AB0523  TAKAYASU ARTERITIS AND SACROILIITIS: A CASE-CONTROL STUDY
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Background: A possible shared immunopathogenesis between Spondyloarthritis (SpA) and Takayasu Arteritis (TA) has been hypothesized and some clinical cases about SpA in TA patients have been reported (1). In clinical practice the diagnosis of sacroiliitis may be performed by X-ray, Computed Tomography (CT) or Magnetic Resonance Imaging (MRI). In particular, CT findings of sacroiliitis include contour irregularities, joint space alterations, joint erosion, subcondral bone changes (osteoporosis or sclerosis), enthesitis, ankylosis. Meanwhile, TA patients performe routinely FDG-PET/CT scans for monitoring subcondral bone changes (osteoporosis or sclerosis), enthesitis, ankylosis.

Objectives: This study aims to understand if there is an increased incidence of sacroiliitis in TA patients.

Methods: We collected retrospectively imaging data from FDG-PET/CT scans of 28 TA patients and 28 controls, matched for sex and age. Controls were selected among patients performing FDG-PET/CT in our Nuclear Medicine Unit, excluding patients with bone tumors, bone metastasis and thyroid cancers. The majority of controls were affected by lymphoma in complete remission. An expert rheumatologist read the CT-scans of sacroiliac joints.

Results: No patients or controls demonstrated FDG-uptake in sacroiliac joints. In the control group we detected sacroiliac sclerosis in two cases: one due to degenerative changes, one to sacroiliitis (1/28, 4%). In the TA group four patients presented CT alterations suggestive for sacroiliitis: one bilateral erosion, one bilateral sclerosis, two monolateral sclerosis (4/28, 14%). One of these patients complained an inflammatory back pain.

Conclusion: In our cohort of TA patients we demonstrated an increased prevalence of sacroiliitis, diagnosed by CT scan. Only one patient reported an inflammatory back pain, while three patients had radiological signs of previous sacroiliitis. These findings highlight the importance of looking for spondyloarthropathy in TA patients even if asymptomatic.

References:

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AB0524  ANCA ASSOCIATED VASCULITIS IN GRAN CANARIA: THE IMPORTANCE OF THE INTERSTITIAL LUNG DISEASE
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Background: ANCA-associated vasculitis (AVV) are a heterogeneous group of systemic diseases that needs a better knowledge and approach due to the high mortality it presents.

Objectives: Describe the clinical characteristics of patients with AVV assessed by the Rheumatology services in two university hospitals in Gran Canaria in the last decade, as well as clinical differences between the AVV subtypes.

Methods: Characteristics of 34 patients diagnosed with AVV between January 2011 - December 2018 were collected retrospectively. The patients met ACR classification criteria and consensus criteria from Chapel Hill-2012. Variables are compared using the χ² test for dichotomous variables or the t-Student test for continuous variables. For non-continuous variable, Mann-Whitney U or a logarithmic transformation was used.

Results: 21 (61.7%) patients received cyclophosphamide and 3 (8.8%) patients received rituximab as induction treatment. Azathioprine was the most commonly used maintenance treatment (41.1%). 16 (47%) patients had renal involvement. An improvement in proteinuria was observed, both in GPA (p=0.008) and in MPA (p=0.03) (Renal outcomes in Table 2). No patient received kidney transplant.

Conclusion: ILD can be considered a relatively frequent manifestation of this group of diseases. A high percentage of patients had recurrences. Mortality remains high in AAV and in our series ILD is a frequent cause of death.

Disclosure of Interests: Francisco Javier Nóvoa Medina: I have been paid as a speaker for a few medical talks. Francisco Rubiño: None declared, Sergio Machín García: None declared, Iñigo Rua-Figueroa: None declared
DOI: 10.1136/annrheumdis-2020-eular.3268

