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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Acknowledgements: UCB contributed funding for part of this research, but had no input in collection, analysis of data or preparation of abstract.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2554

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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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2507

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