Background: Evaluation of disease activity and functional impairment in Axial spondyloarthritis (AxSpA) are important in therapeutic plan. Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Ankylosing Spondylitis Disease Activity Score (ASDAS) and The Bath Ankylosing Spondylitis Functional Index (BASFI) scores are based largely on subjective measures, which liable to change depending on patient’s expression, culture, and awareness.

Objectives: Assessment of reliability of BASFAI, BASDAI, ASDAS-ESR, and ASDAS-CRP as a total score and individual questions in patients with AxSpA.

Methods: This cross-sectional study was conducted on 103 patients with AxSpA according to the ASAS classification criteria for AxSpA. Each patient completed BASDAI, BASFAI, ASDAS-ESR, and ASDAS-CRP during their routine visit for follow up with one rheumatologist. Then the same patients completed the three questionnaires again in the same day or on the second day with another rheumatologist.

Results: Internal consistency and reliability of ASDAS-ESR, ASDAS-CRP, BASDAI, and BASFAI scores were good (ICC was 0.841, 0.820, 0.767, and 0.852 respectively). Reliability of BASFAI score was better than that of ASDAS-ESR, ASDAS-CRP, BASDAI scores, and that of ASDAS-ESR, ASDAS-CRP was better than reliability of BASDAI score.

Table 1. Intercorrelation Coefficient of BASFAI in AxSpA patients reported by observer 1 and observer 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach's Alpha</th>
<th>ICC</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Putting your socks or tights without help or aids (e.g. sock aid) (F1)</td>
<td>0.931</td>
<td>0.871</td>
<td>0.815-0.911</td>
</tr>
<tr>
<td>2) Bending from the waist to pick up a pen from the 0.903</td>
<td>0.823</td>
<td>0.740-0.877</td>
<td></td>
</tr>
<tr>
<td>3) Reaching up to a high shelf without help or aids</td>
<td>0.837</td>
<td>0.719</td>
<td>0.612-0.801</td>
</tr>
<tr>
<td>4) Getting up from an armchair without your hands or any other help (F4)</td>
<td>0.751</td>
<td>0.601</td>
<td>0.462-0.711</td>
</tr>
<tr>
<td>5) Getting up off the floor without help from lying on your back (F5)</td>
<td>0.779</td>
<td>0.638</td>
<td>0.508-0.740</td>
</tr>
<tr>
<td>6) Standing unsupported for 10 minutes without discomfort (F6)</td>
<td>0.707</td>
<td>0.547</td>
<td>0.396-0.669</td>
</tr>
<tr>
<td>7) Climbing 12-15 steps without using a handrail or walking aid (F7)</td>
<td>0.863</td>
<td>0.760</td>
<td>0.664-0.831</td>
</tr>
<tr>
<td>8) Looking over your shoulder without turning your body (F8)</td>
<td>0.878</td>
<td>0.798</td>
<td>0.715-0.858</td>
</tr>
<tr>
<td>9) Doing physically demanding activities (e.g physiotherapy exercises, gardening or sports) (F9)</td>
<td>0.817</td>
<td>0.690</td>
<td>0.573-0.779</td>
</tr>
<tr>
<td>10) Doing a full day’s activities whether it be at home or at work (F10)</td>
<td>0.748</td>
<td>0.598</td>
<td>0.458-0.709</td>
</tr>
<tr>
<td>Total BASFAI Score</td>
<td>0.920</td>
<td>0.852</td>
<td>0.789-0.898</td>
</tr>
<tr>
<td>ICC (0.21 to 4) was indicative of fair agreement, ICC (0.41 to 6) was indicative of moderate agreement, ICC (0.61 to 8) was indicative of substantial agreement, ICC (0.81 to 9) was indicative of almost perfect agreement, and ICC (1) was indicative of perfect agreement.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: Some questions of ASDAS, BASDAI, and BASFI scores are more reliable than others, this depends on the question. The answers of the questions that assess sensation of pain, are liable to change. While the answers of other questions that assess stiffness or assess its duration are less liable to change. Questions that assess certain daily activity are more reliable than that assess the ability to do more than one activity.

