FRI0182

EROSIONS AT THE SACROILIAC JOINTS AND FATTY LESIONS AT THE SPINE ARE THE MOST DISCRIMINANT LESIONS FOR RECENT ONSET AXSPA RECOGNITION

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Objectives: To evaluate the performances of MRI (SIJ and Spine) structural lesions suggestive of axSpA for its recognition.

Methods: Observational cross-sectional national multicentre study. **Patients:** a) Recent onset axSpA patients: first, a sample of 100 patients representative in terms of imaging abnormalities of the global DESIR recent onset axSpA cohort based on the results of the previously published central reading of baseline films of DESIR were selected. b) Recent onset CBP patients: consecutive in- and out-patients consulting for recent mechanical CBP, initiating before the age of 45 y and with a maximum age of 50 y, in four tertiary care Hospitals were included in the study. **Imaging:** MRI scans (T2-STIR and T1 sequences) of the SIJ and cervico-thoracic and thoraco-lumbar spine were performed in both groups with identical protocol. **Central reading:** an experienced reader (AM) centrally read all MRI scans, blinded for clinical diagnosis. **Statistical analysis:** prevalence of lesions suggestive of axSpA was compared in both groups. Sensitivity, specificity and positive likelihood ratio (LR+) of each lesion were calculated.

Results: A total of 98 patients with recent onset CBP were included, and compared to 100 recent onset axSpA patients. Age and gender were comparable (mean (SD) 36.2 (9.9) vs. 32.2 (8.7)y, and 41.8% and 45% males, in the CBP vs. axSpA groups, respectively).

Prevalence of chronic lesions of the SIJ was significantly greater in the axSpA group. Presence of at least 3 subchondral bone erosions at the SIJ performed the best for axSpA discrimination. Prevalence of chronic lesions of the spine was comparable in the two groups. The presence of at least 5 fatty lesions was the most discriminant, with high specificity.

Conclusions: Presence of at least 3 erosions at the MRI-SIJ and at least 5 fatty lesions at the MRI-spine seemed to performed well for axSpA recognition.

Disclosure of Interest: None declared

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FRI0183

CLINICAL PERIPHERAL ENTHESITIS IN THE DESIR PROSPECTIVE LONGITUDINAL AXIAL SPONDYLOARTHRITIS COHORT

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Objectives: 1) To describe the prevalence and characteristics of peripheral enthesitis in recent onset axial spondyloarthritis; 2) to estimate the incidence of peripheral enthesitis over time; 3) to determine the factors associated with the presence of peripheral enthesitis.

Methods: **Patients:** 708 patients with recent onset axial spondyloarthritis enrolled in the DESIR cohort (prospective multi-centre, longitudinal). **Data collected:** patients and spondyloarthritis characteristics at baseline with a specific focus on enthesitis and occurrence of peripheral enthesitis, during the five of years follow-up

Results: At inclusion, 395 patients (55.8%) reported peripheral enthesitis. The locations were mainly the plantar fascia (53.7%) and the Achilles tendon (38.5%). During the 5 year follow-up period, 109 additional patients developed peripheral enthesitis resulting in an estimated (Kaplan Meier technic) percentage of 71% (95% CI: 68–75). Variables associated with peripheral enthesitis in the univariate analysis were: older age, male gender, absence of HLA B27, MRI sacroiliitis and fulfilled Modified NY criteria, presence of anterior chest wall pain, peripheral arthritis, dactylitis, psoriasis, high BASDAI, BASFI, mean score ASAS and the use of NSAID. Only the history of anterior chest wall pain and of peripheral arthritis were retained in the multivariate analysis (Odds Ratio (OR)=1.6 [95% Confidence interval 1.6 [1.1–2.3], and OR=2.1 [1.4–3.0], respectively).

Conclusions: This study highlights the high prevalence of peripheral enthesitis in recent onset axial spondyloarthritis, and suggests that in combination with peripheral arthritis, enthesitis might have an impact on the burden of the disease.

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FRI0184

HIGH PREVALENCE OF HIDRADENITIS SUPPURATIVA, ESPECIALLY IN FEMALE AXIAL SPONDYLOARTHRITIS PATIENTS WITH HIGH DISEASE ACTIVITY AND POOR QUALITY OF LIFE

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Background: Hidradenitis suppurativa (HS) is a chronic debilitating inflammatory skin disease. Although HS and axial spondyloarthritis (SpA) share common denominators in the pathogenesis and treatment, little is known about HS associated patient characteristics in axial SpA.

Objectives: To identify patient characteristics associated with HS in a large cohort of axial SpA patients.

