objected lower results (AUC=0.60, cutoff=2.38). Figure 1 shows cumulative probability plots of mSASSS and ASDAS versus OWD, showing cutoff values determined by ROC analysis.

Conclusion: Structural damage, in cervical and lumbar spine, are the main contributor to HK appearance in axSpA patients. Inflammation is not so determinant and acts only in the short term. HK produces a significant reduction of cervical mobility and physical function. New treatments that decrease radiographical progression, and overweight reduction are the most important factor to avoid HK.

REFERENCES:

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HIGH PREVALENCE OF ABDOMINAL OBESITY IN FEMALES WITH AXIAL SPONDYLOARTHRPATHY

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Background: Worldwide prevalence of obesity has been steadily increasing, despite significant public health campaigns to raise health awareness. In axial spondyloarthritis (axSpA) obesity has been shown to be associated with higher levels of disease activity and decreased response to treatment. The waist to hip ratio (WtHpR) is a tool to screen for abdominal obesity. Abdominal deposition of adipose tissue is associated with increased risk of cardiovascular disease, type II diabetes and premature death. Abdominal obesity is more commonly found in males, while females are more prone to gluteal-femoral fat deposition. The Ankylosing Spondylitis Registry of Ireland (ASRI) is a source of epidemiological data of axSpA patients in Ireland.

Objectives: To capture the prevalence of abdominal obesity in a large cohort of axSpA patients and assess for variation in prevalence between sexes.

Methods: Participants were analysed on the basis of sex and presence of obesity by BMI and WtHpR. Obesity was defined as per WHO guidelines. Categorical variables were recorded as BMI and WtHpR. Obesity was defined by body mass index (BMI) with a result of >30 kg/m².

Results: There is a high prevalence of abdominal obesity as assessed by WtHpR in axSpA, this is especially high in females with axSpA. Use of WtHpR should be considered when screening for obesity in this population.

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ARE THERE GENDER DIFFERENCES IN AXIAL SPONDYLOARTHRITIS: DATA FROM A PORTUGUESE SPONDYLOARTHRITIS COHORT

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Background: Historically, axial spondyloarthritis (particularly ankylosing spondylitis) was considered a men’s disease and has been under-recognized in women.

Emerging evidence reveals gender differences in pathophysiology, disease presentation and therapeutic efficacy.

Objectives: To determine if there are differences between genders in a Portuguese cohort of patients with axSpA as regards clinical manifestations, disease activity, functional capacity, patient related outcomes and radiographic findings.

Methods: Patients with ≥18 years fulfilling the ASAS- Assessment of Spondyloarthritis International Society classification criteria for axSpA and registered in the electronic national database- Reuma.pt were included in a multicentric cross-sectional study. Sociodemographic data, clinical features and radiographic findings were collected from the first record in Reuma.pt. These variables were compared between genders using Mann-Whitney test and Chi-Square test. Variables with a significant association with group variable (gender) were considered in the multiple variable analysis to adjust the gender effect on the outcome variables.

Results: A total of 995 patients were included, 1114 (55.9%) men and 881 (44.1%) women. Men had a lower median age at onset of disease (25.1 vs 28.4, p<0.000) and median age at diagnosis (26.9 vs 30.4, p=0.000) and were more frequently smokers (32.1% vs 15.7%, p<0.000). Comparing to women, men had worse BASMI scores (4.0 vs 3.4, p=0.000), higher levels of CRP (10.5 vs 6.9, p=0.000) and were more often HLA-B27 positive (67.8% vs 54%, p=0.000). In univariable analysis, sacroiliitis on radiograph and/or MRI (95.5% vs 91.7%, p=0.04) was more common in men, however that wasn’t confirmed in multivariable analysis.

In contrast, women more frequently had more inflammatory bowel disease (8.8% vs 4.9%, p=0.000), higher levels of ESR (25.0 vs 21.0, p<0.003) and worse PROs- BASDAI (5.7 vs 4.5, p=0.000), PGA (60.0 vs 55.0, p=0.000) and fatigue (6.2 vs 5.4, p=0.000).

Conclusion: Physicians must be aware of difference between genders in axial spondyloarthritis because this can result in less underdiagnosis and misdiagnosis, allow optimization of treatment strategies, and decrease overall disease burden in women with axSpA patients.

