Results: Data from 23 patients were analysed during the 52 weeks observational period. Mean age was 54.7 years, 60% of the patients were female. Mean DAS28 at baseline was 4.26, mean BSA 9%, whereas mean values for SJC were 5.9 and TJC 11.4 using 66/68 joint count. All patients were negative for ACPA and rheumatoid factor.

ROC analysis revealed that a DACT cut-off of 4.55 at baseline, indicating moderate expression of fluorescence intensities in context of disease activity, shows a predictive quality to LDA achievement at W52 with 80% specificity, 78% sensitivity and likelihood ratios of 3.89 (LQ+) and 0.28 (LQ-). The corresponding AUC value is 0.717 (95%CI=[0.393, 1]; $p=0.146$). Compared to clinical disease measurements such as baseline DAS28, TJC or SJC, the DACT at BL is more discriminative to identify patients who attain LDA at W52.

Conclusions: This interim analysis of the XPLORE study shows promising data for the use of FOI as possible imaging biomarker for disease activity measure and prediction of response in PsA-patients newly treated with antiTNF-therapy: Baseline values evaluated using the automated computer-based reading of the fluorescence intensities with a cut-off of 4.55 are predictive for later achievement of DAS28 low-disease activity or remission within the treatment course. Data will be verified in a larger cohort of the XPLORE study.

Disclosure of Interest: M. Köhm Grant/research support from: Pfizer Germany, S. Ohrndorf: None declared, T. Rossmanith: None declared, A. Foldenauer: None declared, U. Henkemeier: None declared, G. Schmittat: None declared, J. Berger Employee of: Xiralit GmbH, H. Burkhardt Grant/research support from: Pfizer Germany, F. Behrens Grant/research support from: Pfizer Germany

DOI: 10.1136/annrheumdis-2018-eular.6764

AB0881

ASSOCIATION OF RS12218 POLYMORPHISM IN SAA1 GENE WITH LUMBAR SPINE SYNDESMOPHYTES IN THE RUSSIAN ANKYLOSING SPONDYLITIS POPULATION. A PILOT STUDY

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Background: Ankylosing spondylitis (AS) is a chronic inflammatory disease from the group of spondyloarthritis (SpA). Earlier studies showed a correlation between SAA1 gene polymorphism, encoding serum amyloid A, and the development of secondary AA-amyloidosis in familial Mediterranean fever and rheumatoid arthritis in Caucasian and Asian populations. The Moriguchi et al (2005) study showed that the -13 T/C polymorphism in the gene 5'-flanking region (rs12218) is a better marker of AA-amyloidosis than mapping of polymorphisms in SAA1 exon 3 (SAA1.1 and SAA1.1.3). Data on rs12218 polymorphism contribution into predisposition to AS and its clinical phenotypes are very scarce. One of the clinical phenotypes, determining the severity of spine damage, is associated with presence of syndesmofytes (SM) in the lumbar (SMl), thoracic (SMt) and cervical (SMc) spine, confirmed by x-ray data.

Objectives: To study potential associations of rs12218 polymorphism in SAA1 gene with AS and phenotypes of radiographic progression, with the presence of SMl, SMt and SMc, and correlation with BASDAI, BASFI and ASAS indices.

Methods: rs12218 polymorphism was studied in 112 subjects: 47 AS patients (37 males and 10 females, mean age 40y, mean disease duration 213 weeks, mean age at onset 22y, positive for HLA-B27), and 65 healthy volunteers (controls). Genotyping was performed using allele-specific polymerase chain reaction in real time (PCR-RT).

Results: The Pearson Correlation analysis showed negative correlation between rs12218 polymorphism and presence of SMl, as well as BASDAI, BASFI scores ($r=-0.39$, $r=-0.35$ and $r=-0.36$, $p=0.006$, $p=0.017$, $p=0.014$, respectively). There were no correlations between rs12218 and pts' age, AS duration and pts' age at AS onset. There were similar rs12218 allele distribution rates between AS patients and the controls. rs12218C allele rates were significantly higher in SMl group ($n=23$) compared to subjects without SMl ($n=24$) [50.0% vs. 15.2%, $p=0.001$]. No association was established between C allele and presence of SM in other parts of the spine. A correlation between BASDAI and BASFI scores and SAA1 gene rs12218 polymorphism was established. Mean BASDAI score was significantly higher in carriers of TC and CC genotypes compared to carriers of TT genotype (5.6 ± 1.3 vs. 3.9 ± 2.3 , $p=0.004$). The mean BASFI scores in carriers of the respective genotypes were (6.1 ± 2.3 vs 4.1 ± 2.8 , $p=0.012$). No significant correlation was found between rs12218 genotypes and mean ASDAS score values.