Methods: In this cross-sectional study, a self-screening questionnaire based on validated diagnostic HS questions was sent to all axial SpA patients from the Groningen Leeuwarden Axial Spondyloarthritis (GLAS) cohort. Verification of HS diagnosis was done by reviewing medical records for dermatologists diagnosis of HS and by telephone using another validated diagnostic HS question. These HS questions showed previously high sensitivity and specificity (92%–97%¹ and 97%², resp.). Comparative analysis for axial SpA patients with versus without HS was performed. Multivariable logistic regression analysis of patient characteristics was performed to investigate independent predictors for HS in axial SpA.

Results: In total, 75.6% (449/592) questionnaires were eligible for analyses. Included patients had a mean age of 50±13 years, 63% were male, mean symptom duration was 23±13 years, and 78% were HLA-B27 positive. HS diagnosis could be confirmed in 41 of the 449 respondents, resulting in an estimated prevalence of 9.1%. Assuming that all non-responders never had HS, the minimal HS prevalence rate would be 6.9% (41/592).

In comparison to patients without a positive history of HS, these patients were more frequently female (54% vs. 35%, p=0.02), showed higher axial SpA disease activity (mean BASDAI 4.5 vs. 3.6, p=0.01 and ASDAS_{CRP} 2.6 vs. 2.2 p=0.003), and worse quality of life (QoL) (median ASQoL 9.0 vs. 4.0, p<0.001). Also, a history of heel enthesitis and dactylitis was more prevalent (34% vs. 19%, p=0.03 and 15% vs. 6%, p=0.05, respectively). Multivariable analysis showed that a higher score on ASDAS was independently associated with HS (OR: 1.639, 95% CI 1.176–2.284).

Conclusions: In our cohort of axial SpA patients, HS is more prevalent than in the general population (6.9%–9.1% and ~1% resp.).³ HS is associated with high ASDAS, especially in female patients experiencing poor QoL. Additionally, heel enthesitis and dactylitis seems also to be more prevalent in axial SpA patients with HS.

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FRI0185

FACTORS DETERMINING WORK INSTABILITY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Work instability is defined as mismatch between the employee's ability to work and the employer's expectations¹. 50% of Ankylosing spondylitis patient lose their job due to disease activity and 50% of those in job face work instability and job retention problem². Work disability is preceded by a period of work instability, which can be measured by the Ankylosing spondylitis work instability scale (ASWIS)¹.

Objectives: To determine the factors responsible for work instability in patients with Axial spondyloarthritis (axSpA).

Methods: Patients attending the Spondyloarthritis clinic at a UK centre from 2013 to 2017, were included, if in employment, and diagnosed with axSpA according to ASAS criteria. Number of patients having low (WIS ≤ 10) and moderate to high (WIS 11–20) and corresponding parameters were noted. Numerical values were analysed using Spearman rank test and categorical values using Pearson's test. Multiple regression analysis was done. P value ≤ 0.05 was considered significant.

Results: Of total 255 patients, 139 were in employment (54.5%). 97 were male and 42 were female. Mean age was 43.5 years (20–78 years). 59 patients in manual and 80 patients in non-manual job type, 52 had non-radiographic axSpA (nrSpA) and 87 had radiographic axSpA (rSpA). Mean diagnostic delay was 8 years (0–37 years). Mean ASWIS score was 10.43 (0–20). 75 patients (53.9%) were in Low WIS category and 64 (46%) in moderate to high WIS category. BASDAI and BASFI are found to be significantly correlating with WIS for the whole cohort.

Parameter	Spearman Rank Coefficient	p value
BASDAI	0.7633	0.00011*
BASFI	0.4250	0.00092*

Diagnostic delay, job type, comorbidities, extra articular features, HLAB27, CRP, Pain visual analogue scale (VAS), BASMI, smoking, alcohol and use of biologics were not found to be significant for the whole cohort.

In separate analysis for rSpA and nrSpA groups, the BASDAI and BASFI were of equal significance, but the Pain VAS strongly correlated with WIS in the nrSpA group only ($r=0.62$) and the CRP correlated in the rSpA group only ($r=0.64$).

Conclusions: Work instability is prevalent in axSpA, in all job types. Main factors contributing to work instability are disease activity (BASDAI) and function (BASFI). Drivers for work instability may be different in radiographic and non-radiographic patients. A prospective study will evaluate the impact of use of biologic on work instability.