REFERENCES:

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ASSOCIATION BETWEEN INDIVIDUAL AND COUNTRY-LEVEL SOCIOECONOMIC FACTORS AND HEALTH OUTCOMES IN AXIAL AND PERIPHERAL SPONDYLOARTHRITIS: ANALYSIS OF THE ASAS PERSPA STUDY

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Background: Health outcomes in spondyloarthritides (SpA) are largely determined by socioeconomic (SE) factors, leading to the great inequity observed between countries across the world. However, the impact of these SE factors on health outcomes across different SpA phenotypes (axSpA, pSpA and PsA), is less well known.

Objectives: To investigate (1) the association between individual and country-level SE factors and health outcomes in different SpA phenotypes, (2) to explore whether any effect of these SE factors is mediated by the use of b/tsDMARD therapy.

Methods: Patients with axSpA, pSpA or PsA from the multinational cohort ASAS-perSpA were included in the analysis. The effect of individual (age, gender, education and marital status) and country-level SE factors (Gross Domestic Product [GDP], Healthcare Expenditure [HCE], Human Development Index [HDI], Gini Index) over health outcomes (ASDAS≥2.1, continuous ASDAS, BASFI, and ASAS-HI) were assessed in multivariable mixed-effects logistic and linear regression models (as appropriate), adjusting for confounders. Interactions between each individual and country-level SE factors and disease phenotype and between both levels of SE factors, were tested. Finally, a mediation analysis was conducted to explore whether the impact of country-level SE factors on ASDAS is mediated through b/tsDMARD therapy.

Results: A total of 4185 patients from 23 countries were included: 61% males, mean age 45 (SD 14), 65% axSpA, 10% pSpA and 25% PsA. Female gender, lower educational level and marital status (single vs married) were associated with higher ASDAS, without significant differences across disease phenotype. Living in lower-(vs higher) GDP countries was also associated with higher ASDAS (β =0.39 [95%CI 0.16; 0.63]), with similar results for other economic indicators (Figure 1). 7% of the association between GDP and ASDAS was mediated by b/tsDMARD uptake. The above-mentioned individual and country-level SE factors remained significant to discriminate active disease (ASDAS≥2.1), with greater impact of gender (OR=1.32 [1.13; 1.54]), educational level (primary vs university OR=1.76 [1.40;2.10]) and lower GDP (OR=1.74 [1.22;2.46]). Higher BASFI was also associated with gender (female vs male: β=0.12 [0.01; 0.24]), lower education (primary vs university: β=0.29 [0.11; 0.46]), and marital status (single vs married: β=0.23 [0.09; 0.38]), without effect of country-level SE factors, and no differences across SpA phenotype. Gender and lower educational level were similarly associated with worse ASAS-HI scores (female vs male: β=0.08 [0.68;1.09], and primary vs university: β=0.06 [0.31;0.91]), while more fatigue was only associated with female gender and, in an opposite direction, with higher country-level SE factors (Figure 1). No interactions were found between individual and country-level SE factors for any of the outcomes.

Conclusion: Individual (female gender and lower education) and country-level SE factors are independently associated with higher disease activity in SpA. Uptake of b/tsDMARD had a small mediating effect on the association between GDP and ASDAS. Lower education and female gender are also associated with worse outcomes of functional disability, global functioning and fatigue. Country-level SE factors are not associated with functional disability or global functioning; in contrast, there is a paradoxical effect with fatigue: living in a country with a higher SE status is independently associated with higher levels of fatigue. Management of disease outcome in SpA requires also awareness of the role of individual and country level SE-factors.

Table 1: Multiple variable analysis to adjust the gender effect on the outcome variables.

<table>
<thead>
<tr>
<th>BASDAI</th>
<th>BASMI</th>
<th>PGA</th>
<th>Fatigue</th>
<th>Sacroilistis on radiograph or/and MRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male gender</td>
<td>β</td>
<td>p</td>
<td>β</td>
<td>p</td>
</tr>
<tr>
<td>Age at diagnosis</td>
<td>HLA-B27</td>
<td>β</td>
<td>p</td>
<td>β</td>
</tr>
<tr>
<td>CRP</td>
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<td>0.0001</td>
<td>0.0002</td>
<td>0.00019</td>
</tr>
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<td>Smoker</td>
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<td>0.0019</td>
<td>0.0019</td>
<td>0.0019</td>
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<tr>
<td>Ex-smoker</td>
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<td>0.0019</td>
<td>0.0019</td>
<td>0.0019</td>
</tr>
<tr>
<td>IBD</td>
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<td>0.0001</td>
<td>0.0002</td>
<td>0.00019</td>
</tr>
</tbody>
</table>

Figure 1. Effect of individual and country-level socioeconomic factors on ASDAS and fatigue, derived from multivariable mixed-effects models adjusted by clinical confounders.