REFERENCES: NIL.

Disclosure of Interests: None Declared.

DOI: 10.1136/annrheumdis-2023-eular.2855

AB1038 RELATIONSHIP BETWEEN ANKYLOSIS AND PHYSICAL FUNCTION ASSESSMENT IN ANKYLOSING SPONDYLITIS

Keywords: Quality of life, Spondyloarthritides, Patient reported outcomes

M. Suzuki1, K. Kishimoto1, D. Kihira1, R. Sato1, J. Hasegawa1, M. Maeda1, Y. Ohashi1, K. Terabe1, S. Asai1, S. Imagama1, Nagoya University Graduate School of Medicine, Department of Orthopedic Surgery and Rheumatology, Nagoya, Japan

Background: Ankylosing spondylitis (AS) is a progressive inflammatory disease affecting the spine and large joints of the extremities. Ankylosis of the spine and sacroiliac joints affects patients not only physically but also psychologically and socially, resulting in a significant decline in quality of life (QOL) and disruption of daily activities [1]. However, it is unclear to what extent the progression of the disease affects physical function and patient subjective evaluation.

Objectives: The purpose of this study was to investigate the relationship between the degree of progression of ankylosis, physical function, and frailty in patients with AS.

Methods: Twenty-four patients with AS attending our hospital who underwent full spine computer tomography (CT) and physical function assessment were included in the study. The anterior-posterior, intervertebral joint, and interosseous process ankylosis sites and number of ankylosis (whole spine/cervical spine/thoracic spine/lumbar spine) and sacroiliac joint ankylosis were evaluated in each vertebra. Patient-objective measures of physical function included gait speed, grip strength, Timed Up and Go test (TUG), time of five sit-to-stand, and Bath Ankylosing Spondylitis Metrology Index (BASMI), and patient-subjective measures of physical function included Bath Ankylosing Spondylitis Functional Index (BASFI), Kihon CheckList (KCL), the 25-question Geriatric Locomotive Function Scale (GLFS-25), and Beck Depression Inventory (BDI-II) as subjective assessments. Spearman's rank correlation coefficient was used to analyze the correlation between the degree of progression of ankylosis and each of the assessment items.

Results: The mean age (± standard deviation) at the time of the study was 40.6±15 years, 79% were male, 50% were HLA-B27 positive, and the disease duration was 13.9±9 years. Age was significantly correlated with the number of thoracic spine ankylosis (r=0.449), and disease duration with the number of total spine/cervical spine/thoracic spine/sacroiliac joint ankylosis (r=0.553/0.635/0.510). BASMI, an objective patient assessment, showed a significant correlation with the number of total spine/cervical spine/thoracic spine/lumbar spine ankylosis (r=0.730/0.653/0.707/0.615), but not with walking speed, grip strength, TUG, or time of five sit-to-stand. BASFI, a subjective patient assessment, showed a significant correlation with the number of total spine/cervical spine/thoracic spine/lumbar spine ankylosis (r=0.680/0.729/0.600/0.496), and the GLFS-25 (r=0.418/0.500) with the number of total spine/ cervical spine ankylosis. BDI-II, an assessment of psychiatric symptoms, and KCL, an assessment of frailty, showed no correlation with the number of ankylosis.

Conclusion: BASFI and GLFS-25, physical function assessments, were significantly correlated with spinal ankylosis in AS patients, and the degree of progression of spinal ankylosis was found to interfere with daily life.

REFERENCE:
arthicular and extra-articular manifestations. Recent advances in early diagnosis have differentiated axial SpA into radiographic and non-radiographic subsets but the exact differences between them are debatable.

Objectives: This study was conducted to compare the clinical, laboratory, and radiologic characteristics of Indian patients with radiographic and non-radiographic axial SpA.

