



Conclusions: SMSP is an effective mobile interface to serve AS patients performing self-management as well as to supply physicians with valuable and reliable data with a minimal bias for online data collection and automatic quality controls. This large cohort may improve our knowledge of the characteristics, pathogenesis and natural course in Chinese patients with AS.

Disclosure of Interest: None declared

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FRI0196 TRADITIONAL DXA UNDERESTIMATES BONE MINERAL DENSITY OF THE SPINE IN AXIAL SPONDYLOARTHROPATHY

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Background: Axial spondyloarthritis (axSpA) is an inflammatory arthritis which can lead to new bone formation (syndesmophytes) and ankylosis of the spine. Osteoporosis is a recognised feature of axSpA, but can be challenging to diagnose. Traditional dual-energy x-ray absorptiometry (DXA) in the antero-posterior (AP) projection of the spine can overestimate bone mineral density (BMD) due to the presence of syndesmophytes, potentially under-diagnosing osteoporosis. There is a real need to find an accurate method to assess BMD in axSpA patients. Lateral DXA of the lumbar spine is unaffected by syndesmophyte formation and may be a promising tool.

Objectives: The aim of this study is to:

1. investigate different projections of DXA of the lumbar spine in axSpA patients
2. assess the effect of syndesmophytes on spine BMD.

Methods: AxSpA patients were assessed with clinical exam, questionnaires and laboratory investigations. The burden of syndesmophytes on lateral x-rays of the lumbar and cervical spine was assessed with the validated modified Stoke Ankylosing Spondylitis Spinal Score (mSASSS) score, which ranges from 0–72 (higher scores indicate more severe disease). DXA was performed of the spine in both the AP and lateral projections. SPSS was used for statistical analysis.

Results: One hundred patients with axSpA were recruited: 78% (n=78) male, mean (SD) age 52¹² years, disease duration 26¹³ years, 85% (n=85) fulfil modified New York criteria. The median (IQR) mSASSS score was 10.³³

Lumbar spine BMD was lower when measured by lateral DXA rather than AP (0.76 v 1.11 g/cm², p<0.01). Lateral DXA detected more cases of spinal osteopenia or osteoporosis than AP (21% v 44%, p<0.01). Lateral spine BMD reduced with longer duration of disease (r=-0.3, p=0.02), whereas AP spine BMD increased with age (r=0.3, p=0.01). Women had significantly more cases of osteoporosis at the lumbar spine than men when measured by lateral DXA (32% v 12%, p=0.02), but not by AP DXA.

A higher mSASSS, reflecting more syndesmophytes/new bone formation, was associated with a rising AP spine BMD (r=0.5, p<0.01), but had no effect on lateral spine BMD. The gap between AP and lateral spine BMD, i.e. when AP BMD was higher than lateral BMD, increased significantly (p<0.05) with increasing age (r=0.38), disease duration (r=0.37) and mSASSS (r=0.52). mSASSS was the strongest independent predictor of a difference between AP and lateral BMD measurements, suggesting that syndesmophyte formation interferes with AP DXA assessment of the spine.

Conclusions: AP DXA of the spine is affected by a higher burden of syndesmophytes (new bone formation), raising concerns that traditional DXA assessment

may miss cases of osteoporosis. We suggest that lateral DXA of the spine may be a more accurate tool to detect osteoporosis in axSpA patients.

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FRI0197 ASSOCIATION OF THE ELECTROCARDIOGRAPHIC DISTURBANCES WITH AORTIC ROOT DILATION IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) is a disease with very characteristic extraarticular organ involvements. Cardiac conduction disturbances and aortic root diseases are some of the most particular manifestations of this disease¹. The most frequent conduction disturbances are atrioventricular blocks (AVB), bundle branch blocks (BBB) and intraventricular conduction disturbances (IVCD)². The prevalence of AVB is 3% and 8% for IVCD in the general population³. In some cross-sectional studies of the AS population^{4,5} the prevalence was reported to be around 4.6%–9% for AVB and 4%–29% for IVCD. Some studies propose that there may be a relation between the conduction disturbances and the inflammation of the aortic root due to disease activity^{6,7,8}.

Objectives: This study aims to evaluate association between the electrocardiographic alterations (AVB, BBB, IVCD) and aortic root dilation in patients with AS.

