Performance may vary according to symptom duration and severity of symptoms which likely impacts diagnostic ascertainment.

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THU0394

THE PREVALENCE OF EXTRA-ARTICULAR MANIFESTATIONS IN AXIAL SPONDYLOARTHRITIS AND PSORIATIC ARTHRITIS IS ASSOCIATED TO DISEASE DURATION: RESULTS FROM THE LEEDS SPECIALIST SPONDYLOARTHRITIS SERVICE

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Background: Psoriasis, uveitis and inflammatory bowel disease (IBD) are extra-articular manifestations (EAMs) that can occur in both axial Spondyloarthritis (axSpA) and psoriatic arthritis (PsA). Their prevalence has been outlined independently in a recent meta-analysis¹ for axSpA and in several series in PsA with variable results. Although the diagnostic delay of inflammatory arthritis has been reduced in the last years, it remains a significant unmet need, particularly in axSpA. There are limited data on the relationship between diagnostic delay and the appearance of EAMs.

Objectives: To explore the prevalence of EAMs in a cohort of axSpA and PsA patients, and its relationship to disease duration and possible diagnostic delay in both groups.

Methods: Cross-sectional, single centre, observational cohort study of consecutive patients attending a large tertiary specialist clinic. All subjects provided written consent (2005-2018). Only patients fulfilling the modified New York (mNY) criteria for ankylosing spondylitis and CASPAR criteria for PsA were considered for this analysis. Demographic and clinical data were retrieved during enrolment and cross-referenced with the clinical notes. To explore the relationship between presence of EAMs, disease duration and delay to diagnosis, only uveitis and IBD were considered because of psoriasis being common in the PsA group. Univariate (Mann Whitney U-test) and multivariate analysis (binary logistic regression) with variables of sex, age, disease duration and diagnostic delay were performed.

Results: Data from 988 patients were available for analysis (n= 418 axSpA, n=570 PsA). Demographic and clinical characteristics are summarised in Table 1.

In the axSpA group, 187 cases (44.7%) presented with EAMs (including psoriasis) and 67 (16.02%) of these had more than 1 EAM. In the PsA group, 32 cases (5.6%) presented with EAM (excluding psoriasis) and only 3 cases (0.5%) had more than one EAM.

In the PsA group, a median delay of 4 years (IQR 2-9) was observed between psoriasis onset and PsA. In 42 cases the psoriasis appeared after the PsA onset. The predominant PsA phenotype was polyarticular (n=298; 52.3%) of which n=118, 20.7% had erosive disease. 101 (17.7%) had a predominantly axial phenotype.

Disease duration and delay to diagnosis were longer in the axSpA group (p<0.0001). Further univariate analysis showed an association between disease duration and the presence of EAMs when analysing the whole cohort (p<0.001) and the axSpA group (p<0.001), but not in the PsA group (p=0.832). The diagnostic delay was associated to the presence of EAMs in the whole cohort (p<0.001), but not in the individual disease groups. In the multivariate analysis only disease duration was related to presence of EAMs in the whole cohort (OR 1.064 95%IC 1.044-1.086) and axSpA group (OR 1.043 95%IC 1.016-1.070).

Abstract THU0394 – Table 1. Demographics of the study population.

Variable	PsA n=570	axSpA n=418
Females, n (%)	292 (51.2)	117 (28.5)
Age, years, mean (SD)	52.68 (13.09)	50.14 (14.55)
Disease duration, years, median (IQR)	12 (8-19)	20 (13-31)
Delay to diagnosis, years, median (IQR)	1 (0-2)	4 (1-10)
Psoriasis, n (%)	528 (92.6)	58 (13.9)
Uveitis, n (%)	21 (3.7)	118 (28.2)
IBD, n (%)	14 (2.6)	52 (12.4)
Crohn, n (%)	7 (1.3)	23 (5.5)
Ulcerative colitis, n (%)	4 (0.7)	21 (5.0)
Undifferentiated colitis, n (%)	3 (0.5)	8 (1.9)

Conclusion: The prevalence of EAMs (uveitis and IBD) in this cohort appears higher in axSpA than PsA and is related to disease duration. Diagnostic delay occurs in both groups being more significant in axSpA, and should be highlighted as a priority research area in order to improve the outcome of people affected by SpA.

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[1] De Winter JJ, et al. Arthritis Res Ther (2016); 18:196.

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THU0395 MUSCLE STRENGTH COMPROMISE IN YOUNG AXIAL SPA PATIENTS: PRELIMINARY RESULTS FROM MYOSPA STUDY

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Background: Pain and stiffness are characteristic clinical features of axial Spondyloarthritis (axSpA), leading to functional impairment. Patients describe beneficial effects of physical activity, suggesting a possible involvement of muscle tissue. Body composition data in young axSpA patients with short disease duration are scarce and its implications in muscle strength are not yet clarified.

