Objectives: To compare the incidence of complications in HLA-B27- associated anterior uveitis patients with and without spondyloarthritis (SpA).

Methods: 189 patients with HLA-B27- associated anterior uveitis were observed in Research Institute of Eye Disease for 10 years. The pts were underwent standard ophthalmological examination, and, if necessary, computer perimetry, ultrasound examination (B-scan), optical coherence tomography of the retina and optic nerve (OCT), fluorescence fundus angiography (FAGD) and electrophysiological studies (EFI). All pts were examined for clinical and imaging signs of SpA: inflammatory back pain, arthritis, enthesitis, sacroiliitis.

Different variants of SpA were diagnosed in 108 pts: ankylosing spondylitis – in 48 (44.4%), reactive arthritis – in 9 (8.3%), psoriatic arthritis – in 9 (8.3%), inflammatory bowel disease – in 2(1.9%), juvenile SpA – in 4 (3.7%), undifferentiated SpA – in 36 (33.3%). In 81 pts SpA was not confirmed: 11 had a viral infection (13.5%), 7- bacterial infection (8.6%), 1 (1.2%)-multiple sclerosis, 3 (3.7%) -psoriasis, 59 (72.8%)- idiopathic AU.

Results: Complications were identified in 74 of 108 (68.5%) pts – 147 eyes in SpA-group and in 39 of 81(48.1%) – 110 eyes in group without SpA. Cataract was identified in 89 (60.5%) of 147 eyes in SpA-group and in 35(1.8%) of 110 eyes in group without SpA, $p=0.0001$; glaucoma – in 28 of 147 eyes (19.0%) in SpA-group and 8 of 110 eyes (7.3%) in group without SpA, $p=0.005$; synechia – in 24(16.3%) and in 8 (7.3%) respectively, $p=0.021$; vitreous destruction – in 59(40.1%) and in 26 (23.6%), $p=0.005$. Maculopathy, optic atrophy, corneal degeneration, panuveitis were observed more often in SpA-group, but the differences were not significant. Combinations of several complications were detected in 59 (40.1%) in SpA-group and in 31 (28.2%) in group without SpA, $p=0.03$.

Conclusion: Complications of HLA-B27- associated AU were identified more often in pts with SpA than without SpA (the majority of which was idiopathic AU). It confirms the effect of systemic inflammatory disease on the severity of uveitis.

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THU0401

WOMEN WITH SPONDYLOARTHROPATHIES HAVE HIGHER DISEASE BURDEN ACCORDING TO RAPID3 COMPARED TO MEN, BUT THERE IS NO GENDER DIFFERENCES ACCORDING TO A MODIFIED ASDAS-CRP

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Background: Women with Spondyloarthropathies (SpA) may be late or under-diagnoses due to a less typical presentation than in men, with a more peripheral clinical manifestation. Although some studies have suggested a higher burden of disease in women^{1, 2}, others did not confirm these differences^{3, 4}. In addition, women present higher scores for pain and fatigue, which may influence the BASDAI (Bath Ankylosing Spondylitis Disease Activity Index) score⁵.

Objectives: To evaluate possible gender differences in clinical presentation and disease severity in men and women with SpA in routine care at one academic center.

Methods: All patients complete a Multidimensional Health-Assessment Questionnaire (MDHAQ) as part of their routine care. It includes physical function (FN) (0-10), three 0-10 visual analogue scales (VAS) for pain (PN), patient global estimate (PATGL), and fatigue (FT), RADAI self-reported painful joints, and morning stiffness (MS). Patients with SpA (ICD10 codes) were included: ankylosing spondylitis (AS), psoriatic arthritis (PsA), undifferentiated, and inflammatory bowel disease associated (IBD). Data extracted were clinical presentation, treatment and laboratory tests including C-reactive protein (CRP), HLA-B27 (Human leukocyte antigen), and erythrocyte sedimentation rate (ESR). Composite indices, RAPID3 (0-30) previously validated in SpA, as the sum of 0-10 scores for FN, PN, and PATGL, and a modified ASDAS-crp using a "back pain" score derived from RADAI neck, back and hips; a "peripheral pain" score derived from the remaining RADAI joints; and MS in minutes were also included. Demographic and clinical characteristics were compared according to gender.

Results: 190 patients were included, 60% males and 40% females, with no differences in age, disease duration, and treatment. Men had significantly more frequent inflammatory back pain. Patient global assessment and pain scores were significantly higher in women versus men resulting in a higher RAPID3 (moderate disease severity in both groups). Axial, peripheral pain, morning stiffness and laboratory data did not show differences by gender, and as a result ASDAS-CRP was similar between men and women, with a value corresponding to moderate disease activity (Table).