Conclusions: Therefore, this pilot study is the first to show the possible participation of rs12218 polymorphism in SAA1 gene in AS pathogenesis in Russian population. We suggest that C allele may be a risk factor predisposing to SMl [OR 5.14 95% CI(1.75-16.17), $p=0.001$]. The data obtained on a limited sample of patients require further validation on larger samples of patients involving different population groups.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2466

AB0882

ACHILLES ENTHESITIS IN THE PATIENTS WITH SPONDYLOARTHRITIS: RELATIONSHIP WITH MUSCLE STRENGTH, ACTIVITIES OF DAILY LIVING AND QUALITY OF LIFE

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Background: Enthesitis is a central feature of spondyloarthritis (SpA). In SpA, the entheses of the lower extremities are more commonly involved than those of the upper limbs, and the heel is the most frequent site. Investigation of peripheral enthesitis in SpA is based on clinical findings and/or imaging findings. The involvement of Achilles tendon may lead to pain, movement restrictions, decrease in muscle strength, and eventually a diminished quality of life (QoL).

Objectives: In the present study, we aimed to evaluate clinical enthesopathy and relation with ankle muscle strength, activities of daily living (ADLs) and foot and ankle related QoL in the patients with SpA.

Methods: Sixty SpA patients fulfilling the Assessment of SpondyloArthritis International Society (ASAS) classification criteria for SpA (M/F=39/21) (35.61 ± 9.85 years) and 50 healthy controls (M/F=32/18) (35.40 ± 10.62 years) were enrolled in the study. Clinical enthesopathy was defined by the presence of at least one of the spontaneous pain, tenderness elicited by pressure, mobilisation and contraction against resistance of the corresponding tendons and local swelling of the entheses. Pain by visual analogue scale (VAS), disease activity by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), functional capacity by Bath Ankylosing Spondylitis Functional Index (BASFI), enthesitis severity by SPARCC index was assessed in the patients. Isokinetic measurements of ankle dorsiflexion and plantarflexion were performed by the isokinetic dynamometer. The participants were tested at 30° and 120°/sec angular velocities. Pain, other symptoms (stiffness, swelling, range of motion), ADLs, sport and recreational activities, and foot and ankle-related QoL were evaluated by the Foot and Ankle Outcome Score (FAOS) in which higher scores indicate lesser problems and/or functional limitations.

Results: There was no significant difference between the patients and controls regarding age, sex, and body mass index. Clinical enthesopathy was detected in 36.7% of the SpA patients. Although ankle plantarflexion and dorsiflexion muscle strength in all angular velocities were lower in the SpA patients, the difference did not reach statistical significance ($p>0.05$). All of the FAOS subscales were found to be significantly lower in the patients with SpA than in the controls ($p<0.001$). When the SpA patients were divided into two groups as with clinical enthesopathy ($n=22$) and without clinical enthesopathy ($n=38$), there were significant differences between the groups regarding VAS pain, BASDAI, BASFI and SPARCC scores whereas there was no significant difference in muscle strength. Also, all FAOS subscale scores were significantly lower in the patients with clinical enthesopathy. Additionally, in the patients with SpA, while there were negative correlations between VAS pain, BASDAI, BASFI, SPARCC and FAOS subscale scores, there was a positive correlation between ankle muscle strength and FAOS scores ($p<0.05$).

Conclusions: We found that all the FAOS subscale scores were lower in the SpA patients and they were correlated with clinical findings. The results of our study indicate that even though there was not a significant decrease in the muscle strength, ADLs, sport and recreation activities, foot-related QoL are poorly affected in the SpA patients with Achill enthesitis.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6361

AB0883

ASSESSMENT OF EARLY MYOCARDIAL DYSFUNCTION USING SPECKLE TRACKING ECHOCARDIOGRAPHY IN PATIENTS WITH RADIOGRAPHIC AND NONRADIOGRAPHIC AXIAL SPONDYLOARTHRITIS

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory disease that mainly affects axial skeleton. Although some differences like sex and objective signs of inflammation were described between these two subgroups, overall disease burden was found to be similar in radiographic (r-) and non-radiographic (nr-) axSpA patients. The association of chronic inflammation with cardiac dysfunction was well documented in many inflammatory rheumatic diseases. However it was not assessed in the subgroups of axSpA patients. Advanced two-dimensional (2D) speckle tracking echocardiographic analysis is more sensitive and accurate method of early detection of myocardial dysfunction than the conventional 2D transthoracic echocardiography (TTE).

