Objectives: The aim of this study is to determine the prevalence of cardiac manifestations and to assess their predictive factors in a population of Moroccan patients suffering from SpA.

Methods: We have conducted a cross-sectional study over two months in our department of rheumatology. All SpA patients fulfilled ^{ASAS 2009} criteria. They all have had a cardiac check up with research of clinical cardiac manifestation, 12-lead electrocardiogram and trans-thoracic echocardiography.

Data analysis was carried out using the SPSS Statistics 20 software. A univariate analysis as well as multivariate regressions were carried out to identify the factors associated with cardiac manifestations.

Results: We have included 61 men and 31 women with a mean age of 37.34 ±12.77 years old. The mean disease duration was 10.59±7.63. The median CRP was 9.60 mg/L (IQR 0–180), the mean ASDAS CRP 2.24±1.30 and the mean BASDAI 2.7±1.99.

Traditional cardiovascular risk factors in our series included dyslipidemia in 15 patients (18.3%), hypertension in 10 patients (10.9%) and type 2 diabetes in 7 patients (7.6%). Mean BMI was 23.88±5.83 Kg·m⁻². Twenty nine patients (31.9%) were overweight and 10 patients (11%) were obese. Eight patients (8.7%) smoked and 3 patients (3.3%) used alcohol whereas 19 patients (20.7%) had a history of smoking and 6 patients (6.5%) had a history of alcohol use.

Cardiac manifestations were found in 12 patients (13.6%): 3 (3.3%) had aortic regurgitation (AR), 1 (1.1%) had aortic dilatation, 1 (1.1%) had aortic thickening, 2 (2.2%) had mitral thickening, 1 (1.1%) had mitral regurgitation (MR), 1 (1.1%) had mitral stenosis (MS), 3 (3.4%) had pericarditis and 2 (2.2%) had bundle branch block.

In comparison with the group without cardiac manifestations, axial involvement, current enthesitis and extra-articular manifestations were common in patients with cardiac involvement. Furthermore, uveitis was frequent in patients with aortic dilatation and MR. Patients with AR and MS had higher ESR and disease activity compared to the group without heart disease. Patients with pericarditis had an accelerated ESR unlike the group without cardiac involvement.

In univariate analysis, AR was significantly associated with ESR and ASDAS VS (OR=1.03 [1.003–1.063], p=0.028; 2.75 [1.062–7.123], p=0.037, respectively). Pericarditis was significantly associated with ESR (OR=1.03 [1.003–1.062], p=0.029).

In multivariate analysis, cardiac manifestations were significantly associated with current enthesitis and extra-articular manifestations (OR=4.48 [1.078–18.683], p=0.039 and 6.35 [1.156–34.893], p=0.033, respectively).

Conclusions: Heart disease was common in our study and was associated with the enthesitis involvement and the severity of SpA.

REFERENCES:

- [1] Ozkan Y. Cardiac involvement in ankylosing spondylitis. *J Clin Med Res* 2016;8:427–30.
- [2] Lianne S, et al. Axial spondyloarthritis: the heart of the matter. *Clin Rheumatol* 2015;34: 995–8.
- [3] Pereira IA, et al. Extra-articular manifestations in spondyloarthritis are common and should be screened. *Rheumatol Curr Res* 2012;2:111.

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AB1328 FLARES IN SPONDYLOARTHRITIS: PREVALENCE AND RELATED FACTORS

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Background: Spondyloarthritis is a chronic condition characterised by alternated periods of flares and stable disease.

Objectives: The aim of this study is to assess the prevalence of patient-reported flares and the validity of this concept through its related factors.

Methods: We have conducted a cross-sectional study over two months in our department of rheumatology. All SpA patients fulfilled ^{ASAS 2009} criteria.

Current and past flares over the last 3 months were recorded. Disease activity and functional status were assessed by the BASDAI score (0–10) and the Bath Ankylosing Spondylitis Functional Index (BASFI; 0–100), respectively. Data analysis was carried out using the SPSS Statistics 20 software. Univariate and multivariate regressions were performed to identify the factors associated with current flare.

Results: We included ninety two patients with SpA, 61 (66.3%) were men. The mean age was 37.34±12.77 years old. The mean disease duration was 10.59 ±7.63 year. The mean BASDAI was 2.7±1.99 and the median BASFI was 14 (IQR 0–100). Thirty-five patients (38%) received antitumor necrosis factor alpha (anti-TNF-α). Twenty-nine patients (31.5%) were currently in flare, and 6 patients (6.5%) reported only past flares.