Methods: Out of a registry of 118 patients from a spondyloarthritis consultation, we selected patients with AS according to New York criteria. We included those patients who had undergone an electrocardiography (EKG) and an echocardiography, in order to rule out heart disease or to check up because of long term AS. Demographical and clinical data (cardiovascular risk factors, past heart disease, presence of arthritis, enthesitis, dactylitis, uveitis and HLAB27) were collected. The EKG were reevaluated looking for IVCD, AVB or BBB by a blinded arrhythmologist. Echocardiographical data about aortic root dilation were collected using aortic root diameter adjusted by body surface area. We carried out chi squared analysis as well as a comparison of proportions. We summarised descriptive data of our sample in table 1.

Results: Out of 118 patients, 38 patients met inclusion criteria. Fourteen of them (36.8%) were women. The average age was 60.3 years old and mean disease duration was 19.62 years.

Conduction disturbances was present in 12 (31.5%) patients of whom 4 were AVB (10.5%), 5 BBB (13.2%) and 3 IVCD (7.8%). Aortic root dilation was found in 6 (15.8%) of the 38 patients.

The conduction disturbances showed a statistically significant association with aortic root dilation (chi square p=0.02). In comparison of two proportions, the prevalence of aortic root dilation in abnormal EKG group (0.67 IC95% 0.36%–0.97%) was significantly higher than normal EKG group (0.6 IC95% 0.36%–0.97) p=0.02.

Abstract FRI0197 – Table 1

Variable	Number (patients)/Proportion (%)
Women	14 / 36.84%
B27	29 / 80.56%
Arthritis	14 / 36.84%
Enthesitis	13 / 34.21%
Uveitis	5 / 13.16%
Aortic root dilation	12 / 31.5%
Aortic insufficiency	12 / 31.5%
Exsmoker	23.68%
Smoker	34.21%
Hypertension	21 / 56.76%
Dyslipemia	22 / 59.49%
Diabetes	10 / 27.02%
Valve disease	2 / 5.55%
Ischaemic disease	7 / 29.44%
AVB	4 / 10.52%
Left BB	1 / 2.63%
Right BB	3 / 7.89%
Anterior BB	1 / 2.63%
Intraventricular conduction disturbances	3 / 7.89%

Conclusions: The prevalence of aortic root dilation and conduction disturbances was higher in our sample than in the general population. In our

sample the presence of aortic root dilation and conduction disturbances (AVB, BBB, IVCD) had a statistically significant association. The principal limitations of this study are the small sample size and the retrospective nature in patient selection.

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FRI0198 WHICH FACTORS INFLUENCE PSYCHOLOGICAL WELL-BEING OF PATIENTS WITH AXIAL SPONDYLOARTHRITIS? – DATA FROM A CROSS-SECTIONAL SURVEY LINKED TO INSURANCE CLAIMS

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Background: Psychological well-being is considered an important determinant of quality of life. Importantly, well-being is related not only to medical factors, but also to social and economic factors.

Objectives: The aim of this study was to examine the psychological well-being of patients with axial spondyloarthritis (axSpA) and its determinants.

Methods: A stratified random sample of subjects with a diagnosis of axSpA (International Classification of Diseases, Tenth Revision, [ICD-10] code M45) was drawn from German health insurance data to whom a postal questionnaire was sent asking about disease-related, psychological, and lifestyle factors as well as socioeconomic status. Additional information to verify the axSpA diagnosis was collected. The psychological well-being was assessed by the World Health Organisation Well-Being Index (WHO-5), which is considered a sensitive and specific screening tool for depression. The following established cut-offs on the WHO-5 were applied: >50: good well-being, no depressive symptoms, 29–50: mild depressive symptoms, ≤28: moderate-to-severe depressive symptoms. Information on comorbidities, drug prescriptions and non-pharmacological treatment was retrieved from claims data and linked to the questionnaire data.

Results: A total of 1736 persons with a confirmed axSpA diagnosis were included; mean age was 55.8 years and 46.3% were female. We found a mean WHO-5 score of 44.70 in axSpA subjects, which is considerably below the WHO-5 score of 69.95 reported among the population in Germany aged 41 to 60 years.¹ Using the cut-offs on the WHO-5, 533 persons (31%) were found to have moderate-to-severe depressive symptoms, 479 (28%) had mild depressive symptoms, and 724 (42%) had a good well-being. Persons with moderate-to-severe depressive symptoms had higher disease burden of axSpA, lower household income and reported more often a lack of exercise and a perception of suffering from stress (table 1). Multivariable logistic regression revealed that higher disease activity of axSpA, higher level of functional impairment, lower income, self-reported stress and lack of exercise, and younger age were associated with moderate-to-severe depressive symptoms.

