Methods: Two hundred and fifty-five patients fulfilling the imaging arm of the Assessment of SpondyloArthritis International Society axSpA criteria were enrolled. TBS and bone mineral density (BMD) were assessed using dual-energy X-ray absorptiometry. Vertebral fracture of the thoracic and lumbar spine was defined according to the Genant criteria. Osteoporosis risk factors, inflammatory markers, disease activity scores, and spinal structural damage were also assessed. Multivariate logistic regression analysis was performed to identify factors associated with vertebral fractures.

Results: Of 255 axSpA patients, 28 (11%) had 31 vertebral fractures. The mean TBS was 1.39 ± 0.11 and 1.30 ± 0.13 in patients without and with vertebral fractures, respectively ($p < 0.001$). BMD in the femoral neck was lower in patients with vertebral fractures ($p = 0.027$), but BMDs in the lumbar spine and total hip were not. In the multivariate analyses, low TBS and the presence of syndesmophytes were significantly associated with vertebral fractures, independently of BMD (OR [95% CI] = 3.6 [1.2–11.1] and 3.3 [1.0–10.7], respectively). For the total hip, TBS has a better discriminatory value than BMD for prediction of vertebral fractures in axSpA patients ($p = 0.034$).

Conclusions: TBS values are lower in axSpA patients with vertebral fractures. Low TBS and syndesmophytes were independently associated with prevalent vertebral fractures. TBS has better predictive value to BMD for the discrimination of vertebral fractures and could help to detect axSpA patients with vertebral fractures.

Disclosure of Interest: None declared

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THU0258

DIAGNOSTIC VALUE OF ANTI-CD74 AUTOANTIBODIES IN AXIAL SPONDYLOARTHRITIS AND AXIAL PSORIATIC ARTHRITIS. RESULTS OF OPEN-LABEL, CROSS-SECTIONAL, CONTROLLED, MULTICENTER PROGRESS STUDY

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Background: The problem of axial spondyloarthritis (axSpA) differential diagnostics is not solved, especially in the early stages of the axSpA. Therefore, new diagnostic markers for axSpA are needed.

Objectives: of the study were to evaluate the prevalence, sensitivity and specificity of anti-CD74 autoantibodies (anti-CD74-AB) in HLA-B27 associated axSpA in comparison with HLA-B27 associated axial Psoriatic arthritis (axPsA) and with healthy controls.

Methods: Anti-CD74-AB (quantitative ELISA) were measured in serum of 114 HLA-B27-positive patients with axSpA, and in 26 age- and sex – matched HLA-B27 positive patients with axPsA, and in 37 healthy controls without HLA-B27. 68 axSpA patients had ankylosing spondylitis (AS) according mNew-York criteria (1984), 46 axSpA persons had non-radiographic axSpA (nr-axSpA) due to ASAS criteria for axSpA (2009). AxPsA patients had psoriatic arthritis with axial involvement and fulfilled both ^{CASPAR} (2006) and ASAS axSpA criteria (2009). Disease activity in axSpA and axPsA patients was measured according ASAS recommendations.¹

Results: Patients with AS, nr-axSpA and axPsA were comparable in SpA activity: differences in BASDAI, ASDAS indices and C-reactive protein levels were not significant, $p \geq 0.05$ for all. Nr-axSpA patients had shorter disease duration as compared with AS and axPsA patients ($p < 0.001$).

The concentration of anti-CD74-AB in patients with axSpA was 3.5 ± 3.0 U/ml (3.1 ± 3.0 U/ml in AS and 3.8 ± 2.9 U/ml in nr-axSpA patients), 2.1 ± 1.4 U/ml in patients with axPsA ($p \geq 0.05$ compared to controls and ax-SpA) and 1.3 ± 1.4 U/ml in healthy controls ($p < 0.05$ for the difference with ax-SpA, AS and nr-axSpA). Diagnostic values of anti-CD74-AB in axSpA (ROC-analyse results) are presented in table 1.