Abstract THU0401 – Table 1. Demographic and clinical characteristics of patients with SpA by gender. Data as median (IQR) unless otherwise specified (* $p<0.05$)

	Men N=113	Women N=77
Age (yrs), mean (SD)	45.2 (14.4)	47.0 (15.3)
Self-reported race/ethnicity, %	61/15/13/11	50/20/13/17
White/Black/Hispanic/Others		
Disease duration, (yrs)	6.1 (1.4-11)	5.2 (2.1-9.3)
SpA subgroup, %:	57/24/16/3	36/29/31/4*
AS/PsA/Undifferentiated/IBD		
Peripheral arthritis, %	67%	69%
Inflammatory back pain, %	78%	63%*
PROs-MDHAQ		
PATGL	2.5 (1.0-5.0)	5.0 (2.0-7.0)*
Axial pain-RADAI (neck, back and hips)	4 (0.8-5.0)	3.3 (1.7-5.8)
Peripheral pain-RADAI	0.9 (0.2-1.9)	0.9 (0-2.6)
Total PN	3.0 (1.0-6.0)	6.0 (2.0-7.5)*
MS (min)	30 (15-60)	37.5 (15-120)
Fatigue	2.0 (0-6.0)	5 (2.0-8.0)*
Laboratory Data		
HLA-B27 positive, %	66.7%	67.4%
CRP (mg/L)	5 (5-15.6)	5 (5-15.6)
ESR (mm/h)	12 (4-29)	19.5 (9-33)
Composite index, mean (SD)		
RAPID3	7.7 (6.9)	10.9 (7.5)*
Modified ASDAS-CRP	1.8 (0.9)	1.9 (0.9)

Conclusion: Women with SpA have higher RAPID3 scores than men, in contrast to a modified ASDAS-CRP based on scores from the MDHAQ which did not show gender differences. These data suggest that RAPID3 scores in women may be attributable in part to a gender bias rather than clinical severity and a careful interpretation in the context of gender is necessary.

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THU0402

CONTRIBUTION OF THE EOS IMAGING SYSTEM IN ASSESSING PELVIC AND SPINAL DEFORMITIES IN SPONDYLOARTHRITIS

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Background: The severity of Spondyloarthritis (SA) lies mainly in the progressive ankylosis of the axial skeleton and the deformations generated. The means of assessing the spinal static disorders in SA are currently subjective and difficult to reproduce. Multidisciplinary collaboration has led to the development of a new biplane low dose radiology technology named EOS. It allows a simultaneous acquisition of the axial skeleton and the lower limbs in a standard standing position.

Objectives: We aimed to assess pelvic and spinal parameters and spinal stature in patients with SA using the EOS system.

Methods: This is a prospective cross-sectional study conducted over a 10-month period (January-October 2018) involving 50 patients with SA meeting the criteria of Assessment of SpondyloArthritis International Society. An entire body EOS examination of the vertebral column in a standardized standing position was performed in all patients. Pelvic parameters measured by the EOS system were pelvic incidence (PI: normal value:

48-55°), sacral slope (SS: normal value: 36-42°) and lateral pelvic tilt (LPT: normal value: 12-18°). Spinal stature parameters were thoracic kyphosis (normal value: 41-48°), lumbar lordosis (normal value: 43-61°), sagittal vertical axis (SVA: normal value: <30mm) and spinosacral angle (SSA: normal value: <132°).

Results: We enrolled 29 men (58%) and 21 women (42%) with an average age of 42.6 ± 11.09 years [20 -79]. The mean duration of SA was 12.4 ± 9.71 years [2-46]. SA was axial in 17 patients (34%), and axial and peripheral in 29 patients (58%). The median PI was 50.7 ± 11.81°. The median SS was 35.8 ± 11.64°. The median LPT was 14.9 ± 8.97°. The average value of thoracic kyphosis was 52.1 ± 12.1°. The average value of lumbar lordosis was 37.4 ± 16. The median SVA was 25.2 ± 55.88 mm and the median of SSA was 123.9 ± 16.64°. Thus, deformity of the thoracic spine was found in 40 patients (80%) with thoracic hyperkyphosis type and thoracic rectitude in 12% and 68% of cases respectively. The deformity of the lumbar spine was found in 40 patients (80%) with lumbar hyperlordosis type and lumbar rectitude in 74% and 6% of cases respectively. From this construction and segmenting the SS values, we were able to classify the type of back according to Roussouly : the type 2 back was the most frequently found (40%), followed by type 3 back (34%), type 4 back (24%), and type 1 back (2%). Spinal deformities were more frequent in women (p=0.004) and associated with a longer duration of the disease (p<0.0001) and a longer duration before initiation of treatment (p<0.0001) (Table 1).

Conclusion: Our study showed that the EOS system was a useful technique in assessing pelvic and spinal stature in patients with SA.

