Disclosures of Interests: None declared.
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POS1005

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


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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 66/68 joint count in rheumatoid or psoriatic arthritis. Composite indices are the most useful tools to measure disease activity in a cohort of patients with ReA.

Methods: Patients with diagnosis of ReA (Calin’79) and post-infectious arthritis 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 the 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, median age: 40 years old (SD = 14) and median ReA duration: 18 months (IQR 2-45). The number of painful and swollen joints in a 66/68 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 2.5-10.0), DAREAm 8.6 (IQR 4.6-12.7), HAQ 0.625 (IQR 0.125-1). The dimensions with the greatest compromise in the EQ-5D were pain/discomfort (63%) and anxiety/depression (51%), and the median VAS scores were 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), MS (rs = 0.50; p < 0.001), HAQ (rs = 0.53; p < 0.001), VAS fatigue (rs = 0.57; p < 0.001) and mobility subscales of the EQ-5D (rs = 0.56; p < 0.001), pain/discomfort (rs = 0.51; p < 0.001) and anxiety/depression (rs = 0.66; p < 0.001).

Conclusion: This is the first study that assess activity indices in a cohort of patients with ReA. The DAREAm 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.
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POS1066

ABERRANT T17 CELLS EXPANSION AND RISK FACTORS IN ANKYLOSING SPONDYLITIS PATIENTS COMPPLICATED WITH CARDIOVASCULAR EVENTS

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Background: The incidence of Ankylosing Spondylitis (AS) complicated with cardiovascular disease (CVD) has increased in recent years. [1] However, the identification of risk factors indicating the development of CAD in AS patients is lacking. Th17 cells are increasingly recognized to be important in atherogenesis. Aberrant Th17 cell expansion and alterations of Th1/Th2 and Th17/Treg may be shared etiologic pathways of AS and cardiovascular disease (CVD). [2] Thus, the role of these cells in the pathogenesis of ankylosing spondylitis patients complicated with cardiovascular events remains elusive.

Objectives: This study aimed to assess the level of circulating Th17 cells as well as other lymphocyte subsets such as Treg, Th1, Th2, 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<0.058).

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 cells (P<0.001).

4. Logistic regression showed age (odds ratio: 1.09; 95% CI: 1.05-1.17), hyper-tension (odds ratio: 3.31; 95% CI: 1.15-9.28), diabetes (odds ratio: 8.03; 95% CI: 1.251-51.503), and elevated level of Th1 number (odds ratio: 10.11; 95% CI: 1.003-1.016) and DD (D-dimer) (odds ratio: 1.00; 95% CI: 1.000-1.002) were significantly correlated with the onset of CVD in AS patients.

5. 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:

Figure 1. Compared with AS group, AS with CVD group exhibited significant increases in the number of Th17 cells (P<0.01) and Treg cells (P<0.046). The ratio of Th17/Treg was also increased (P<0.058). 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.

Disclosure of Interests: None declared.
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POS1007

OPTIMIZING A REFERRAL STRATEGY FOR PATIENTS WITH A HIGH PROBABILITY OF AXIAL SPONDYLOARTHRITIS: THE ROLE OF AGE AND SYMPTOM DURATION

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Background: One of the most important prerequisites for a timely diagnosis of axial spondyloarthritis (axSpA) is the early referral of a patient with back pain to a rheumatologist. In the past years a number of referral strategies has been proposed,
inflammatory back pain, n (%) 204 (56.7%) 103 (57.2%) 101 (56.1%) 0.92

HLA-B27 positive, n (%) 141 (40.9%) 104 (59.8%) 37 (21.6%) <0.0001

Back pain duration, years, mean (SD) 7.9 (7.6) 6.5 (6.9) 9.2 (8.1) <0.0001

Male sex, n (%) 177 (49.2%) 100 (55.6%) 77 (42.8%) 0.02

Age, years, mean (SD) 36.9 (10.4) 37.2 (11.5) 36.6 (9.2) >0.99

Diagnosis of axial SpA, n (%) 106 (29.4%) 71 (39.4%) 35 (19.4%) <0.0001

relation to age and symptom duration in the physician-based (A) and OSR (B) groups.