Abstract THU0258 – Table 1. Diagnostic values of anti-CD74 autoantibodies in patients with axial spondyloarthritis

(ROC-analyse):

	AUC (95% CI)	Sensitivity of the test, %	Specificity of the test, %	+LR	Upper cut-off value for reference interval, U/ml	p
axSpA	0,74 (0,67– 0,82)	64,4	89,2	5,9	>2,0	<0,0001
AS	0,68 (0,59– 0,79)	60,3	89,2	5,6	>2,0	0001

nr-axSpA	0,78 (0,58– 0,83)	73,1	84,0	4,5	>1,73	<0,0001
axPsA	0,7 (0,69– 0,89)	96,1	45,9	1,8	0,7	0005

AS – ankylosing spondylitis, axSpA – axial spondyloarthritis, axPsA – axial psoriatic arthritis, nr-axSpA – non-radiographic axial spondyloarthritis, CI – confidence interval, +LR – positive likelihood ratio.

Cut-off value of anti-CD74-AB >2.0 U/ml in patients with axSpA showed the diagnostic sensitivity of 64.4%, specificity of 89.2%, the positive LR of 5.9, whereas in patients with nr-axSpA at concentrations of 1.7 U/ml – sensitivity 73.1%, specificity 84% and positive LR 4.5.

Conclusions: Anti-CD74-AB are strongly associated with nr-axSpA and less – axPsA. The measurement of anti-CD74-AB can be considered as candidate biomarker in the diagnostics of axSpA and in differential diagnostics between HLA-B27 positive ax-SpA and axPsA, especially in early stages of the diseases. Further studies are needed for the evaluation of anti-CD74-AB diagnostic capacity.

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THU0259

FREQUENCY AND PATTERN OF THE UVEITIS IN SPONDYLOARTHRITIS WITH BIOLOGICAL THERAPY

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Background: Uveitis is the most frequent extra-articular manifestation (EAM) of spondyloarthritis (SpA). Its prevalence is approximately 30% and increases with the duration of the SpA. The characteristic pattern is anterior, acute, recurrent and unilateral uveitis. However, the frequency and characteristics of uveitis in SpA treated with biological therapy (BT) are unknown.

Objectives: The main target is to describe the frequency and characteristics of uveitis in SpA with BT in a single centre.

Methods: Descriptive and retrospective study (January 2003–December 2017) of SpA that develops uveitis in a reference hospital. The epidemiological variables, type of SpA, presence of uveitis and its characteristics, presence of BT at the time of onset and treatment received are collected. For the analysis, frequencies and percentages were used in qualitative variables, and mean and standard deviation (SD) for quantitative variables. Statistical analysis was performed with IBM SPSS v.23.

Results: We studied 246 patients with SpA. The subtypes of SpA were: ankylosing spondylitis (AS) (n=125, 50.8%), psoriatic arthritis (PsA) (n=101, 41.1%), undifferentiated SpA (n=13, 5.3%), non-radiographic axial SpA (n=3, 1.2%), enteropathic arthropathy (n=3, 1.2%) and reactive arthritis (n=1, 0.4%).

Uveitis was observed in 41 patients (16.7%) after an average time of development of 109.47 (73.9) months of the SpA. The incidence rate was 5.5 cases of uveitis/100 patients-year of follow-up. 70.7% were men and the mean age(SD) was 47.4 (12.06) years. 87.8% of the cases were HLAB27 positive and had a family history of SpA 41.5%.

Uveitis was observed in 33 patients (80.5%) with AS, in 6 (14.6%) with PsA, in 1 (2.4%) with non-Rx axial SpA and in 1 (2.4%) with undifferentiated SpA. (table 1) The uveitis pattern was anterior (100%), acute (92.7%), unilateral (87.8%) and in 12.2% bilateral (80% in PsA). At the time of onset of uveitis, the mean ESR was 30.11 mm1sth, CRP 3.56 mg/dL, DAS28 3.66 and BASDAI 3.21.

Regarding the diagnosis of SpA, uveitis was after (85.4%), before (12.2%) and simultaneous (2.4%).

At the time of the onset of uveitis, 14 patients (34.1%) were with BT (35.7% etanercept, 28.6% infliximab, 21.4% adalimumab, 7.1% golimumab and 7.1% certolizumab). BT was modified in 3 of the cases.