Objectives: The purpose of this study is to assess the muscle strength and body composition of different body segments (trunk, upper and lower limbs), in patients with axSpA and to compare them with healthy controls.

Methods: Patients with clinical diagnosis of axSpA meeting the ASAS classification criteria, aged 18 to 50 years, with symptoms duration ≤ 10 years, were included in this study. Healthy individuals matched by gender and age (1:1) were used as control group (HC). Muscle strength was measured by resisted hand-held dynamometer performed by a single reader, in three different body segments: trunk, upper and lower limbs (on both sides). The mean strength of right and left, upper and lower limbs, was calculated and used in the analysis. Strength of each body segment was also normalized to the total lean mass (LM) of the respective segment. Body composition was measured by octapolar multifrequency bioelectrical impedance analysis (InBody770). Physical activity was assessed by the International Physical Activity Questionnaire (IPAQ). Fisher's exact test or chi-square test and Mann-Whitney U test were used to compare differences between groups.

Results: A total of 27 axSpA patients and 27 HC were included. Mean age was 36.5 ± 1.0 years, 67% were males. There was no significant difference between both groups in terms of age, gender, body mass index and physical activity. AxSpA patients had a mean symptoms duration of 7.0 ± 0.9 years.

AxSpA patients had lower muscle strength in the upper limbs (50.55 ± 31.60 vs 71.70±31.41 $p=0.023$) and lower limbs (52.25±18.45 vs 59.83

±9.75, $p=0.001$), compared to HC. Trunk muscle strength did not show any difference between groups (59.10±26.1 vs 56.45±11.2, $p=0.856$). There were no significant differences in LM and body water, between both groups, for each segment (upper limbs, lower limbs and trunk). Fat mass was significantly higher in the trunk (10.90±8.80 vs 8.10±5.83, $p=0.035$) and upper limbs (1.40±1.35 vs 0.88±1.0, $p=0.05$) of axSpA patients, but not in the lower limbs (3.10±1.90 vs 2.45±1.68, $p=0.157$). Normalized appendicular muscle strength was lower in axSpA patients (upper limbs: 18.63±8.25 vs 21.21±5.92, $p=0.018$) (Table).

Conclusion: Young patients with short duration have reduced appendicular muscle strength, compared to HC, with no differences in LM, suggesting a possible muscle dysfunction. Further studies are needed to confirm these findings and understand the underlying pathophysiological mechanisms.

Abstract THU0395 –Table 1.

Table. Comparison of subjects' characteristics between axSpA patients and healthy controls.

Variable	Patients n=27	Controls n=27	p-value
Age*	36.25±7.82	36.81±7.36	0.808
Gender (male), n (%)	18 (66.7%)	18 (66.7%)	1.000
Body height (cm)	169.80±10.7	172.40±13.3	0.522
Body mass (Kg)	73.00±19.2	70.05±16.5	0.347
BMI (Kg/m²)	25.10±7.00	23.80±3.00	0.303
IPAQ (%)			0.871
Low	10.4	14.6	
Moderate	20.8	18.8	
High	18.8	16.7	
BASDAI	3.0±2.11	-	-
BASFI	0.90±4	-	-
Strength (Nm/s)			
Trunk	59.10±26.1	56.45±11.2	0.856
Upper Limb	50.55±31.60	71.70±31.41	0.023
Lower Limb	52.25±18.45	59.82±9.75	0.001
Lean Mass (Kg)			
Trunk	24.90±4.40	25.25±8.35	0.831
Upper Limb	3.00±0.76	3.12±1.40	0.782
Lower Limb	7.96±2.38	9.17±3.07	0.128
Fat Mass (Kg)			
Trunk	10.90±8.80	8.10±5.83	0.035
Upper Limb	1.40±1.35	0.88±1.05	0.050
Lower Limb	3.10±1.90	2.45±1.68	0.157
Body water (L)			
Trunk	10.40±3.40	19.30±5.98	0.837
Upper Limb	2.34±0.59	2.40±0.96	0.885
Lower Limb	6.13±1.84	6.93±2.33	0.274
Strength/LM (Nm/s/Kg)			
Trunk	2.40±0.60	2.34±0.58	0.628
Upper Limb	18.63±8.25	21.21±5.92	0.018
Lower Limb	6.47±1.71	6.80±2.03	0.233

Values are median ± IQR, unless otherwise indicated.

* Mean ± SD.

BMI: Body Mass Index. IPAQ: International Physical Activity Questionnaire. BASDAI: Bath AS Activity Index. BASFI: Bath AS Functional Index. LM: Lean Mass.

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THU0396 SMALL INTESTINAL BACTERIA OVERGROWTH IN SPONDYLOARTHRITIS

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Background: It has shown different alterations in the intestinal microbiota in patient with SpA. Tests for the detection of intestinal dysbiosis have focused on the identification of dysbiosis at the terminal ileum and colon