Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.3330

**POS1005**

**ASSESSMENT OF DAREA AND MODIFIED DAREA IN AN ARGENTINIAN-GUATEMALAN REACTIVE ARTHRITIS COHORT**


**Background:** Reactive Arthritis (ReA) is an inflammatory joint disease and, as in rheumatoid or psoriatic arthritis, composite indices are the most useful tools to measure disease activity. The Disease Activity Index for Reactive Arthritis (DAREA) is the only developed index for ReA, which requires a 66/66 joint count and CRP for its assessment, the latter being difficult to acquire in our setting.

**Objectives:** 1) To assess the correlation of the DAREA and DAREAm with several clinical variables, functional capacity and quality of life in a cohort of patients with ReA.

**Methods:** Patients with diagnosis of ReA (Calin’79) and post-infectious arthritides were included. Demographic data were collected, patient’s pain and global assessment were evaluated through a visual analog scale (VAS) and a 3-point scale (no pain = 0, mild = 1, moderate = 2, severe = 3), physician’s global assessment, morning stiffness (MS) and VAS fatigue. Functional capacity was assessed by HAQ and quality of life according to EuroQol-5 dimensions (EQ-5D), and the activity indices DAS28, DAREA and DAREAm were calculated. Statistical analysis: a descriptive analysis of the variables and correlation between numerical variables with Spearman rank correlation were performed.

**Results:** 57 patients were included, 53 with diagnosis of ReA, the majority post urogenital (63%) and gastrointestinal (17%), and 4 with diagnosis of post-infectious arthritis. Fifty percent were male, mean age: 40 years old (SD ± 14) and median ReA duration: 16 months (IQR 2-45). The number of painful and swollen joints in a 66/66 joint count showed a median of 2 (IQR 0-3) and 1 (IQR 1-2) respectively, Median VAS pain 43 (IQR 15-70), patient’s disease activity 40 (IQR 20-60) and physician’s 40 (IQR 20-60), MS 10 (IQR 0-50) and fatigue 30 (IQR 0-80). Median DAS28 3.6 (IQR 2.3-4.3), DAREA 7.4 (IQR 5-10.6), DAREAm 8.6 (IQR 4.6-12.7). The dimensions with the greatest compromise in the EQ-5D were pain/discomfort (63%) and anxiety/depression (51%), and median VAS EQ-5D was 60 (IQR 32-80). DAREA correlated with DAREAm (rs= 0.89; p <0.001), DAS28 (rs= 0.84; p <0.001), medical VAS (rs= 0.60; p <0.001) and mobility subcales of the EQ-5D (rs= 0.56; p <0.001). The DAREA demonstrated a very good correlation with both DAREA and DAS28. We encourage the use of this simplified index in daily practice to evaluate patients with ReA.

**Disclosure of Interests:** None declared.

DOI: 10.1136/annrheumdis-2021-eular.3374

**POS1006**

**ABERRANT T17 CELLS EXPANSION AND RISK FACTORS IN ANKYLosing SPONDYLITIS PATIENTS COMPLICATED WITH CARDIOVASCULAR EVENTS**

T. Ding1, B. C. Li2, R. Su3, X. Li2, C. Wang2.

1. The Second Hospital of Shaoxi Medical University, Rheumatology, Tiaoyuan, China; 2. Rheumatology, The Second Hospital of Shaoxi Medical University, Tiaoyuan, China, Rheumatology, Tiaoyuan, China.

**Background:** The incidence of Ankylosing Spondylitis (AS) complicated with cardiovascular disease (CVD) has increased in recent years. [1] However, identification of risk factors indicating the development of CAD in AS patients is lacking. Th17 cells are increasingly recognized to be important in atherogenesis.

**Objectives:** This study aimed to assess the level of circulating Th17 cells as well as other lymphocyte subsets such as Treg, Th, Ts, and NK cells in AS combined with CVD, and further to evaluate whether elevations in special PBMC subpopulations in AS patients indicate an increased risk of CVD.

**Methods:** Samples were assessed from 141 AS patients hospitalized at the Second Hospital of Shanxi Medical University (60 AS patients combined with CVD and 81 AS patients without CVD) and 100 healthy controls. The absolute numbers of lymphocytes and CD4+ T cells in peripheral blood were determined using Flow Cytometry. The association between PBMC subpopulations and CVD development in AS patients were analyzed using multivariable logistic regression.

**Results:** 1. Compared with AS group, AS with CVD group exhibited significant increases in the number of Th17 cells (P=0.001) and Treg cells (P=0.046). The ratio of Th17/Treg was also increased (P=0.085).

2. Analogous increases in the absolute number (P<0.001) and frequency (P<0.001) of Th1 cells, as well as the ratio of Th1/Th2 (P<0.001) and Th1/Treg (P=0.004) were also present in AS with CVD patients, compared to those without CVD.

3. Compared to HCs, 141 AS patients showed significantly decreased Treg cells (P<0.012) and increased Th17 cell (P=0.001).