TABLE 1. INITIAL CLINICAL MANIFESTATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ALL THE PATIENTS (n=34)</th>
<th>GPA (n=14)</th>
<th>MPA (n=10)</th>
<th>EGP (n=10)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otolaryngological involvement</td>
<td>13 (92.9%)</td>
<td>3 (21.4%)</td>
<td>10 (60%)</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Intestinal disease</td>
<td>5 (14.7%)</td>
<td>0</td>
<td>5 (50%)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Renal involvement</td>
<td>0.027</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Renal-pulmonary syndrome</td>
<td>6 (17.6%)</td>
<td>3 (21.4%)</td>
<td>2 (20%)</td>
<td>1 (10%)</td>
<td></td>
</tr>
<tr>
<td>- Glomerulonephritis</td>
<td>10 (29.4%)</td>
<td>3 (21.4%)</td>
<td>6 (60%)</td>
<td>1 (10%)</td>
<td></td>
</tr>
<tr>
<td>- Basal proteinuria &gt;1 gr/24 hs</td>
<td>13 (38.2%)</td>
<td>4 (28.5%)</td>
<td>7 (70%)</td>
<td>1 (10%)</td>
<td></td>
</tr>
<tr>
<td>Alveolar pulmonary hemorrhage not associated with renal involvement</td>
<td>2 (5.8%)</td>
<td>0</td>
<td>1 (10%)</td>
<td>1 (10%)</td>
<td></td>
</tr>
<tr>
<td>Manifestations Peripheral Nervous System</td>
<td>0.027</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cardiomypathy</td>
<td>3 (8.8%)</td>
<td>0</td>
<td>3 (30%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Eye involvement (scleritis/conjunctivitis/ keratitis/uveitis)</td>
<td>6 (17.6%)</td>
<td>6 (42.8%)</td>
<td>0</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 2. RENAL OUTCOMES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GPA (n=6)</th>
<th>MPA (n=8)</th>
<th>p VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal serum creatinine, mean (SD), mg/dl</td>
<td>2.07 (1.1)</td>
<td>3.08 (2.06)</td>
<td>0.3934</td>
</tr>
<tr>
<td>Basal proteinuria, mean (SD), mg/dl</td>
<td>2264 (1391.5)</td>
<td>2732 (1334.7)</td>
<td>0.8348</td>
</tr>
<tr>
<td>Last serum Creatinine, mean (SD), mg/dl</td>
<td>2.2 (1.4)</td>
<td>2.1 (1.5)</td>
<td>0.577</td>
</tr>
<tr>
<td>Last proteinuria, mean (SD), mg/dl</td>
<td>485 (457.9)</td>
<td>326 (110.4)</td>
<td>0.4704</td>
</tr>
</tbody>
</table>

Interestingly, 5 patients (14.7%), all of them MPA, presented interstitial lung disease (ILD), 3 of them (60%) prior to systemic involvement (9, 10 and 82 months). 3 patients had an usual interstitial pneumonitis (UIP) pattern, none had a non-specific interstitial pneumonia (NSIP) pattern and two had other patterns.

15 patients had 17 relapses. Five (14.7%) patients had serious infections. Eight (23.5%) patients died: 4 due to progression of ILD, 2 due to vasculitis manifestations.

Conclusion: ILD can be considered a relatively frequent manifestation of this group of diseases. A high percentage of patients had recurrences. Mortality remains high in AAV and in our series ILD is a frequent cause of death.

Disclosure of Interests: Enrico Balò, Mauro Ferrari: None declared, Beatriz Tejeira-Segura: None declared, Sergio Machín García: None declared, Iñigo Rua-Figueroa: None declared
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AB0525  NATURAL HISTORY OF CRYOGLOBULINEMIA FROM 2000 TO 2018 FROM THE LABORATORY POINT OF VIEW: AN ANALYSIS OF CRYOGLOBULIN CHARACTERISTICS IN A SINGLE CENTER.
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Background: Big data refers to large amounts of information. With today's ever-improving technologies created by the automation and digitization, it becomes easier to convert data into relevant information, which can be used to provide better patient management, especially when it occurs a rare condition such as cryoglobulinemia (CRG). CRG is due to an immunoglobulin (Ig) that precipitate at low temperatures. There are 3 types of CRG: type I: monoclonal Ig; type II: monoclonal Ig plus polyclonal Ig; type III: 2 polyclonal Ig.

Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2020-eular.3380

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Objectives: The aim of this study was to analyse the available data coming to the Department of Laboratory Medicine of Modena to describe the population of patients suffering of CRG.

