expansion in AS group ($p<0.001$). PFTs were found to be restrictive in 14 AS patient (63.6%) with mean of FVC ($70.3\pm9\%$), FEV1 ($55.2\pm15.9\%$), FEV1/FVC (80.1 ± 2) and these restrictive PFTs were associated with SCJ synovitis ($p=0.03$), SCJ PD activity ($p=0.03$), SCJ erosions (0.05) and highly associated with MSJ ankylosing ($p<0.001$). All AS patients (100%) with ankylosed MSJ by US had limited chest expansion and restrictive PFTs.

In AS group, ultrasonographic changes and restrictive PFTs were found to be higher with older age, male sex, smoking, longer disease duration and high BASDAI and BASFI.

Conclusions: Our study demonstrated that ultrasound detected subclinical changes in ACW joints is associated with restrictive pattern of PFTs in AS patients.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5895

THU0255 LOW BONE MINERAL DENSITY IS COMMON IN AXIAL SPONDYLOARTHROPATHY

G. Fitzgerald, T. Anachebe, F. O' Shea. *Department of Rheumatology, St James's Hospital, Dublin 8, Ireland*

Background: Osteoporosis is a known consequence of inflammatory arthritis (IA). In the general population and IA such as rheumatoid arthritis, the impact of osteoporosis is well outlined. However, it is often ignored in axial spondyloarthritis (axSpA), a form of IA centred on sacroiliac joints and the spine, as axSpA predominantly affects men, in whom osteoporosis is often not considered. As a result, osteoporosis prevalence figures are unclear, with wide variation in the literature. Accurate epidemiology regarding bone mineral density (BMD) in axSpA is crucial to begin understanding the impact of low BMD in this cohort.

Objectives: 1. Investigate the prevalence of low BMD in a well-characterised axSpA cohort

2. Explore relationships (demographic, disease-related, laboratory) between BMD and axSpA.

Methods: A detailed assessment was performed on axSpA patients, including demographics, clinical characteristics and laboratory investigations. Disease severity was assessed with tools validated in axSpA: ASDAS-CRP and BASDAI (disease activity), BASMI (spinal mobility) and BASFI (function). BMD was assessed using DXA of the spine, hip and radius. Lateral vertebral assessment (LVA) was also performed. The WHO criteria were used to classify low BMD. SPSS was used for statistical analysis.

Results: One hundred and four patients with axSpA were consecutively recruited: 77.9% (n=81) male, 98.1% (n=102) Caucasian, mean (SD) age 51¹² years, disease duration 26¹³ years. The mean (SD) ASDAS-CRP was 2.3 (1), BASDAI was 3.9 (2.2), BASMI was 4.3 (1.9) and BASFI was 3.8 (2.5), reflecting mild to moderate disease burden. A history of fracture was present in 42.3% (n=44) of the cohort, with only 3 fragility fractures reported.

Of the cohort, 42.3% (n=44) had osteopenia and 16.3% (n=17) had osteoporosis. Low BMD was most prevalent at the spine, with 44% of the cohort affected, followed by the femoral neck (30.1%, n=22). Low BMD at the radius was uncommon (<10% of the cohort). Only 6.4% of the cohort had a prior diagnosis of osteoporosis and only 39.4% had a previous DXA.

Three vertebral fractures were detected on LVA – all patients were unaware of these fractures prior to the study.

Female gender, higher BASFI, lower BMI and lower urate levels were significantly associated with bone loss at both the spine and the hip. ASDAS-CRP and BASDAI had no impact on low BMD. Additionally, longer disease duration was associated with spine BMD loss. Non-obese patients were more likely to have low BMD at any site than obese patients (62.3% v 40%, OR 2.5, $p=0.04$). The use of biologics didn't influence BMD.

Conclusions: Low BMD is common in this axSpA cohort, with over 50% of patients affected. Most cases of low BMD were undiagnosed prior to this study and less than half of the cohort had ever had a DXA, suggesting a continued low awareness of the risk of osteoporosis in a male-dominated disease.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.6287

THU0256 HIGH DISEASE ACTIVITY, REDUCED PHYSICAL FUNCTION, LONG DISEASE DURATION, FATIGUE AND LIVING WITHOUT A PARTNER ARE FACTORS RELATED TO WORSE HEALTH RELATED QUALITY OF LIFE IN ANKYLOSING SPONDYLITIS

H. Forsblad-D'elia^{1,2}, L. Law¹, J. Beckman Rehnman¹, A. Deminger², E. Klingberg², L. T.H. Jacobsson². ¹Department of Public Health and Clinical Medicine, Rheumatology, Umeå University, Umeå; ²Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden

Background: Ankylosing spondylitis (AS) begins early in life. The disease often leads to reduced physical function and also reduced health related quality of life (HRQoL). Knowledge is limited about factors related to HRQoL and how it develops over time.

