showed an average reduction in the BASDAI score by more than 30% at each 3 monthly interval.

Figure 1. BASDAI percentage reduction at 3 monthly intervals between the two second line treatment groups using anti-TNF and Secukinumab.

Conclusion: A significant difference could not be demonstrated between the anti-TNF and secukinumab groups in this observational cohort. Interestingly, at 6 months, anti-TNF demonstrated better outcomes according to BASDAI scores than Secukinumab but this efficacy was lost at 12 months. It was difficult to interpret these isolated results without further testing, as this is a small non-randomised study. We observed similar outcomes to the Navarro-Compán review where there was a low percentage change in the BASDAI improvement in patients on second line therapy when compared to first line treatment BASDAI scores. Therefore, exploring the mechanism for the reduction in the BASDAI response would be an interesting future study. Moreover, to fully understand these results, randomised controlled studies would need to be conducted.

References:

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FRIDAY, 05 JUNE 2020
Spondyloarthritis - clinical aspects (other than treatment)

FRI0298
ASAS MODIFICATION OF THE BERLIN ALGORITHM AND THE DUE/T ALGORITHM FOR DIAGNOSING AXIAL SPONDYLOARTHRITIS: RESULTS FROM THE SCREENING IN AXIAL SPONDYLOARTHRITIS FOR PSORIASIS, IRIritis, AND COLITIS COHORT

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Background: Patients presenting with back pain and psoriasis, iritis, or colitis, represent a high-risk population for the presence of axial spondyloarthritis (axSpA). The Dublin Evaluation Tool (DUET)1, the Berlin algorithm2, and the ASAS modification of this algorithm3 are recommended referral strategies aimed at early diagnosis of axSpA. DUET was developed for patients presenting with AAU. Validation of these algorithms in inception cohorts is limited.

Objectives: 1. To assess the performance of referral algorithms for diagnosis of axSpA when tested against the final local rheumatologist diagnosis in an inception cohort of patients presenting with undiagnosed back pain and extra-articular manifestations. 2. To determine whether different criteria for inflammatory back pain (IBP) impact the performance of the algorithms.

Methods: The multicenter Screening for Axial Spondyloarthritis in Psoriasis, Iritis, and Colitis (SASPIC) Study at 11 sites is aimed at early detection of axial SpA in patients presenting with undiagnosed back pain to the rheumatologist. Consecutive patients ≤45 years of age with ≥3 months undiagnosed back pain with any one of psoriasis, acute anterior uveitis (AAU), or colitis diagnosed by the relevant specialist undergo routine clinical evaluation by a rheumatologist for axial SpA. The rheumatologist determines the presence or absence of axial SpA at 3 consecutive stages: 1. After the clinical evaluation; 2. After the results of labs (B27, CRP) and radiography; 3. After the results of MRI evaluation. Final diagnosis by the rheumatologist was used as external standard to test the performance of the algorithms. We tested the following criteria for IBP in the algorithm: ASAS, Berlin, rheumatologist global for likelihood of IBP >5 (0-10 scale), and DUET algorithm in AAU patients.

Results: A total of 246 patients were recruited, 73 presented with iritis, 46 with psoriasis, and 127 with colitis. 47.6% were diagnosed with axSpA. The diagnosis of axSpA was established in 45.7%, 61.6%, and 40.2% of patients with psoriasis, AAU, and IBD, respectively. The performance of the ASAS-modification of the Berlin algorithm was superior to the original algorithm as reported previously2, primarily for enhanced sensitivity, and this was observed irrespective of the criteria used to define IBP (Table 1). Conversely, the performance of the DUET algorithm in the subset of patients with AAU was substantially worse than previously reported3.

Conclusion: The ASAS modification of the Berlin algorithm is the preferred referral strategy for patients presenting with undiagnosed back pain to the rheumatologist.

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FRI0299
EVALUATION OF ENTHESITIS INDICES AND RESPONSE TO BDMArD THERAPY IN PORTUGUESE PATIENTS WITH SPONDYLOARTHRITIS

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Table 1. Comparison of sensitivity and specificity for the ASAS modification of the Berlin algorithm and the DUET algorithm in the SASPIC cohort.

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>Correct Diagnosis (%)</th>
<th>False Negative (%)</th>
<th>False Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Berlin (ASAS criteria for IBP)</td>
<td>65.3</td>
<td>76.6</td>
<td>71.1</td>
<td>16.7</td>
<td>12.2</td>
</tr>
<tr>
<td>Original Berlin (Berlin criteria for IBP)</td>
<td>64.4</td>
<td>76.6</td>
<td>70.7</td>
<td>17.1</td>
<td>12.2</td>
</tr>
<tr>
<td>Original Berlin (IBP global &gt;5)</td>
<td>67.8</td>
<td>78.1</td>
<td>73.2</td>
<td>15.4</td>
<td>11.4</td>
</tr>
<tr>
<td>ASAS Modification of Berlin algorithm (ASAS criteria for IBP)</td>
<td>73.7</td>
<td>75.8</td>
<td>74.8</td>
<td>12.6</td>
<td>12.6</td>
</tr>
<tr>
<td>ASAS Modification of Berlin algorithm (Berlin criteria for IBP)</td>
<td>73.7</td>
<td>75.8</td>
<td>74.8</td>
<td>12.6</td>
<td>13.0</td>
</tr>
<tr>
<td>ASAS Modification of Berlin algorithm (IBP global &gt;5)</td>
<td>76.3</td>
<td>77.3</td>
<td>76.8</td>
<td>11.4</td>
<td>11.8</td>
</tr>
<tr>
<td>DUET</td>
<td>84.4</td>
<td>50.0</td>
<td>71.2</td>
<td>9.6</td>
<td>19.2</td>
</tr>
</tbody>
</table>

