IMPACT OF TREATMENT INITIATION DELAY ON DISEASE ACTIVITY DURING RHEUMATOID ARTHRITIS

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Background: During rheumatoid arthritis (RA), initiating conventional synthetic Disease Modifying Anti-Rheumatic Drug (csDMARD) at the early stages of the disease is a mandatory condition to achieve DMARD-free sustained remission (1). Limited data studying the relationship between RA delay and disease activity are available.

Objectives: The aim of this study was to assess the impact of csDMARD initiation delay during RA on disease activity.

Methods: This is a cross-sectional study including patients with RA (ACR/ EULAR criteria). Delays were collected from patients’ interview and were represented respectively by D1, D2 and D3. D1 stands for the lag time separating the first RA symptom onset and rheumatologist consultation. D2 stands for the lag time separating the first RA symptom onset and RA diagnosis. D3 stands for lag time separating the first RA symptom onset and csDMARD initiation. Disease activity was evaluated by: Visual Analogue Scale for pain (VAS), number of tender joints, number of swollen joints, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) and Disease Activity Score28 (DAS28). The data were analyzed with descriptive statistics, Student’s t-test, chi² (2) test, and Spearman correlation using the SPSS statistical package. A p value < 0.05 was considered significant.

Results: The study included 100 RA patients (86 women and 14 men), with a mean age of 56.5 ± 12.4 years. The mean age at the onset of RA was 47.5 ± 12.4 years. Median D1, D2 and D3 were respectively 12 months [2-242], 15.7 months [2-252] and 18 months [2-370]. Methotrexate was prescribed in 86% of cases. At RA diagnosis, the median values for the following parameters were: VAS 80 [30-100], number of tender joints 10 [0-28], number of swollen joints 5 [0-17], ESR 43 mm/hour [6-133], CRP 14.1 mg/l [1-120], DAS28 5.2 [2-752] and DAS28 (CRP) 4.6 [1-93]. After one year of follow-up, the median parameters of the disease activity were respectively: VAS 60 [0-100], number of tender joints 60 [0-28], number of swollen joints 2 [0-22], ESR 32 mm/hour [2-106], CRP 7.5 mg/l [1-12], DAS28 (ESR) 4.1 [1-47], and DAS28 (CRP) 3.7 [1-68]. Significant positive correlation was found between delays in csDMARD initiation and DAS28 (CRP) scores over the first year (p=0.02, r=0.29).

Conclusion: In this study, delays in treatment were associated with higher DAS28 (CRP) scores after one year of follow-up. Our results suggest that early identification and treatment of RA leads to improved outcomes and even improved rates of drug-free remission.

References:

Disclosure of Interests: None declared.

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GENETIC SUSCEPTIBILITY AND PHENOTYPE OF RHEUMATOID ARTHRITIS IN DANISH AND TURKISH PATIENTS

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Background: Genetic studies in RA demonstrate that the genetic susceptibility to RA in Danish compared to Turkish patients with a higher prevalence of risk-enhancing alleles and a lower prevalence of protective alleles.

Results: We found no associations between the risk-enhancing alleles and the presence of IgM rheumatoid factor or ACPA.

Conclusion: The Turkish patients were younger and had lower disease activity than Danish at the time of diagnosis. Our study found an enhanced genetic susceptibility to RA in Danish compared to Turkish patients with a higher prevalence of risk-enhancing RA alleles and a lower prevalence of protective alleles.

References:

Disclosure of Interests: None declared.

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LUNG DISEASE CHARACTERISTICS IN MOROCCAN RHEUMATOID ARTHRITIS PATIENTS

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Background: Pulmonary involvement is the most common extra-articular Rheumatoid Arthritis (RA) manifestation. Intestinal lung disease is an important and early feature and can increase the mortality risk in RA patients. In Morocco no previous studies have been carried out to identify the prevalence of lung disease in RA patients nor have the risk factors for development of interstitial lung disease (ILD). The aim of this study was to investigate the prevalence of lung disease and analyse the ILD associated risk factors, in Moroccan patients with rheumatoid arthritis.

Methods: This was a retrospective analysis of 288 patients diagnosed with RA between January 2014 and December 2019. Exclusion criteria were: pregnant women, history of other autoimmune disease than RA, pulmonary tuberculosis diagnosed before lung exploration, any drugs known to cause pulmonary changes (such as Amiodarone). Clinical, and laboratory features were recorded simultaneously with the period of pulmonary exploration. Lung involvement was
assessed by High-resolution computed Tomography (HRCT). Statistical analyses were performed using SPSS 20.0. The t-test was employed to compare means of continuous variables, whereas chi-square test was used to compare frequencies. Variables that were significantly associated with ILD using univariate analyses, were included in multivariate logistic regression model. Statistical significance was considered if p < 0.05.