Objectives: To assess HRQoL by SF-36 in a cohort of patients with AS compared with controls and to explore associations between HRQoL and spinal radiographic damage, physical function, disease activity and demographic data.

Methods: A cohort of patients with AS from Western Sweden were assessed at baseline and after 5 years with; x-ray of the spine for mSASSS, clinical examination and questionnaires, including BASMI, BASFI, ASDAS, BASDAI and SF-36. In this abstract we report the baseline results. Each patient's SF-36 results were compared with 5 age- and sex matched persons (n=1055) from the SF-36 Swedish normative population database. Associations between SF-36 mental component summary (MCS) and physical component summary (PCS) scores and disease related and demographic factors were investigated. Univariate logistic regression analyses were assessed with PCS and MCS below/above their respective median values (below median=1 and above median=0) as dependent variables and disease related and demographic variables as covariates. Variables with p-values≤0.2 in the univariate analyses were entered as covariates in multivariate models after checking for multicollinearity.

Results: 210 patients, age (median, IQR) 49.0 (40.0, 61.2) years, symptom duration 24.0 (13.0, 34.0) years, men 58%, HLAB27 87% were included. AS patients scored significantly lower ($p<0.001$) compared to controls in all SF-36 domains and component summaries. AS women scored significantly lower compared to AS men in three domains, Physical Function, Vitality and Mental Health. Both men and women scored significantly lower in PCS compared with MCS. The results of the multiple logistic regressions are shown in the table 1.

Variables	PCS below median 42.4 (1)			MCS below median 48.0 (1)		
	OR	95% CI	P-value	OR	95% CI	P-value
Civil state, single	2.19	0.95–5.02	0.065	3.12	1.40–6.97	0.006
VAS global fatigue,>median				7.05	3.50–14.20	<0.001
Duration of symptoms, decades	1.59	1.16–2.17	0.004			
BASFI	1.98	1.51–2.58	<0.001			
ASDAS-CRP, ≥ 2.1	3.37	1.58–7.20	0.002	3.85	1.95–7.60	<0.001

Conclusions: Patients with AS had significantly lower HRQoL compared with controls. Women with AS scored lower in some domains compared to men and PCS was more affected compared to MCS in both sexes. Both demographic and disease related factors were associated with HRQoL, partly overlapping for PCS and MCS. By modifying factors, such as ASDAS and fatigue, HRQoL may potentially be improved. The development of SF-36 over 5 years will be investigated.

Disclosure of Interest: H. Forsblad-D'elia Grant/research support from: Advisory Board Fees from Sandoz, Novartis and Abbvie and an unrestricted grant from Novartis, L. Law: None declared, J. Beckman Rehnman: None declared, A. Deminger: None declared, E. Klingberg: None declared, L. T.H. Jacobsson: None declared

DOI: 10.1136/annrheumdis-2018-eular.3144

THU0257 ASSOCIATIONS BETWEEN TRABECULAR BONE SCORE AND VERTEBRAL FRACTURES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

H.R. Kim, Y.S. Hong, K.Y. Kang. *Catholic University of Korea, Seoul, Korea, Republic of Ireland*

Background: The bone tissue directly exposed to inflammation in axSpA is the trabecular bone of the vertebrae, and consequently, vertebral osteoporosis and resorption of trabecular bone are increased in axial spondyloarthritis. The trabecular bone score (TBS) is a novel tool used to evaluate bone microarchitecture. AxSpA patients showed poor bone quality compared with matched controls.

Objectives: This study aims to compare TBS between axSpA patients with and without vertebral fractures and investigate associations between TBS and vertebral fractures.

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

DOI: 10.1136/annrheumdis-2018-eular.1712

THU0258

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

I.Z. Gaydukova¹, A. Rebrov², A. Maslyanskiy³, S. Lapin⁴, E. Vasilenko⁵, V. Mazurov⁵. ¹North-Western State Medical University n.a.II Mechnikov, St Petersburg, Russian Federation; ²Saratov State Medical University, Saratov; ³V.A. Almazov North-Western Federal Medical Research Centre; ⁴First Saint Petersburg State Medical University named after I.P. Pavlov; ⁵North-Western State Medical University, St Petersburg

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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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4892

THU0259

FREQUENCY AND PATTERN OF THE UVEITIS IN SPONDYLOARTHRITIS WITH BIOLOGICAL THERAPY

I. Calvo¹, E. Guerrero¹, O. Ibaranguioitia¹, D. Montero¹, M.L. Garcia¹, E. Ruiz¹, I. Torre¹, O. Fernandez¹, J.M. Blanco¹, A.R. Intxaurre¹, C. Perez¹, I. Gorostiza², E. Galindez¹. ¹Rheumatology; ²Research Unit, Basurto University Hospital, BILBAO, Spain

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%).