The treatment of uveitis was topical (78%), corticoids in oral regimen (57.5%), conventional DMARDs (12.5%), with methotrexate predominating in 60% of cases and BT (15%). The most used biologics were adalimumab (50%), infliximab (33.3%) and sekukinumab (16.7%).

Abstract THU0259 – Table 1. Characteristics of the UVEITIS in SpA subtypes

TABLE. CHARACTERISTICS OF THE UVEITIS IN SpA SUBTYPES

	MEN/ WOMEN	AGE TO THE DIAG. OF UVEITIS (average in years)	HLA B27*	ANT/ POST	ACUTE/ CHRONIC	UNILATERAL/ BILATERAL	RECURRENT/ NON- RECURRENT	INCIDENCE RATE (cases/100 patients-year of follow-up)	BT AT THE DIAG. OF UVEITIS (patients)	ETN/ MONOCL.
AS (n=11)	23/10	47.4	32	33/0	31/2	32/1	25/8	8.48	11	4/7
PsA (n=1)	5/1	48.7	3	6/0	5/1	2/4	3/3	1.35	2	0/2
uSpA (n=1)	0/1	50	0	1/0	1/0	1/0	1/0	8.15	0	
nr-axSpA (n=1)	1/0	35	1	1/0	1/0	1/0	0/1	3.54	1	1/0
TOTAL 41	29/12 (70.7%/29.3%)	47.5	36 (87.8%)	41/0 (100%)	38/3 (92.7%/7.3%)	36/5 (87.8%/12.2%)	29/12 (70.7%/29.3%)	5.5	14 (34.1%)	5/9 (35.7%/64.3%)

AS: ankylosing spondylitis, PsA: psoriatic arthritis, uSpA: undifferentiated spondyloarthritis, nr-axSpA: non-radiographic axial spondyloarthritis, DIAG.: diagnosis, ANT.: anterior, POST.: posterior, BT: biological therapy, ETN: etanercept, MONOCL.: monoclonal antibody

Conclusions: In our series, uveitis was observed in 16.7% of patients with SpA of which 80.5% were AS and 14.6% PsA. The most frequent uveitis was anterior, unilateral, acute and recurrent. In PsA, the association with HLA B27 was less frequent and was more bilateral. In most cases, the diagnosis was later than the SpA.

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THU0260

THE UVEITIS IMPACT STUDY: A SURVEY BY THE SPONDYLITIS ASSOCIATION OF AMERICA

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Background: Uveitis is the most common clinically apparent concomitant of ankylosing spondylitis. The implications of developing uveitis in association with AS could help to understand this association and assist both clinicians and patients.

Objectives: To compare survey responses from patients with AS and no history of uveitis to those with AS and a history of uveitis.

Methods: Patients associated with the Spondylitis Association of America (SAA) participated in a web based survey with telephone follow-up performed for a subset.

Results: 716 respondents replied that a physician had made a diagnosis of AS. 30.4% of these patients had a history of uveitis. Patients with a history of uveitis tended to be older (median age 31 versus 23 years) and the median age for onset of uveitis was 18 years. Although patients with uveitis did not differ from patients without uveitis on many measures of function, medication, or disability, patients with uveitis were more likely to have heel pain (56% v.45%, p<0.005), rib pain (60% v. 50%, p=0.02), gut inflammation (37% v 23%, p=0.0001), hypertension (42% v 33%, p=0.02), fibromyalgia (18% v 12%, p=0.03), psoriatic arthritis (11% v 6%, p=0.02), or acid reflux (57% v 48%, p=0.03). Patients with uveitis were more like to be negatively impacted in the past week for the ability to concentrate (18% v 12%, very limited, p=0.03); the ability to read, listen, or watch TV (15% v 9%, very limited, p=0.01); and the ability to enjoy family life or friends (6% v 2%, totally limited, p=0.005). Prednisone was more commonly used by those with uveitis (16% v 7%, p=0.0002); and while sulfasalazine was more commonly used previously (41% v 24%, p<0.001), it was less commonly used currently (7% v. 10%). Etanercept, which is less effective in preventing uveitis than monoclonal anti-TNF inhibitors, was used equally in the two groups (11% v 12%).