Results: The majority (89.2%) of patients were female. Mean age was 52.6±12.53 years and disease duration was 11.2±9.3 years. A total of 48 (16.7%) patients were noted to have respiratory symptonatology. Lung involvement was documented in 188 (65.6%) patients. In each compartment of the lung, abnormal HRCT findings suggestive of ILD were detected in 134 (70.8%) cases, bronchiectasis in 37 (19.5%) and then pleural effusion in 11 (5.8%) (Table 1).

Table 1. Frequency of subtype's pleuropulmonary involvement detected on HRCT (n=189)

<table>
<thead>
<tr>
<th>Subtype of ILD</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual interstitial pneumonia</td>
<td>113 (57.9%)</td>
</tr>
<tr>
<td>Non-specific interstitial pneumonia</td>
<td>23 (12.1%)</td>
</tr>
<tr>
<td>Cryptogenic organizing pneumonia</td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td>Acute interstitial pneumonia/diffuse alveolar damage</td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td>Fibrosis</td>
<td>18 (9.5%)</td>
</tr>
<tr>
<td>Bronchiectasis</td>
<td>37 (19.5%)</td>
</tr>
<tr>
<td>Focal interstitial fibrosis</td>
<td>10 (5.2%)</td>
</tr>
<tr>
<td>Obliterative Bronchiolitis</td>
<td>21 (11.0%)</td>
</tr>
<tr>
<td>Pleural effusion</td>
<td>11 (5.8%)</td>
</tr>
<tr>
<td>Pleural thickening</td>
<td>6 (3.17)</td>
</tr>
<tr>
<td>Nodules</td>
<td>3 (1.5%)</td>
</tr>
</tbody>
</table>

In multivariate analysis, ILD was associated with male older age (OR=1.43, 95% CI [1.202-1.952], p=0.007), advanced age at RA onset (OR=2.17, 95% CI [1.151-1.874], p=0.007), extra-articular manifestations (OR=10.8, 95% CI [5.312-12.300], p<0.001), disease activity (OR=2.68, 95% CI [1.463-1.715], p=0.001) and low methotrexate dose (OR=1.03, 95% CI [1.003-1.106], p=0.031).

Conclusion: ILD was the most prevalent manifestation of RA lung involvement, it was associated with male gender, older age active and severe RA.

References:

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AB0205 PREDICTORS OF ULTRASOUND DETECTED INFLAMMATORY FINDINGS IN PATIENTS WITH INFLAMMATORY ARTHRITIS

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Background: Patients with inflammatory arthralgia (IA) are considered to be at increased risk for progression to RA. US has shown high sensitivity to detect synovitis compared with physical examination. Thus, US is recommended to identify subclinical synovitis in patients without clinical signs of inflammation.

Objectives: The objective of our study is to determine the frequency and pattern of US-detected inflammatory findings in patients with IA and investigate factors contributing to predict these findings.

Methods: An US clinic is scheduled in an academic center running three days every week. A retrospective analysis of our US unit cohort during a period of 6 months was undertaken. Patients with IA and no previous diagnosis of inflammatory arthropathies were included for analysis. Inclusion criteria of IA definition included: severe symptoms presenting in the morning, duration of morning stiffness ≤15 min, symmetric symptoms predominantly located in MCP joints and absence of clinically detected synovitis by the referral rheumatologist. The following routinely collected variables were included in the analysis: demographics, clinical features and laboratory tests. Patients underwent bilateral US examination in GS and PD mode of hands and/or feet according to the European League Against Rheumatism (EULAR) guidelines. The presence of synovitis, tenosynovitis and enthesis was assessed on a semi quantitative scale (0–3) for Grey Scale(GS)/Power Doppler(PD) or using enthesitis OMERACT definition, respectively. Patients were stratified in two groups based on the presence of US inflammatory findings (synovitis, tenosynovitis or enthesitis with PD signal). First, differences between groups were tested using chi-square and Student-t tests in the univariate analysis. Second, multivariate logistic regression models were employed to investigate the association between possible predictive factors of US detected inflammatory findings.

Results: A total of 57 patients were included in the analysis. Mean age was 55.8±15.2 years, 41 (71.9%) were females, and mean symptom duration was 11.4±10.4 months (Table 1). A total of 42 (73.7%) patients presented with a polyarticular arthralgia pattern. US inflammatory findings were present in 20 (35.1%) patients (26.3% PD synovitis, 21.1% PD tenosynovitis and 3.5% PD enthesis). Hands were most commonly involved with PD synovitis at wrists in 19.3% and at MCP in 12.3% of patients (Table 2). For PD tenosynovitis, the flexor MCP 2-5 (5.3%) and compartment IV tenosynovitis (1.8 %) were the most frequent affected locations. Only two patients had PD enthesis at feet and 6 (10.5%) had erosions in hands or feet at baseline examination. In the univariate analysis, the higher ESR values and the shorter time from symptoms onset were significantly associated with US detected inflammatory findings (p=0.044 and 0.049, respectively). In the multivariate analysis, only ESR values (OR=1.04, 95%CI 1.002-1.078), remained significantly associated with the presence of US inflammatory findings (Table 3).