Methods: This was a cross-sectional, observational, comparative study conducted at a 1250-bedded tertiary care hospital. Between February 2020 and December 2021, all consecutive adult patients classified as having Axial Spondyloarthritis as per the Assessment of SpondyloArthritis international Society (ASAS) 2009 Classification Criteria and with symptom duration of at least 3 years were included in the study after taking their informed consent. Patients were classified as radiographic (AS) or non-radiographic Axial SpA (nr-Axial SpA) by two independent and blinded rheumatologists with over twenty years of experience in their field each, based on findings on anteroposterior plain radiographs in the supine position. Demographic details, articular and extra-articular manifestations, comorbidities, and relevant family history were assessed along with the levels of inflammatory markers and HLA B27 status. The study was approved by the Institutional Review Board and the Institutional Ethics Committee.

Results: 209 patients consented to this study, with 160 being classified as radiographic and 49 as non-radiographic axial SpA. 79.4% of the patients were male. The mean age at symptom onset was 27.69 ± 9.93 years for our cohort, with a median duration of 50 months. There was a significantly higher proportion of males (85% vs 15%, p <0.001), patients with enthesitis (74% vs 41%, p 0.05), and hypertension among the radiographic subgroup. 44% of our patients had bilateral Grade 2 changes on their sacroiliac joint radiographs according to the modified New York Criteria, and there was a significant positive correlation between increasing symptom duration and worsening radiographic grades of sacroiliacitis, but there were no significant differences in the remaining clinical features, HLA B27 positivity, or age at symptom onset among the AS and nr-Axial SpA patients. Mean values of BASDAI, BASMI, and ASDAS-ESR scores were also significantly higher in patients with radiographic Axial SpA.

Conclusion: Data from our Indian cohort of axial Spondyloarthritis revealed a significant association of radiographic disease with male gender and the presence of enthesitis, as well as higher mean values of inflammatory markers and composite scores. However, non-radiographic axial SpA was similar to AS as far as most other features were concerned. With increasing symptom duration, the majority of patients may develop radiographic disease, and they may be considered as two ends of the same spectrum, justifying early therapy even in nr-Axial SpA patients.

REFERENCES:

Acknowledgements: NIL.
Disclosure of Interests: None Declared.
DOI: 10.1136/annrheumdis-2023-eular.2891

AB1040

CHARACTERIZATION OF ANXIETY AND DEPRESSION AND THEIR IMPACT ON DISEASE ACTIVITY, FATIGUE AND QUALITY OF LIFE IN SPONDYLOARTHRITIS PATIENTS TREATED WITH ANTI-TUMOR NECROSIS FACTOR ALPHA AGENTS

Keywords: bDMARD, Spondyloarthritis, Quality of life

D. Santos Oliveira1,2, A. Martins1,2, R. Nicolaou3, C. Vaz3, T. Martins-Rocha1, A. Bernardo2, M. Bernardes3, L. Costa1, 1Centro Hospitalar Universitário de São João, Rheumatology Department, Porto, Portugal; 2Faculty of Medicine, University of Porto, Department of Medicine, Porto, Portugal; 3Faculty of Medicine, University of Porto, Center for Health Technology and Services Research (CINTESIS), Porto, Portugal; 4Centro Hospitalar Tondela-Viseu, Viseu, Rheumatology Department, Viseu, Portugal

Background: The psychological health of patients with spondyloarthritis (SpA) influences their response to anti-tumor necrosis factor alpha (anti-TNF-α) therapy. However, little is known about the correlation between anxiety and depression symptoms and clinical outcomes over time.

Objectives: Hence, based on clinical practice setting, this study aimed to explore the impact of anxiety and depression symptoms on clinical outcomes in patients with SpA treated with anti-TNF-α agents over time.