In univariate analysis, patients reporting current flares had a current enthesitis (OR=3.14 [1.250–7.923], p=0.015) and higher values of BASDAI, ASDAS VS and

ASDAS CRP (OR=2.17 [1.085–4.362], p=0.029; 2.20 [1.448–3.359], p=0.0001; 2.23 [1.495–3.340], p=2.235, respectively). These patients had also more extra-articular manifestations (OR=3.37 [1.326–8.601], p=0.011).

In multivariate analysis, the following factors were associated with current flare: Inher BASFI (OR=1.05 [1.013–1.098], p=0.010), protein c-reactive (OR=1.087 [1.016–1.163], p=0.016), ASDAS VS (OR=10.99 [1.921–62.873], p=0.007), current enthesitis (OR=25.00 [2.185–286.146], p=0.01), the presence of extra-articular manifestations (OR=30.66 [1.709–550.049], p=0.02) and the use of non steroidal anti-inflammatory drugs during the last 3 months (OR=125.064 [3.33–4491.0], p=0.009).

Conclusions: Our study shows that assessment of flares may provide a good estimation of disease activity.

REFERENCES:

- [1] Jacquemin C, et al. Patient-reported Flares in Ankylosing Spondylitis: A Cross-sectional Analysis of 234 Patients. *J Rheumatol* 2017;44:425–30.
- [2] Cooksey R, et al. Severe flare as a predictor of poor outcome in ankylosing spondylitis: a cohort study using questionnaire and routine data linkage. *Rheumatology* 2015;54:1563–72.
- [3] Stone MA, et al. Assessment of the impact of flares in ankylosing spondylitis disease activity using the Flare Illustration. *Rheumatology* 2008;47:1213–8.

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AB1329 BIOLOGIC AGENTS AND RISK OF SERIOUS INFECTIONS IN RHEUMATOID ARTHRITIS, PSORIATIC ARTHRITIS AND ANKYLOSING SPONDYLITIS: RESULTS BY INTEGRATING TEN-YEAR (2006–2015) ADMINISTRATIVE DATABASES IN THE ITALIAN REGION OF FRIULI VENEZIA GIULIA

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Background: Serious infections are a major concern for patients considering biologic agents for rheumatoid arthritis (RA) or psoriatic arthritis (PsA) or ankylosing spondylitis (AS). Evidence from meta-analyses is consistent with an increased risk of serious infections with biologic disease-modifying antirheumatic drugs (bDMARDs);¹ however, long-term real-life studies are scarce and controversial.

Objectives: To determine the risk of serious infections (i.e., need of hospitalisation) in patients affected by RA, psoriatic arthritis (PsA) or ankylosing spondylitis (AS), treated by bDMARDs in the Italian region of Friuli Venezia Giulia, approximately 1,200,000 inhabitants.

Methods: The regional health information system was used as the source of data. Administrative data from the hospital discharge records database, the medical prescription database, and the database of exemptions from medical charges were linked at the individual patient level through an anonymous univocal stochastic key. A cohort of patients diagnosed for RA, PsA or AS from 2006 to 2015 was identified from specific national exemption codes (006, 045, 054) and followed up to either the end of 2015, or hospitalisation with the main discharge diagnosis of infection, as ICD-9-CM codes, or death, or change of residency out of the Region. Multivariate Cox regression was used to estimate the hazard ratio (HR) of hospitalisation associated with bDMARDs and adjusting for age, sex, Charlson's comorbidity index, calendar year, prescription of steroids and of csDMARDs. Use of bDMARDs was treated as a time-dependent variable.

Results: Overall, the cohort consisted of 5596 subjects: 3216 (57.5%) with RA,¹⁷⁰² (30.4%) with PsA, and 678 (12.1%) with AS. Of them, 940 patients (16.8%) had received at least one prescription of a bDMARDs during the study period. During follow-up, 193 (3.4%) subjects were admitted to the hospital with a primary diagnosis of infection. The most frequent infections were upper and lower respiratory tract infections (86/193, 44.5%), followed by sepsis (19/193, 9.8%), and soft tissue and skin infections (16/193, 8.3%). After adjusting for the abovementioned variables, when starting a bDMARD, the risk of infections was significantly increased, with an observed increased risk of almost 2-fold by the time of the bDMARD prescription (HR 1.694, 95% CI 1.158–2.478, p=0.0066). Compared with patients <40 years if age, the elderly (>=65 years) showed a much higher risk of infections (HR 3.919, 95% CI 2.286–6.716, p<0.0001). Analyses stratified by disease indicated that RA, PsA, and AS patients starting biologic medications have increased risk of infection.