Objectives: To evaluate the left ventricular function by using speckle tracking echocardiography in patients with both r- and nr-axSpA.

Methods: In total 64 patients with r-axSpA (70% male) and age- and sex-matched 27 patients with nr-axSpA (63% male) and 30 healthy control subjects

(63% male) were included in the analysis. Patients with hypertension, diabetes and known cardiac disease were excluded. All patients underwent detailed echocardiographic examination including M-mode, pulsed-wave Doppler imaging, pulsed-wave tissue Doppler imaging and 2D speckle tracking.

Results: Age and sex distribution were not different between groups. Some demographic and disease related characteristics were shown in the table. BASDAI, BASFI, global assessment of disease activity and ASAS-HI scores were found to be similar between r- and nr-axSpA patient groups. Although ejection fraction (EF) ($p=0.112$) and the other echocardiographic variables were similar between groups, global longitudinal strain (GLS) ($p=0.045$) were found to be different among groups (table 1). Post-hoc analysis showed that GLS was similar between nr-axSpA and control groups however GLS was significantly low in r-axSpA patients. In univariate analysis GLS was correlated with age ($p=0.025$), EF ($p<0.001$), peripheral arthritis ($p=0.047$), and smoking ($p=0.019$). However in regression only peripheral arthritis ($p=0.032$) and EF ($p=0.015$) were found as the independent predictors of GLS.

Abstract AB0883 – Table 1. The demographic and disease related characteristics of study groups.

	Radiographic axSpA patients (n=64)	Non-radiographic axSpA patients (n=27)	Control subjects (n=30)	P
Age, years (mean±SD)	40.9±10.2	37.6±9.4	42.3±4.3	0.056
Duration of disease, years (mean±SD)	14.1±7.8	10.6±8.1	N/A	N/A
BASDAI, (mean±SD)	2.7±2.1	3.0±1.8	N/A	N/A
BASFI, (mean±SD)	2.5±2.3	2.6±2.0	N/A	N/A
Ejection fraction, (mean ±SD)	58.9±5.2	60.1±4.7	61.2±4.9	0.112
Global Longitudinal Strain, (mean±SD)	20.4±3.3	21.3±3.8	22.3±2.5	0.045

Conclusions: The results of the present study showed that left ventricular function had impaired in r-axSpA patients and speckle tracking echocardiography may be a useful tool for early demonstration of left ventricular dysfunction.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2767

AB0884 SERUM FIBROBLAST GROWTH FACTOR-23 LEVELS WERE HIGHER IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS AND MAY BE ASSOCIATED WITH DISEASE ACTIVITY

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory disease that mainly affects axial skeleton. The disease is characterised by new bone formation; it usually starts with the bony fusion of sacroiliac joints (SIJs) and also causes syndesmophyte formation in the intervertebral space, enthesophytes in the tendon and ligament insertion sites. Underlying mechanisms of new bone formation in axSpA patients is not completely understood and low levels of sclerostin may be associated with the development of syndesmophyte in patients with ankylosing spondylitis (AS). Beside sclerostin another osteocyte factor is fibroblast growth factor-23 (FGF-23) and it has been first described as a phosphaturic hormone. It was also shown that FGF-23 may inhibit osteoblast differentiation and matrix mineralization.

Objectives: To evaluate serum FGF-23 and sclerostin levels in patients with axSpA and to compare them with those of healthy control subjects. We also assessed relationship between the serum FGF-23, sclerostin levels and disease related variables in particular the presence of structural changes.

Methods: In total 109 axSpA patients according to ASAS classification criteria and age- and sex-matched 57 healthy control subjects were included in the analysis. Subjects with renal failure and significant comorbid conditions and axial SpA patients who were using anti-TNF agents were excluded. Demographic and disease related characteristics were collected by using a standard questionnaire. Serum levels of FGF-23 and sclerostin were measured using commercially available enzyme-linked immunosorbent assay (ELISA) kits in accordance with the supplier's instructions.