Abstract THU0402 –Table 1. Association of the spinal deformities with clinical parameters

Parameter	Spinal deformities
Female sex	p=0.004
Age	p=0.126
Duration of the disease	p<0.0001
Active disease	p=0.233
Axial spondyloarthritis	p=0.146
Duration before treatment	p<0.0001

Disclosure of Interests: None declared

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THU0403 AXIAL SPONDYLOARTHRITIS INDUCES MUSCLE DYSFUNCTION, THE ROLE OF BODY COMPOSITION PARAMETERS: MYOSPA STUDY

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Background: Sarcopenia as well as abnormalities in body composition are common features in several chronic diseases and have been shown to lead to increased morbidity and mortality. However, their assessment in young patients with axial spondyloarthritis (axSpA) has not been performed thus far.

Objectives: To assess the skeletal muscle mass, strength and performance as well as body composition in patients with axSpA compared to healthy controls.

Methods: Patients between 18 and 50 years of age with the diagnosis of axSpA and short disease duration (under 10 years) and classified according to the ASAS criteria were included. Healthy individuals matched by gender and age (1:1) were used as control group. Muscle strength (MS) was assessed by resisted flexion of the dominant forearm using a hand dynamometer. Muscle performance was assessed with the 60 second sit-to-stand test (STS60) and with 5 times sit-to-stand test (STS5). Body composition was assessed with octapolar multifrequency bioelectrical impedance analysis (InBody 770). The level of physical activity was measured by the IPAQ questionnaire. BASDAI and BASFI were used to evaluate disease activity and function, respectively. All measures (except age and disease duration) are reported as median and 25th and 75th percentiles. Non-parametric tests were used to compare groups.

Results: A total of 27 patients and 27 controls were included [mean age (36.5 ± SD 1.0), 66% males]. AxSpA patients had symptom duration of 7.0 ± SD 0.9 years, BASDAI 2.7 (1.4-3.6) and BASFI 0.9 (0.3-3.2). Compared to controls, axSpA patients had less MS in the dominant upper limb (DUL) (46.0 (37.5-70.6) vs 71.2 (54.1-83.4) kg, p=0.006) and worse

performance on the STS60 test (48.0 (27.5-64.3) vs 63.0 (53.0-68.0) repetitions, p=0.010). These differences were maintained after normalization for lean mass (LM) (MS_DUL/LM_DUL and STS60/Total_LM). In addition, compared to controls, axSpA patients had higher body fat (BF) (19.8 (12.1-29.1) vs 15.7 (10.1-22.2) kg, p=0.041), torso fat (TF) (10.3 (6.3-15.9) vs 8.1 (5.1-11.1) kg, p=0.450) and visceral fat (VF) (87.3 (52.7-145.1) vs 65.4 (41.8-96.4) cm², p=0.034). No differences were registered for weight, body mass index, total body water, extracellular water, fat free mass, LM and bone mineral content between groups. The level of physical activity, measured by the IPAQ questionnaire, was identical between patients and healthy controls (p=0.500).

Conclusion: Compared to healthy controls, young axSpA patients have a reduction in muscle strength and muscle performance with maintenance of muscle mass and levels of physical activity. These preliminary results underline the relevance of further investigations.

Abstract THU0403 – Table 1. Subject characteristics

Variable	Patients N=27	Controls N=27	p-value
Age (years)	37 (32-43)	36(30-44)	0.808
Gender (♂% : ♀%)	66.7:33.3	66.7:33.3	0.922§
Symptom duration (years)	7.0 (4.0-10.0)		
IPAQ (low% : moderate-high%)	29.2:70.8	20.8:79.2	0.505§
LM (Kg)	50.1 (44.5-57.8)	54.1 (43.2-60.2)	0.592
BF (Kg)	19.8 (12.1-29.1)	15.7 (10.1-22.2)	0.041
TF (Kg)	10.3 (6.3-15.9)	8.1 (5.1-11.1)	0.045
VF Area (cm2)	87.3 (52.7-145.1)	65.4 (41.8-96.4)	0.034
MS_DUL (Kg)	46.0 (37.5-70.6)	71.2 (54.1-83.4)	0.006
STS60 test (repetitions)	48.0 (27.5-64.3)	63.0 (53.0-68.0)	0.010

*Values are median (IQR) unless otherwise indicated. Comparison between patients and controls tested by paired samples t-test unless otherwise indicated. §Comparison between patients and controls tested by Chi-Square test in Gender and Physical Activity variables.

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THU0404 DICKKOPF-1 SERUM LEVELS AND THEIR CORRELATION WITH ACTIVE AND CHRONIC MRI-CHANGES OF SACROILIAC JOINTS AND CLINICAL INDICES IN PATIENTS WITH SPONDYLOARTHRITIS

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Background: The lack of valid biochemical markers for spondyloarthritis (SpA) patients requires searching the additional options to increase sensitivity of clinical and radiological methods in validation of changes in sacroiliac joints (SIJ). The molecular basis for the link between inflammation and new bone formation in SpA is still not clear. It has recently been shown that low serum levels of the Dickkopf-1 (Dkk-1), the natural inhibitor of Wnt protein, is associated with the formation of new syndesmo-phytes in patients with SpA [1]. Dkk-1 may be a main factor in blocking new bone formation [2], and might play a role of potential biomarker in SpA patients.