Disclosure of Interests: Nuno Pinheiro: None declared, Maria Rato: None declared, Beatriz Fernandes: None declared, Susana Garcia: None declared, Sílvia Ganhão: None declared, Patricia Madureira: None declared, Maria Bernardes: None declared, Luísa Costa: None declared.

Background: Enthesitis is a hallmark clinical feature of spondyloarthritis (SpA), but to date, few studies have investigated how the overall response to biological treatment relates to the evolution of enthesitis counts.

Objectives: Assess whether the variation in enthesis indices reflects the overall response to bDMARD therapy in SpA.

Methods: This longitudinal, retrospective study included patients who met Assessment of Spondyloarthritis international Society (ASAS) criteria for SpA followed at the Rheumatology Department of a tertiary hospital, under bDMARD therapy. Demographic, laboratory and clinical data were collected, including Bath Ankylosing Spondylitis Metrology Index (BASMI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Activity Index (BASDAI), Ankylosing Spondylitis Disease Activity Score-C-reactive protein (ASDAS-CRP), Maastricht Ankylosing Spondylitis Enthesitis Score (MASES), Leeds Enthesitis Index (LEI) and Spondyloarthritis Research Consortium of Canada (SPARC) scores. All were evaluated at baseline and at 6, 12, 18 and 24 months after starting the first biological therapy. The variation in each parameter compared with the baseline values was calculated at 6, 12, 18 and 24 months and represented in the form of delta. Correlations between variables were assessed using Spearman test and comparison between groups using Wilcoxon, Mann-Whitney U and Kruskal-Wallis tests.

Results: We included 273 patients, 123 (45.1%) females, aged 42.0±12.3 years and with diagnosis of SpA for 15.4±11.2 years at the start of bDMARD therapy. Eighteen (6.6%) had depression. At baseline, mean BASDAI was 6.4±3.6, ASDAS-CRP was 4.0±1.56, median MASES was 1 (0–4), LEI 0 (0–1.75) and SPARC 1 (0–4). Seventy-two patients (26.4%) started golimumab, 71 (26.0%) adalimumab, 66 (24.2%) infliximab, 54 (19.6%) etanercept, 9 (3.3%) certolizumab and 1 (0.4%) seucikinumab. Enthesis indices were significantly higher at baseline in females (median MASES-females 2 (0–5) vs 0 (0–2), p<0.001; LEI-females 0 (0–2) vs 0 (0–1), p=0.03; and SPARC-females 2 (0–5) vs 0 (0–2), p<0.001), and remained so at 24 months (median MASES-females 1 (0–3.5) vs 0 (0–0), p<0.001; LEI-females 0 (0–0.5) vs 0 (0–0), p<0.001; and SPARC-females 1 (0–3) vs 0 (0–0), p<0.001). MASES and SPARC, but not LEI, at baseline were significantly higher in patients with depression [median MASES-depression 3.5 (2–6) vs 1 (0–4), p=0.01; SPARC-depression 4 (0–8) vs 1 (0–3), p=0.03], but at 24 months no differences were observed. There was a significant difference between each of the 3 scores of enthesitis when assessed at 6, 12, 18 and 24 months, compared to baseline (p<0.004). No differences were observed regarding the choice of bDMARD. At baseline, MASES had a significant correlation with patient visual analogic scale (VAS) (r=0.18; p=0.01), BASDAI (r=0.36; p<0.001) and BASFI (r=0.21; p=0.003); LEI had a significant correlation with BASDAI (r=0.31; p<0.001) and BASFI (r=0.21; p=0.003); SPARC had a significant correlation with patient VAS (r=0.19; p=0.01), BASDAI (r=0.37; p<0.001) and BASFI (r=0.26; p=0.001), ΔLEI at 6 months had a significant correlation with ΔBASDAI (r=0.25; p=0.005), ΔASDAS (r=0.19; p=0.03), Δpatient VAS (r=0.23; p=0.01) and Δphysician VAS (r=0.25; p=0.01), but not with ΔESR, ΔCRP and ΔBSMI; no correlation was found at 6 months for ΔMASES or ΔSPARC. At 12 months, ΔMASES had a significant correlation with ΔBASDAI (r=0.18; p=0.03); ΔLEI with ΔBASDAI (r=0.23; p=0.01) and Δpatient VAS (r=0.19; p=0.03); for ΔSPARC no significant correlations were found. At 18 months and 24 months, no correlations were found.

Conclusion: The initiation of bDMARD led to improved enthesis indices over a 24-month period. ΔLEI correlates better with SpA activity scores and measurements than the other indices, especially at the first 2 months of initiation of bDMARD therapy.

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