Methods: An observational retrospective longitudinal cohort study was conducted. Adult patients with diagnosis of SpA according to Assessment of Spondyloarthritis International Society (ASAS) classification criteria, who started their first anti-TNF-α agent between 2002 and 2022 were included. Sociodemographic, clinical and laboratory data were obtained from the national register Reuma.pt at the time of initiation of the first anti-TNF-α agent and after 12 months (M1). Anxiety and depression symptoms were assessed by Hospital Anxiety and Depression Scale (HADS). A score ≥8 on the HADS-Anxiety and HADS-Depression indicates the presence of clinically significant anxiety and depression symptoms, respectively. Ankylosing Spondylitis (AS) Disease Activity Score Activity Score with CRP (ASDAS-CRP) and Bath AS Disease Activity Index (BASDAI) were assessed to measure disease activity. Pain Visual-Analogue-Scale (VAS), Bath AS Functional Index (BASFI) and Bath AS Metrological Index (BASMI) were also collected to assess pain severity and disability. To evaluate enthesis the Maastricht AS enthesis score (MASES) was performed. Clinical response was evaluated by ASDAS response. Fatigue was evaluated using Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue: score ≤39 indicates the presence of clinically significant fatigue and health-related quality of life with EQ-5D. In order to correlate anxiety and depression with clinical outcomes, Pearson coefficient was used. Linear regression models adjusted for age, gender and disease duration were used to assess the impact of anxiety and depression symptoms on clinical outcomes.

Results: A total of 130 patients with SpA (mean age of 40.6±10.8 years old; 85.4% female; 74% with AS) with a median disease duration of 7 [4-14] years were included. Nearly half (50.6%) of patients had anxiety, 33.8% depression, and 30% had both anxiety and depression symptoms. At the baseline, the median of anxiety and depression symptoms was 8 [4.5-12] and 6 [3-8], respectively. At the baseline, there were statistically significant correlations between anxiety depression symptoms and pain-VAS at night (r=0.47, p=0.03 and r=0.6, p=0.004, respectively); between depression symptoms and BASMI (r=0.34, p=0.006) and between anxiety and depression symptoms and EQ-5D (r=0.56, p=0.04 and r=0.65, p=0.011, respectively). At 12M, there were statistically significant correlations between anxiety symptoms and BASMI (r=0.23, p=0.03), FACIT-Fatigue (r=0.68, p=0.001) and EQ-5D (r=0.51, p=0.001); and between depression (r=0.65, p=0.001) and EQ-5D (r=0.59, p=0.001). In the multivariable regression models, depression symptoms at baseline moment predicted VAS at night (β=0.6, p=0.06). At 12M anxiety symptoms predicted BASDAI (β=0.2, p=0.027), FACIT-Fatigue (β=0.7, p=0.001) and EQ-5D (β=0.5, p=0.002); depression symptoms also predicted EQ-5D (β=0.6, p=0.001).

Conclusion: Anxiety and depression are conditions in patients with SpA treated with anti-TNF-α agents. After 12M of treatment, anxiety and depression symptoms predicted worse quality of life and anxiety also predicted higher disease activity and fatigue. Our results encourage the assessment and monitoring of anxiety and depression symptoms over time in these patients in order to design more individualized multidisciplinary approaches. Further longitudinal research is needed to explore the impact of anti-TNF-α agents on anxiety and depression symptoms.

REFERENCES: NIL.
Acknowledgements: NIL.
Disclosure of Interests: None Declared.
DOI: 10.1136/annrheumdis-2023-eular.3205

AB1041

AUTOMATED VERTEBRAL FRACTURE ASSESSMENT AS A SCREENING TOOL IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

Keywords: Outcome measures, Imaging, Spondyloarthritis

M. Siderius1, L. Barres2, N. Littmann2, G. Richter2, Y. Van der Knaap3, R. Slart2, A. Spoorenberg1, S. Arends2, 1University Medical Center Groningen, Rheumatology and Clinical Immunology, Groningen, Netherlands; 2University Medical Center Groningen, Nuclear Medicine and Molecular Imaging, Groningen, Netherlands; 3University of Twente, Biomedical Photonic Imaging, Enschede, Netherlands

Background: Bone loss reflected by low bone mineral density (BMD) is common in axial spondyloarthritis (axSpA) and often already noticed at early stages of disease. Severe bone loss may lead to vertebral fractures (VF). Prevalent VF, low BMD and older age are well-known risk factors for the development of new VF. Manuscript assessment of VF according to the method of Genant et al is considered as the gold standard, however, this is time consuming in research and clinical settings. Nowadays, when performing BMD measurements an automated VF assessment (AVF) can be generated which potentially could be a useful screening method for detecting VF in patients with axSpA.