Methods: Data from the Modena Labs network were extracted by means of the software “Pagoda”, for statistical purposes, directly connected to the Laboratories Information System (LIS). Considered time period 2000-2018

Results: The analysed samples were 28,847, 4901 (17%) of which positive to the cryoglobulins (CR). Detection. The positive typing CRG were 4190 (85%); type I 78%, type II 44.54% and type III 43.6%. The positive samples belonged to 2528 patients. Patients were 1563 (62%) women, average age 66±16, and 965 (38%) men, average age 62±16. (female/male ratio = 1.62) No statistically significant difference regarding sex and age between the 3 types. The cryoglobulinemia phenomenon is quite complex and the typing of monoclonal, polyclonal components of the Ig classes and chains has made it possible to identify 41 possible combinations. Out of 115 patients with Type 1 cryoglobulin, 73% had a monoclonal IgM and 36% monoclonal IgG; 11.2% both monoclonal IgG and IgM. The x light chain was the most frequent: 55.6% IgM-k and 23.4% IgG-k vs 25% IgM-λ and 18.2% IgG-λ. Two patients had an IgA-k cryoglobulin.

Patients with Type 2 cryo were 781: monoclonal IgM-k 587 (75.1%), 126 IgM-λ (16.1%), 52 IgG-k (6.6%), IgG-λ (5%), 1 IgM-λ, 2.8% had both IgG and IgM. Out of 1204 patients with Type 3 cryo, 74.8% had both polyclonal IgG and IgM, 13.8% IgG <725 prior to initiation of treatment.

Information System (LIS). Considered time period 2000-2018

Objectives: To study the basal characteristics of patients with AAV and rheumatoid arthritis (RA) in treatment with RTX and to analyze the risk factors of hypogammaglobulinemia.

Methods: Retrospective observational study of patients treated with RTX. Patients diagnosed with AAV and RA with immunoglobulin levels prior to treatment and after each cycle were included. Clinical and demographic variables were analyzed. Both populations were compared using t-Student for continuous and chi-squared for categorical variables. The influence of the basal characteristics of the patients was analyzed using univariate and multivariate logistic regression models.

Results: Among the 86 included patients, 10 (11.6%) had AAV and 76 (88.4%) RA. Patient's characteristics stratified by disease are included in Table 1. The overall sample was divided into two groups, patients who developed hypogammaglobulinemia and patients who did not. Of the 12 patients who developed hypogammaglobulinemia, 4 had RA and 8 AAV (p=0.001). In the univariate analysis, patients who developed hypogammaglobulinemia presented higher age at diagnosis (61 ± 15 vs 43 ± 11 years, OR=1.14 p<0.001), shorter time of disease progression (4.9 ± 8 vs 12.6 ± 9 years, OR=0.86 p<0.02) and lower gammaglobulin rates at baseline (744 ± 504 vs 1145 ± 295 OR=0.16 p<0.006). There were more severe infections in the group of patients with hypogammaglobulinemia than in the group without it (1/4 [25%] vs 1/74 [1.4%], OR=0.42 p<0.001).

Patients with hypogammaglobulinemia received a higher cumulative dose of steroids during treatment (OR=1.000 p=0.019). Within the RA group, patients with hypogammaglobulinemia also received a higher cumulative dose of steroids (p<0.009).

In the multivariate study, only age at the beginning of treatment (OR=1.1 p=0.020) remained a risk factor for the appearance of hypogammaglobulinemia.

Conclusion: A significantly higher percentage of hypogammaglobulinemia is observed in patients with AAV treated with Rituximab, compared to patients with RA. The development of hypogammaglobulinemia seems to be influenced by age at diagnosis, years of disease progression, IgG levels prior to initiation of treatment and a higher cumulative dose of glucocorticoids (targeted in both the overall sample and the RA group). In addition, there is a higher frequency of severe infections in the hypogammaglobulinemia group. Studies with larger sample sizes are needed to confirm these results.

Disclosure of Interests: Maria Sanz: None declared, Gemma Bonilla: None declared, Diana Peiteado: None declared, Diego Benavent: None declared, Chamaida Plasencia: None declared, Laura Nuño: None declared, Irene Monjo: None declared, Alejandro Villalva: None declared, Alejandro Balsa: None declared.

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AB0526 DIFFERENCES IN IMMUNOGLOBULIN LEVELS IN PATIENTS WITH ANCA-ASSOCIATED VASCULITIS AND RHEUMATOID ARTHRITIS TREATED WITH RITUXIMAB

M. Sanz1, G. Bonilla1, D. Peiteado1, D. Benavent1, C. Plasencia1, L. Nuño1, I. Monjo1, A. Villalva1, A. Balsa1. 1University Hospital La Paz, Madrid, Spain

Background: Rituximab (RTX) is a chimeric monoclonal antibody against CD20 monoclonal antibody used in the treatment of rheumatic diseases. Hypogammaglobulinemia has been described as an adverse event. It has been reported that hypogammaglobulinemia is more frequent in patients with ANCA-associated vasculitis (AAV). Objective: To study the basal characteristics of patients with AAV and rheumatoid arthritis (RA) in treatment with RTX and to analyze the risk factors of hypogammaglobulinemia.

