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.