4. Logistic regression showed age (odds ratio: 1.09; 95% CI: 1.035-1.137), hypertension (odds ratio: 3.31; 95% CI: 1.152-9.528), diabetes (odds ratio: 8.03; 95% CI: 1.251-51.503), and elevated level of Th1 number (odds ratio: 10.1; 95% CI: 1.003-1.106) and DD (D=median) (odds ratio: 1.00; 95% CI: 1.000-1.002) were significantly correlated with the onset of CVD in AS patients.

5. Smoke, increased Th17 level, and use of NSAIDS were also positively correlated with the onset of CVD although the P-values did not reach significant.

**Conclusion:** Our data indicates aberrant expansion of Th17 cells in AS with CVD patients. Moreover, age, hypertension, diabetes, and increased level of Th1 in PBMC and DD are single independent risk factors for the presence of CVD in AS. The mechanisms of atherogenesis in AS may associate with the elevations in Th1 and Th17 cells. Imbalance of Th1/Th2 and Th17/Treg may be shared etiologic pathways of AS and CVD, providing attractive targets for the prevention and therapy of CVD development in AS patients.

**REFERENCES:**


most of them in line with the ASAS referral recommendations [1] and with a similar performance – about 30-40% of the referred patients can be diagnosed with axSpA after examination by a rheumatologist. In addition to physician-based strategies, an online self-referral (OSR) strategy has been recently proposed and evaluated about 20% of the patients being diagnosed with axSpA after rheumatologic evaluation [2].

Objectives: The objective of the current analysis was to investigate the role of age and symptom duration for the optimization of a physician-based and an OSR strategy for axSpA.

Methods: In the OptiRef study, patients with chronic back pain and suspicion of axSpA either referred by primary care physicians/orthopedists using the Berlin referral tool (=physician-based) or based on a referral recommendation of an OSR were evaluated by rheumatologists in a specialized center [2]. All patients underwent a structured examination including imaging that resulted into the final diagnosis of axSpA or no axSpA. The relationship between age, symptom duration and the likelihood of axSpA diagnosis was evaluated in this analysis.

Results: A total of 360 patients (180 presented via the OSR and 180 referred by the physician based referral strategy) were included in this analysis. Patient’s characteristics are shown in Table 1. A total of 71 patients (39.4%) in the physician-based group and 35 patients (19.4%) in the OSR group were finally diagnosed with axSpA. The heatmaps depicting the relationship between the proportions of patients diagnosed with axSpA and age plus symptom duration (Figure 1) showed a clear decline of the axSpA probability with increasing age. In the physician-referred group, however, axSpA was diagnosed even in patients who were above 50 years at the time-point of the examination, while there were only few patients with axSpA in the self-referred group aged 40-49 years, and none in the age group ≥50 years. Interestingly, there was no clear relationship between symptom duration and probability of the diagnosis: axSpA was diagnosed in a substantial proportion of patients even with a long history of back pain (>12 years) in both subgroups.

Conclusion: The probability of axSpA is high in patients suffering from back pain and aged <40 years with a substantial decline thereafter. Therefore, a referral strategy based on self-evaluation of symptoms should be more focused on a younger patient population, while physician-based strategies do not require such a restriction.

REFERENCES:

Table 1. Patient characteristics

<table>
<thead>
<tr>
<th>Total N=360</th>
<th>Berlin tool N=180</th>
<th>Self-referral N=180</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis of axial SpA, n (%)</td>
<td>106 (29.4%)</td>
<td>71 (38.9%)</td>
<td>35 (19.4%)</td>
</tr>
<tr>
<td>Age, years, mean (SD)</td>
<td>36.9 (10.4)</td>
<td>37.2 (11.5)</td>
<td>36.6 (9.2)</td>
</tr>
<tr>
<td>Male sex, n (%)</td>
<td>167 (46.4%)</td>
<td>105 (58.3%)</td>
<td>62 (34.4%)</td>
</tr>
<tr>
<td>Back pain duration, years, mean (SD)</td>
<td>7.9 (7.6)</td>
<td>6.5 (6.3)</td>
<td>9.2 (8.1)</td>
</tr>
<tr>
<td>HLA-B27 positive, n (%)</td>
<td>141 (40.9%)</td>
<td>104 (57.8%)</td>
<td>37 (21.6%)</td>
</tr>
<tr>
<td>CRP elevation, n (%)</td>
<td>52 (14.8%)</td>
<td>34 (19.4%)</td>
<td>18 (10.2%)</td>
</tr>
<tr>
<td>Inflammatory back pain, n (%)</td>
<td>204 (56.7%)</td>
<td>103 (572%)</td>
<td>101 (56.1%)</td>
</tr>
</tbody>
</table>

Figure 1. Heatmaps depicting the proportions of patients diagnosed with axSpA in relation to age and symptom duration in the physician-based (A) and OSR (B) groups.