Conclusions: By integrating the information coming from ten-year administrative databases, RA, PsA and AS patients starting bDMARDs are at high risk of serious infections. This risk is much higher in the elderly. Upper and lower respiratory tract

infections are the most common infections, supporting the prevention policies by vaccination for influenza viruses and *Str. pneumoniae*, in particular in the elderly population.

REFERENCE:

- [1] Ramiro S, et al. *Ann Rheum Dis.* 2017;76(6):1101–1136.

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AB1330

A PRELIMINARY STUDY ON THE BASELINE HRCT SCORING CRITERIA FOR PREDICTING THE FIBROSIS PROGRESSION OF RA-ILD

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Background: Interstitial lung disease (ILD) is the most common pulmonary manifestation of RA. The progression of fibrosis in RA-ILD varied differently, and effective predictors of progression were absent.

Objectives: To explore the baseline HRCT scoring criteria that can predict progressive fibrosis and provide reference for clinical diagnosis and treatment.

Methods: The chest HRCT of RA-ILD patients from 2009 to 2017 were retrospectively analysed, including 102 patients with progressive fibrosis and 50 patients without progressive fibrosis. Progressive fibrosis was defined as honeycombing development or an increase in extent of reticulation on follow-up HRCT. The baseline HRCT evaluation was performed by two thoracic radiologists blinded to all patient data, which including routine interstitial lesion evaluation and fibrosis predictive score. We proposed the baseline HRCT fibrosis predictive score to differentiate progressive fibrosis from the stable patients. The score included two parts, subpleural lesion score and bronchovascular bundle thickening score, with a total score of 0–9 points.

Results: In the routine evaluation, peripheral distribution was more common in the progressive fibrosis group (78.43% VS 52%, $p < 0.05$), traction bronchiectasis and traction bronchiolectasis both were more common in the progressive group (41.18% VS 8%, $p < 0.01$; 93.14% VS 46%, $p < 0.01$; respectively). Compared with non-progressive fibrosis group, subpleural reticulation and subpleural linear opacities were more common in the progressive fibrosis group (79.21% VS 28%, $p < 0.0$; 41.80% VS 14%, $p < 0.01$; respectively), subpleural honeycombing was more common in the progressive fibrosis group (41.17% VS 20%, $p < 0.05$), subpleural ground-glass opacity showed no difference between the two groups (52.94% VS 66%, $p > 0.05$). Notably, subpleural honeycombing in the progressive group were all accompanied by the presence of subpleural reticulation and subpleural linear opacities on baseline HRCT. The AUC curve of fibrosis predictive score was 0.87 (95% confidence interval, 0.81, 0.93), indicating that baseline HRCT score had a better judgement value for progressive fibrosis. The cut-off value was 5.5 points (sensitivity was 64%, specificity 94%), that is, baseline HRCT score ≥ 6 points was more likely to develop progressive fibrosis. Drug interventions (glucocorticoids, cyclophosphamide) were relatively deficient in the progressive fibrosis group, (26.47% VS 44%, $p < 0.05$; 9.80% VS 22%, $p < 0.05$; respectively). Further analysis showed that treatment situations (glucocorticoids, cyclophosphamide) were similar between the baseline HRCT score ≥ 6 points group and the baseline HRCT score < 6 points group (34.78% VS 30.12%, $p > 0.05$; 10.14% VS 16.87%, $p > 0.05$; respectively), suggesting that patients with potential fibrotic tendencies had not been treated actively in the early stage.

Conclusions: The baseline HRCT score has a better predictive value for the progressive fibrosis of RA-ILD, traction bronchiectasis and traction bronchiolectasis are helpful to identify progression. The baseline HRCT evaluation may provide a reference for the choice of time for treatment.