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FRI0186

CONCOMITANT CSDMARDS INFLUENCE CLINICAL RESPONSE TO TNF INHIBITORS ONLY IN OVERWEIGHT PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: In patients with axial spondyloarthritis (axSpA), the use of conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs), such as methotrexate (MTX) and sulfasalazine (SSZ), as well as the body mass index (BMI) have been associated with circulating TNFi levels. Recently, BMI has also been associated with TNFi clinical response but csDMARDs have not shown any significant clinical improvement for axial manifestations¹. However, no study has assessed in the same population the influence of both factors -csDMARDs and BMI- on drug serum levels and clinical response

Objectives: To investigate the influence of csDMARD and BMI on circulating drug levels and clinical response to TNFi therapy in axSpA patients

Methods: A 1 year follow-up prospective observational study with two cohorts (Madrid and Amsterdam) including 180 axSpA patients treated with standard doses of infliximab (41%) or adalimumab (59%). Laboratory and clinical parameters were collected every 6 months. Patients were stratified by BMI: normal-weight (18.5–24.9 kg/m²) and overweight-obesity (>25.0 kg/m²). TNFi trough levels were measured by capture ELISA². Clinical response to TNFi was defined as Δ BASDAI ≥ 2 . The association between concomitant csDMARDs and BMI with drug levels and clinical response to TNFi at 1 year was analysed through multivariate log-regression models (odds ratio and 95% CI). The presence of significant interactions between covariates was tested and all models were adjusted for

age, gender, HLA-B27, disease duration, TNFi-type (for drug levels) and baseline BASDAI and CRP (for clinical response)

Results: Seventy-nine out of 180 patients (44%) received concomitant csDMARDs (MTX 14%, SSZ 20% and MTX +SSZ 10%), 78 (43%) patients were normal-weight and 102 (57%) overweight-obese. Mean (SD) age and disease duration was 47(13) and 11(9) years respectively, 59% were males, 73% HLA-B27 + and 78% had r-axSpA. Concomitant csDMARDs (OR: 3.82; IC 95%: 1.06–13.84) and being overweight-obese (OR: 18.38; IC 95%: 2.24–150.63) were independently associated with serum TNFi drug presence. Furthermore, a significant interaction between csDMARDs and BMI with clinical response was found. While the use of concomitant csDMARD contributed positively to achieve clinical response in overweight-obese patients (OR: 7.86; IC 95%: 2.39–25.78), no association was found for normal-weight patients (OR: 1.10; 0.33–3.58). Additionally, sensitivity analysis using remission status and ASDAS were performed and showed results along the same line

Conclusions: In patients with axSpA, TNFi drug persistence is positively influenced by the use of concomitant csDMARDs and especially by being normal-weight. However, TNFi clinical response is associated with the use of concomitant csDMARDs only in overweight-obese, but not in normal-weight patients. Based on this, the use of concomitant csDMARDs in patients with axSpA could be beneficial in overweight patients

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FRI0187

LIPOPROTEIN (A) AND POSSIBLE RELATED FACTORS IN PATIENTS WITH SPONDYLOARTHRITIS. RESULTS OF THE CARMA STUDY

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Background: Cardiovascular disease (CVD) is the main cause of mortality and morbidity in patients with spondyloarthritis (SpA), partially explained by traditional CV risk factors (CVRF). Other non-conventional CVRF, probably related to chronic systemic inflammation, may be involved. In this sense, lipoprotein (a) [Lp(a)], an non-conventional risk factor with proatherogenic and thrombogenic properties, could be involved, since it seems to act as an acute-phase reactant, there are few data on this aspect in these patients.

Objectives: To evaluate the prevalence of hyperlipoproteinemia (a) in patients with SpA and analyse the possible related factors.

Methods: Analysis of the baseline visit of patients with ankylosing spondylitis (AS) and psoriatic arthritis (PsA) of the CARMA project (CARDiovascular in Reumatology), a prospective cohort study of 10 years of follow-up, to evaluate the cardiovascular risk in chronic rheumatic inflammatory diseases, including rheumatoid arthritis, AS and PsA, followed in 67 Spanish rheumatology centres. A multivariate logistic regression model was performed, in which the dependent variable was hyperlipoproteinemia (a), defined as the plasma concentration of lipoprotein (a) [Lp(a)] ≥ 50 mg/dl. Sociodemographic factors and those related to the disease itself have been included as independent variables.

Results: 1459 patients were analysed, 738 with AS and 721 with PsA. Plasma concentrations of Lp(a) were available in 57.7% of the patients with AS and in 57.1% of the patients with PsA. A 19.2% (95% CI: 16.80–22.05) of the patients with SpA, 20.7% (95% CI: 16.91–24.82) of AS and 17.7% (95% CI: 14.15–21.75) of PsA, respectively, had hyperlipoproteinemia (a), without statistically significant differences with respect to the control group: 16.7% (95% CI: 13.23–20.86; $p=0.326$). After adjusted for age and sex, only patients with AS were more likely to have hyperlipoproteinemia (a) than the control group (OR: 1.806, 95% CI: 1.177–2.771, $p=0.007$). In the model adjusted for possible confounding factors, high values of apolipoprotein B in all patients, non-steroidal anti-inflammatories in AS, and sex (men) and kidney disease as comorbidity in PsA, were associated with a higher probability of presenting hyperlipoproteinemia (a).

Conclusions: Patients with AS have a higher percentage of hyperlipoproteinemia (a) compared to the control group. No specific factors of the disease have