Conclusions: This survey suggests associations between uveitis and clinical manifestations such as heel pain, bowel disease, and skin disease. It is one of the first reports to suggest that uveitis affects quality of life such as the ability to enjoy family or friends. Although medications differentially affect uveitis, our study did not indicate an impact on therapy resulting from uveitis except for the current use of prednisone and a prior history of the use of sulfasalazine.

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THU0261

CARDIOVASCULAR RISK STRATIFICATION IN ANKYLOSING SPONDYLITIS: LATERAL LUMBAR RADIOGRAPHY IS USEFUL TO DETECT HIGH-CARDIOVASCULAR RISK PATIENTS

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Background: Ankylosing spondylitis (AS) is associated with increased rates of cardiovascular (CV) disease. CV events in these patients can be prevented by identifying patients at high risk who can benefit from appropriate primary prevention measures. The systematic coronary risk evaluation (SCORE) is the predictive model recommended in Europe, but it underestimates the CV risk in AS.

Objectives: To determine if a lateral lumbar radiography, which is available in most of AS patients, may help to identify AS patients at high risk of CV disease.

Methods: 125 AS patients older than 35 years old without history of CV events, diabetes mellitus or chronic kidney disease were recruited. All patients underwent a carotid ultrasound (US) and lateral lumbar spine radiography and a multi-detector coronary tomography (MDCT) was also performed in a subgroup of 43 AS patients. Carotid plaques were defined according to the Mannheim consensus and the presence of AAC as calcific densities visible in an area parallel to the lumbar spine and anterior to the lower part of the spine. A Coronary Artery Calcification Score (CACS) superior to 100 were considered as a surrogate marker of coronary atherosclerosis. CV risk was calculated according to the total cholesterol systematic coronary risk evaluation (TC-SCORE).

Results: CV risk was categorised according to the TC-SCORE as low (<1%; n=64), moderate (≥1% and <5%; n=54) and high/very high risk (≥5%; n=7). Most patients with low TC-SCORE did not show CAA, which was only present in 3 patients (4.68%). In contrast, 38.9% of patients included in the moderate-risk group had CAA. The lateral lumbar radiography showed a sensitivity to detect subclinical atherosclerosis lower than that observed by carotid US, which found plaques in 61% of patients with moderate TC-SCORE, but superior to the MDCT (61.9% Vs 28.6% in the subgroup of 43 patients). 89% of patients with AAC also had carotid plaques (r=0.49, p<0.0001). We set up a predictive model to disclose the largest number of AS with high/very high CV risk, defined by the presence of carotid plaques or a TC-SCORE ≥5% (table 1). A model including patients with a chart TC-SCORE ≥5% along with the presence of AAC showed a sensitivity of 50.9% (model 4). The combination of a TC-SCORE ≥5% and the performance of carotid US in patients with a moderate SCORE showed the highest sensitivity to detect patients at high/very high risk (72.7%, model 2). Nevertheless, model 4 showed greater specificity than model 2 (70% Vs 95.7%), leading to a higher global diagnostic accuracy (area under curve: 0.73 Vs 0.71).

Abstract THU0261 – Table 1

Table 1.	Sensitivity	Specificity	Correctly classified	ROC [95% CI]
Model 1. TC-SCORE ≥5%	12.7%	100%	61.6%	0.56 [0.52 - 0.61]
Model 2. TC-SCORE ≥5% OR TC-SCORE ≥1% <5% plus carotid Carotid US (presence of plaques)	72.7%	70.0%	71.2%	0.71 [0.63 - 0.79]
Model 3. TC-SCORE ≥5% OR TC-SCORE ≥1% and <5% plus lateral lumbar X-ray (presence of AAC)	45.5%	95.7%	73.6%	0.71 [0.64 - 0.78]
Model 4 TC-SCORE ≥5% or TC-SCORE <5% plus lateral lumbar X-ray (presence of AAC)	50.9%	95.7%	76.0%	0.73 [0.66 - 0.8]

The gold standard used to define high/very high cardiovascular risk was the presence of TC-SCORE ≥5% or carotid plaques.

Conclusions: Several AS patients at high CV risk who are underdiagnosed as having very high CV risk by the SCORE can be detected by a lateral lumbar radiography.