Figure 1.

Table 1. Patient characteristics

<table>
<thead>
<tr>
<th>Diagnosis of axial SpA, n (%)</th>
<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>Age, years, mean (SD)</td>
<td>36.9 (10.4)</td>
<td>37.2 (11.5)</td>
<td>36.6 (9.2)</td>
<td>&gt;0.99</td>
</tr>
<tr>
<td>Male sex, n (%)</td>
<td>177 (49.2%)</td>
<td>100 (55.6%)</td>
<td>77 (42.8%)</td>
<td>0.02</td>
</tr>
<tr>
<td>Back pain duration, years, mean (SD)</td>
<td>7.9 (7.6)</td>
<td>6.5 (6.9)</td>
<td>9.2 (8.1)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>HLA-B27 positive, n (%)</td>
<td>141 (40.9%)</td>
<td>104 (59.8%)</td>
<td>37 (21.6%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>CRP elevation, n (%)</td>
<td>52 (14.8%)</td>
<td>34 (19.4%)</td>
<td>18 (10.2%)</td>
<td>0.02</td>
</tr>
<tr>
<td>Inflammatory back pain, n (%)</td>
<td>204 (56.7%)</td>
<td>103 (57.2%)</td>
<td>101 (56.1%)</td>
<td>0.92</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.

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Disclosure of interests: None declared.

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POS1008 THE ROLE OF SERUM CALPROTECTIN IN THE DIAGNOSIS OF INFLAMMATORY BOWEL DISEASE IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) and inflammatory bowel diseases (IBD) have many common features. Approximately in two patients with axial spondyloarthritis have subclinical (histologically confirmed) inflammation of the intestine, and 5-10% of subclinical inflammation turns into Crohn’s disease (CD) or Ulcerative colitis (UC) [1]. Colonooscopy is usually used to diagnose IBD, but this procedure is invasive. Laboratory biomarkers, as fecal calprotectin (FC) and serum calprotectin (SC) can used to diagnosis of IBD. But there is no consensus regarding SC clinical utility. SC is exposed to proteolytic enzymes, but its level also increases with inflammation in the intestine and is associated with a higher disease activity [2], SC levels positively correlate with CRP, ESR, disease activity in AS, but not as obvious as with FC [3,4].

Objective: The aim of this study was to evaluate the possibility of using SC in the diagnosis of IBD in patients with AS.

Methods: In the analysis were included 50 patients with AS, fulfilling the modified New York criteria, among them man -36 (72%), woman -14 (28%), mean age of patients was 42.5 ±9.9, mean disease duration – 13.4±8.7 years. All patients were examined with ESR, CRP, FC (range: 100-1800 µg /g), esophagogastroduodenoscopy, colonooscopy and quantitative analysis of the SC level using ELISA (BUHLMANN MRP8/14 ELISA, range: 0.4-3.9 µg /ml).

Results: All patients had a high disease activity, mean BASDAI was 5 ± 3.8. mean ASDAS CRP 3.7 ± 1.01, mean ASDAS ESR 3.6 ± 1.01. 80 % patients had high FC level (more than 100 µg /g), while only 18% patients had an increase of SC level. IBD were diagnosed in 11 cases: 6 patients (12 %) with CD and 5 patients (10 %) - UC, in the remaining cases (78%) was no intestinal pathology. Only 2 patients with IBD had a high SC level. SC level was more correlated with ESR (r=0.53) and CRP (r=0.52) (<0.05) levels, than with FC level (r=0.4) (<0.05).

Conclusion: The results showed that there is currently insufficient data to assess the possibility of using SC in the diagnosis of IBD in patients with AS. There is a significant association between the SC, CRP and ESR, but not fecal calprotectin. Potentially SC may be more representative of systemic inflammation than an intestinal inflammation.

REFERENCES:

Disclosure of interests: None declared.

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