**AB0727** MAGNETIC RESONANCE IMAGING IN SYMPTOMATIC BACK PAIN IN INFLAMMATORY BOWEL DISEASE: STRUCTURAL LESIONS AND HLA-B27 IMPROVE THE DIAGNOSTIC ACCURACY IN AXIAL SPONDYLOARTHRITIS

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**Background:** Inflammatory bowel disease (IBD) related arthropathy may manifest as peripheral arthritis, dactylitis or enthesitis as well as inflammatory back pain (IBP) due to sacroiliac joint (SIJ) and/or spinal inflammation. HLA-B27 correlates with the presence of MRI determined SIJ bone marrow oedema (BMO) in axial spondyloarthritis (axSpA) and axial psoriatic arthritis (PsA) patients. The prevalence of HLA-B27 positivity is low in IBD and patients may already be on therapy that potentially modifies MRI spinal lesions at the time of imaging.

**Objectives:** To evaluate the utility of MRI to aid the diagnosis of axSpA in IBD patients with IBP and to explore the relationship of MRI abnormalities with HLA-B27 status.

**Methods:** Cross-sectional, retrospective audit of consecutive MRI scans of the SIJ and spine performed (2008-2018) in a large teaching hospital. All scans were requested in IBD patients presenting with IBP and clinical suspicion of axSpA. Demographic and clinical data were retrieved from the medical notes. Decision from the clinician whether the patient had axSpA related to the IBD was also recorded. MRI scans were scored by 2 readers using the semiquantitative Leeds Scoring System (BMO grade from 0 to 3). An overall score for inflammatory (sum of SIJ and Spine BMO scores) and structural lesions (sum of lesions per quadrant) was calculated.

**Results:** MRI scans from 119 IBD (Crohn’s n=82, ulcerative colitis n=31, and undifferentiated IBD n=6) patients were available for analysis. 63.9% were female, mean age 38.7 years at time of MRI with mean age of IBP onset 36.3 years. The majority (n=65/83, 78.3%) were HLA-B27 negative (missing data n=36). Thirty subjects were receiving biologic therapy for IBD. A summary of MRI findings (SIJ and spine) is shown on Table 1.

**Abstract AB0727 Table 1**

<table>
<thead>
<tr>
<th>Abnormal SIJ MRI</th>
<th>BMO</th>
<th>Grade 1 N=20</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>(16.8%)</td>
</tr>
<tr>
<td></td>
<td>Grade</td>
<td>N=46 (38.7%)</td>
</tr>
<tr>
<td>Structural lesions</td>
<td>Fall deposition</td>
<td>Sclerosis N=45 (37.8%)</td>
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<tr>
<td></td>
<td>Erosions N=39 (32.8%)</td>
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<td>Amyloidosis N=4 (3.4%)</td>
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<table>
<thead>
<tr>
<th>Abnormal Spine MRI</th>
<th>BMO</th>
<th>&lt;3 lesions N=17 (14.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural lesions</td>
<td>Posterior fusion</td>
<td>N=1 (1%)</td>
</tr>
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</table>

Conclusion: The ASAS criteria were less specific when MRI assessment was added to the process of diagnostic evaluation, which could reflect rheumatologist over-interpretation of both clinical and radiographic findings in this population with higher pre-test probability of axSpA.

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A total of 56 patients, including 39 with UC (19 males, 20 females) and 17 with CD (10 males, 7 females) were included. The Assessment of SpondyloArthritis International Society (ASAS) Expert Criteria were used to assess IBP. The criteria were fulfilled if at least four of five of the following questions were answered by “yes”: (1) did your back pain start when you were aged 40 or younger?; (2) did your back pain develop gradually?; (3) does your back pain improve with exercise?; (4) do you find that there is no improvement in your back pain when you rest?; and (5) do you suffer from back pain at night, which improves upon getting up? Image evaluation was performed blindly by two readers.

Conventional radiography was evaluated by the modified Stoke AS Spine Score (mSASSS) in the spine and the Grade of modified New York criteria (mNY) in the sacroiliac joints. In MRI, spinal and sacroiliac joints were evaluated by the Spondylo-arthritis Research Consortium of Canada (SPARC) score.

Results: Among the 56 patients with IBD, 21 had IBP by clinical examination and 11 had pain in the sacroiliac joints. In conventional radiography, the average mSASSS score was 8.9 in patients with IBP and 6.5 in patients without IBP (p = 0.257). Eleven patients had bilateral Grade 2 or unilateral Grade 3 of the mNY, and three (27.3%) of these patients had sacroiliac pain and eight (17.8%) did not have sacroiliac pain (p = 0.477). In spine MRI, nine (42.9%) patients with IBP and nine (25.7%) patients without IBP had an SPARC score of > 2 (p = 0.184). In sacroiliac MRI, one (9.1%) patient with sacroiliac pain and 12 (26.7%) patients without sacroiliac pain had an SPARC score of > 2 (p = 0.216).

Conclusion: Even without clinical symptoms of SpA, significant inflammatory findings are detected by MRI. Imaging might be important, regardless of the presence or absence of clinical symptoms, in patients with IBD.

REFERENCES


AB0729 ASSESSING THE DIFFERENCES IN TIMES TO GENERAL PRACTITIONER PRESENTATION AND DIAGNOSIS, AND OUTCOMES FOR AXIAL SPONDYLOARTHRITIS PATIENTS IN DIFFERENT ETHNIC GROUPS

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Background: Axial spondyloarthritis (axSpA) is a condition characterised by inflammatory back pain +/- extra-articular manifestations. There is a known delay to diagnosis1. Management includes physiotherapy, non-steroidal anti-inflammatory drugs (NSAIDs) and biologic agents2. The Luton & Dunstable University Hospital, UK Rheumatology department looks after an ethnically diverse population of patients with the condition.

Objectives: The objectives of this study were to compare time from symptom onset to General Practitioner (GP) presentation, time from symptom onset to diagnosis, and response to treatment between different ethnic groups.

Methods: 124 patients with an axSpA diagnosis, according to the Luton & Dunstable University Hospital Infotex database, were identified. 24 patients were excluded due to a peripheral spondyloarthritis diagnosis. A retrospective case note review of 100 case records was undertaken. A Microsoft Excel spreadsheet was used to analyse data.

Results: The mean age was 44 years. 64 (64%) patients were male and 36 (36%) were female. 48 (48%) and 27 (27%) patients were HLA-B27 positive and negative respectively. HLA-B27 status was not available for 25 (25%) patients. Ethnicity breakdown showed 58 White British patients; 12 Pakistani; 7 White Other; 6 Bangladeshi; 5 White Irish; 5 Asian; 4 Indian and 3 Black Caribbean. There were 70 Caucasian (White British,