Methods: Retrospective observational study of patients treated with RTX. Patients diagnosed with AAV and RA with immunoglobulin levels prior to treatment and after each cycle were included. Clinical and demographic variables were analyzed. Both populations were compared using t-Student for continuous and chi-squared for categorical variables. The influence of the basal characteristics of the patients was analyzed using univariate and multivariate logistic regression models.

Results: Among the 86 included patients, 10 (11.6%) had AAV and 76 (88.4%) RA. Patient's characteristics stratified by disease are included in Table 1. The overall sample was divided into two groups, patients who developed hypogammaglobulinemia and patients who did not. Of the 12 patients who developed hypogammaglobulinemia, 4 had RA and 8 AAV (p=0.001). In the univariate analysis, patients who developed hypogammaglobulinemia presented higher age at diagnosis (61 ± 15 vs 43 ± 11 years, OR=1.14 p<0.001), shorter time of disease progression (4.9 ± 8 vs 12.6 ± 9 years, OR=0.86 p<0.02) and lower gammaglobulin rates at baseline (744 ± 504 vs 1145 ± 295 OR=0.16 p<0.006). There were more severe infections in the group of patients with hypogammaglobulinemia than in the group without it (1/4 [25%] vs 1/74 [1.4%], OR=0.42 p<0.001).

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In the multivariate study, only age at the beginning of treatment (OR=1.1 p=0.020) remained a risk factor for the appearance of hypogammaglobulinemia.

Conclusion: A significantly higher percentage of hypogammaglobulinemia is observed in patients with AAV treated with Rituximab, compared to patients with RA. The development of hypogammaglobulinemia seems to be influenced by age at diagnosis, years of disease progression, IgG levels prior to initiation of treatment and a higher cumulative dose of glucocorticoids (targeted in both the overall sample and the RA group). In addition, there is a higher frequency of severe infections in the hypogammaglobulinemia group. Studies with larger sample sizes are needed to confirm these results.

Disclosure of Interests: Maria Sanz: None declared, Gemma Bonilla: None declared, Diana Peiteado: None declared, Diego Benavent: None declared, Chamaida Plasencia: None declared, Laura Nuño: None declared, Irene Monjo: None declared, Alejandro Villalva: None declared, Alejandro Balsa Grant/ research support from: BMS, Roche, Consultant of: AbbVie, Gilead, Lilly, Pfizer, UCB, Sanofi, Sandoz, Speakers bureau: AbbVie, Lilly, Sanofi, Novartis, Pfizer, UCB, Roche, Nordic, Sandoz.

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AB0527 PHARMACOGENETICS AND PHARMACODYNAMICS OF RESPONSE TO APREMILAST IN A PHASE 3 CLINICAL STUDY IN SUBJECTS WITH ACTIVE BEHÇET’S DISEASE

J. Maranville1, I. Medvedeva1, R. Yang1, M. Chen2, S. Collazo2, S. Mccue2, P. Schafer2. 1Celgene Corporation, Cambridge, United States of America

Background: Apremilast (APR), an oral phosphodiesterase 4 (PDE4) inhibitor, modulates inflammatory mediators and has demonstrated efficacy in treating oral ulcers in a phase III Behcet’s syndrome study (BCT-002 [RELIEF]).

Objectives: To conduct an exploratory analysis of genetic polymorphisms, plasma biomarkers, and blood leukocytes with clinical response in RELIEF.

Methods: Subjects with active Behçet’s disease (BD) were randomized (1:1) to APR 30 mg twice daily or placebo (PBO). The primary clinical efficacy endpoint was the area under the curve for the number of oral ulcers through Week 12 (AUC). Among the 207 subjects enrolled, 140 provided consent for DNA genotyping, 116 for plasma biomarker testing, and 96 for leucocyte subset testing. Genotyping was performed on the Illumina OmniExpressChip (Covance Genomics Laboratory). TNF-a, IL-6, interferon-γ, and IL-17A levels were measured using Simoa Single Molecule Array; IL-8 and IL-23 were measured using the Human DiscoveryMap multiplex panel (Myriad RBM). Th17,