Results: In the present study there were 55 patients with non-radiographic axSpA and 54 patients with AS. Serum levels of FGF-23 levels were significantly higher in axSpA patients than healthy subjects. Although there was a trend towards a lower sclerostin levels in axSpA patients this difference did not show statistical significance (table 1). In axSpA patients serum FGF-23 levels were found to be correlated with erythrocyte sedimentation rate (ESR) ($p=0.006$ and $r=0.265$), C-

reactive protein (CRP) ($p=0.017$ and $r=0.229$) and patients' height ($p=0.027$ and $r=-0.221$). There was no relationship between FGF-23 and mSASSS score or the presence of syndesmophyte. Subgroup analysis revealed that the duration of disease ($p=0.005$), ESR ($p=0.007$), CRP ($p<0.001$) and mSASSS ($p=0.008$) scores were significantly higher in AS patients than nr-axSpA patients. However serum sclerostin levels were significantly higher in nr-axSpA patients (1464.4 ± 728.1 vs 1150.8 ± 754.3 pg/mL and $p=0.029$).

Abstract AB0884 – Table 1. Demographic characteristics and serum FGF-23 and sclerostin levels in study groups

	Axial spondyloarthritis (n=109)	Healthy controls (n=57)	P
Mean age (years)	39.8±10.3	37.0±8.2	0.055
Male (%)	51	44	0.513
Mean fibroblast growth factor-23 (pg/mL)	188.5±160.7	130.8±100.3	0.005
Mean sclerostin (pg/mL)	1309.0±754.4	1365±676.7	0.633

Conclusions: Our results suggested that serum FGF-23 is increased in axSpA patients. And also disease activity may contribute to an up-regulation in serum FGF-23 levels.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2828

AB0885 CHARACTERISTICS OF JUVENILE ONSET HIP ARTHRITIS IN PATIENTS WITH SPONDYLOARTHRITIS

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Background: Axial spondyloarthritis (AS) is a chronic inflammatory rheumatic disease that affects the axial skeleton. It typically occurs in the late teens or early twenties and rarely in childhood, defining the juvenile onset (JoAS).

The adult-onset AS (AoAS) and Juvenile-onset (JoAS) may share many common features including hip involvement. But their impact on function and quality of life may differ.

Objectives: To compare demographic, clinic and functional outcome of patients with hip involvement in JoAS, with that of patients with AoAS

Methods: Cross-sectional study including patients with AS according to the ASAS criteria of 2009 with hip involvement. The juvenile onset of coxitis was defined by an onset before 16 years of age. An analysis of demographic and clinical comparisons between the two groups was performed including HLA B27 status. Mobility spine outcomes were assessed by the Bath AS Metrology Index (BASMI) and radiographic disease severity by the Bath AS Radiology Index (BASRI).

Results: There were 100 AS aged on average 36.4 ± 12.2 years old.¹⁶⁻⁶⁹ The sex ratio was 4.6. The mean duration of progression of AS was 10.93 ± 9.89 years [0.5–24]. It was a JoAS in 15 cases. All patients had a hip involvement. The juvenile onset of hip arthritis was associated with male gender ($p=0.042$), younger age of patient with AS at the time of recruitment ($p=0.007$), less severe clinical spinal involvement assessed by schober index ($p=0.029$) and more frequent and severe enthesitis assessed by MASES ($p=0.024$). Extra-articular manifestations were significantly more frequent in patients with juvenile onset of hip arthritis ($p=0.008$). Otherwise the comparison of the two groups showed no difference in the presence of uveitis ($p=0.407$) and pulmonary involvement ($p=0.097$). HLAB27 antigen was significantly more common in JoAS ($p=0.037$). BASRI and BASMI as well as ESR and CRP, were comparable between the two groups ($p=0.976$, $p=0.626$, $p=1.000$, respectively)

Conclusions: Hip involvement is common in the AS, particularly in JoAS. Our study showed that juvenile onset hip arthritis was associated with male gender, less severe spine involvement, enthesitis and the presence of HLA B27. This would help physicians to identify patients at higher risk of developing hip involvement, to enable early diagnosis.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5872