Abstract FRI0198 – Table 1. Main demographic, disease-related, lifestyle and socioeconomic characteristics of patients and axSpA.

	Total N=1736	Depressive symptoms			P-value
		no N=724 (42%)	mild N=479 (28%)	moderate/severe N=533 (31%)	
Sex, female	46.3	41.0	50.6	49.7	0.0009
Age, years	55.820.1	57.420.4	54.120.5	55.120.4	<.0001
Symptom duration, years	25.220.3	26.620.5	23.920.6	24.320.6	0.0013
Duration since diagnosis, years	19.420.3	21.320.5	17.920.6	1820.6	<.0001
In rheumatologic care, %	46.1	39.5	47.2	54.0	<.0001
HLA-B27 positive, %	86.0	87.4	83.5	86.6	0.2816
BASDAI, 0-10	4.550	3.320.1	4.820.1	5.820.1	<.0001
BASFI, 0-10	4.120.1	2.920.1	4.220.1	5.620.1	<.0001
Inflammatory bowel disease (ever, self-reported), %	8.8	6.9	6.2	13.9	<.0001
Uveitis (ever, self-reported), %	27.3	28.7	28	24.9	0.3181
Pсориаз (ever, self-reported), %	15.1	12.1	16.8	17.7	0.0152
Body Mass Index, kg/m ²	2750.1	26.820.2	2720.2	27.420.2	0.0872
Lack of exercise, %	24.4	19.0	23.3	30.8	<.0001
Suffering from stress, %	39.9	25.5	47.8	52.6	<.0001
Full-time employment, %	31.7	32.2	35.6	27.4	0.0187
Household income, €					
<1500	25.9	20.1	26.7	33.1	<.0001
1500-3200	56.0	55.0	58.3	55.2	
>3200	18.1	24.9	15.0	11.7	
Smoking, current, %	18.9	14.8	20.0	23.4	0.0006
Pharmacological treatment, %					
NSAIDs	59.7	50.9	63.4	68.6	<.0001
Non-opioid analgesics	22.6	18.2	20.6	30.3	<.0001
Opioids	16	9.4	16.5	24.4	<.0001
bDMARDs*	17.1	15.5	19.1	17.5	0.2520
csDMARDs**	11.7	10.6	10.5	14.4	0.0818
Glucocorticoids	18.3	15.6	17.5	22.8	0.0046
No pharmacological treatment, %	22.1	30.3	21.2	11.8	<.0001

Values are presented as mean ± standard error of the mean for continuous characteristics and as percentages otherwise. P-values were assessed using analyses of variance for continuous characteristics and Rao-Scott chi-square tests otherwise.

WHO-5, 5-item World Health Organization Well-Being Index; BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index; NSAIDs, Nonsteroidal Anti-inflammatory Drugs; csDMARDs, conventional synthetic Disease-Modifying Anti-Rheumatic Drugs; bDMARDs, biological Disease-Modifying Anti-Rheumatic Drugs.

* bDMARDs: 17.0% TNF blocker, 0.07% secukinumab, 0.06% tocilizumab, 0.06% ustekinumab, 0.05% abatacept.

** csDMARDs: 5.7% sulfasalazine, 5.6% methotrexate, 0.9% leflunomide, 0.6% azathioprine, 0.2% ciclosporin.

Conclusions: Moderate-to-severe depressive symptoms are frequent in patients with axSpA. They are associated with a high disease burden as well as sociodemographic factors. These findings highlight the need for the careful evaluation of depressive symptoms as a part of the management strategy for axSpA, helping to improve axSpA outcomes.

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FRI0199 FUNCTIONING CATEGORIES BY ASAS HEALTH INDEX IN PATIENTS WITH ACTIVE ANKYLOSING SPONDYLITIS AND CONCOMITANT FIBROMYALGIA

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Background: Ankylosing spondylitis (AS) is a chronic rheumatic disease that characterised by prevalent inflammatory spinal involvement. Concomitant fibromyalgia (FM) can significantly modify this condition. In 2014, ASAS Health Index and Environmental Factors (ASAS HI/EF) appeared as new tool to assess the health status of patients with spondyloarthritis, able to describe the total impairments, restrictions and functional limitation due to AS.¹