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AB1331

SERUM DRUG LEVELS IN THE MANAGEMENT OF RHEUMATOID ARTHRITIS AND SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW

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Background: Several studies in rheumatic and other inflammatory diseases treated with tumour necrosis factor- α inhibitors (TNFi) support the association between clinical response and trough drug levels (DL). The utility of monitoring DL in rheumatoid arthritis (RA) and spondyloarthritis (SpA) patients on biological

therapy is not clear, so it is important to identify clinical situations in which, the knowledge of DL, would allow an individualised therapeutic decision in the patient, more cost-effective.

Objectives: To answer the most relevant clinical questions related to the usefulness of DL measurement in clinical practice: 1) whether, in patients in remission who are candidates for optimisation, DL predict relapse or survival to dose-titration; 2) whether, in patients with primary or secondary failure to biological agents, DL influence prognosis; and 3) whether concomitant use of methotrexate (MTX) influences the association between DL and response.

Methods: An electronic search of the major databases was performed, Medline, Embase and Cochrane Library, from inception to December 2016. We included articles published in English or Spanish on patients with RA, SpA or both, treated with TNFi, tocilizumab or abatacept, and related to answer any of the three questions of the target research. Overall characteristics and outcomes of the studies were collected in a table of evidence and the quality of the studies was assessed with a scale based on the Oxford levels of Evidence.

Results: The electronic search strategy yielded 1749 articles, twelve of which were included in this systematic review. 2 studies responded the first question, 5 the second, and 7 the third. These studies were mainly observational studies, 6 retrospective and 4 prospective cohort studies, and 2 randomised clinical trials. Sample sized varied from 24 to 395 patients, for a total of 1482 patients analysed. A total of 1281 RA patients were included (64 in the first question, 243 in the second and 1038 in the third) and 201 SpA patients (32 in the first and second questions, 169 in the third). Studies were small and with limitations, but suggest that measurement of DL may be useful in patients in remission, that higher DL predict a longer relapse-free optimisation, and in patients with failure to a biological agent, treatment may need individual adjustment according to the presence of DL or anti-drug-antibodies. In addition, MTX influences the association between response and DL in most studies, with greater controversy in tocilizumab and SpA patients.

Conclusions: Monitoring DL would allow optimal use of current biological therapies, but more studies and of better quality are needed to draw definitive conclusions. In addition, future research should be performed to determine therapeutic ranges of DL, so that the proposed algorithms can be used in a standardised and reliable manner.

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AB1332

FACTORS ASSOCIATED TO PERSISTENCE ON GOLIMUMAB IN PATIENTS WITH INFLAMMATORY ARTHRITIS OF THE BIOBADASER REGISTRY

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Background: Persistence to treatment may be used as a surrogate marker for long-term treatment success

Objectives: To assess the probability of persistence on golimumab (GOL) up to 5 years after treatment initiation and the factors associated to longer persistence

Methods: BIOBADASER is the Spanish registry of biological drugs of the Spanish Society of Rheumatology and the Spanish Medicines Agency. A data-base analysis was done in October 2017 on all the patients who had initiated GOL for one of the approved indications (rheumatoid arthritis [RA], axial spondyloarthritis [SpA] or psoriatic arthritis [PsA]). The probability of persistence was calculated with a Kaplan-Meier test. Factors related to persistence were analysed with a Cox-regression model.

Results: 353 patients were included (105 [29.8%] RA, 147 [30.6%] axial SpA and 101 [28.6%] with PsA), mean age 52¹¹ years, 55% women). Median duration of disease at the onset of GOL was 8.0 [2.8–15.0] years. GOL was the first biological drug in 40.1% of the patients, second in 30.1% and third or further biological in 29.8%. Concomitant medication at GOL initiation was methotrexate (MTX) (33.7%), sulphasalazine (SSZ) (6.1%), leflunomide (LEF) (12.7%), steroids (CS) (26.0%). At the last observation on GOL, 32.0% were on MTX, 5.8% on SSZ, 12.8% on LEF, 16.3% on CS. The probability of persistence on GOL since treatment initiation was 85.9% at year 1 (95% CI 81.4–89.5), 73.7% at year 2 (67.1–79.1), 68.5% at year 3 (60.5–75.1), 60.6% (50.2–69.5) at year 4 and 57.1% (44.9–67.5) at year 5. Persistence was similar for RA, axial SpA or PsA patients (p log-rank 0.070), and higher when GOL was used as first biological agent (p log-rank < 0.001). As first biological drug the probability of persistence was 94.5%