REFERENCE:

[1] Ez-Zaitouni, et al. AR&T 2017;19(1):118.

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THU0232

IS A POSITIVE FAMILY HISTORY OF SPONDYLOARTHRITIS RELEVANT FOR DIAGNOSING AXIAL SPONDYLOARTHRITIS ONCE HLA-B27 STATUS IS KNOWN? DATA FROM THE ASAS, DESIR AND SPACE COHORTS

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Background: Knowledge of a positive family history (according to the ASAS definition (ASAS PFH)) for spondyloarthritis (SpA), in particular a PFH of ankylosing spondylitis (AS) or acute anterior uveitis (AAU), is considered valuable in making a diagnosis of axSpA but clusters with HLA-B27 positivity¹. So a relevant clinical question is if a PFH is still important for making a diagnosis of axSpA if HLA-B27 status is known.

Objectives: To investigate in three independent axSpA cohorts if an ASAS PFH, a PFH of AS or a PFH of AAU contributes to a diagnosis of axSpA in patients with known HLA-B27 status.

Methods: Baseline data of patients suspected of axSpA in the ASAS, DESIR and SPACE cohorts were analysed. In each cohort, univariable logistic regression models were performed with HLA-B27 status and ASAS PFH as determinants and a clinical axSpA diagnosis as outcome. The analyses were repeated in multivariable models with both determinants. Relative risks for axSpA diagnosis were calculated stratified on both HLA-B27 status and ASAS PFH (HLA-B27-/ASAS PFH- as reference). Analyses were repeated with a PFH of AS and a PFH of AAU.

Results: In total, 1964 patients suspected of axSpA were analysed (ASAS n=594, DESIR n=647, SPACE n=723). ASAS, DESIR and SPACE patients had a mean (SD) symptom duration of 85.7 (108.4), 18.2 (10.5) and 13.3 (7.0) months; 54%, 47% and 38% were male; 52%, 58% and 44% were HLA-B27+; 44%, 40% and 35% had sacroiliitis on imaging (MRI and/or radiographs); 62%, 45% and 53% received a clinical diagnosis of axSpA; an ASAS PFH was reported in 23%, 39% and 43%, respectively. In the univariable analysis, HLA-B27 status was significantly associated with an axSpA diagnosis in all three cohorts; ASAS: OR 6.7 (95%CI 4.7–9.8), DESIR: OR 2.1 (95%CI 1.5–2.9), SPACE: OR 6.6 (95%CI 4.7–9.2). An ASAS PFH was univariately associated with an axSpA diagnosis in SPACE (OR 1.5 (95%CI 1.01–2.0)), but not in ASAS (OR 1.4 (95%CI 0.9–2.0)) and DESIR (OR 1.0 (95%CI 0.7–1.4)). In the multivariable models, HLA-B27 status was independently associated with a diagnosis of axSpA but such an independent association was not found for ASAS PFH in any cohort (ASAS: HLA-B27 OR 6.9 (95%CI 4.7–10.2), ASAS PFH OR 0.9 (95%CI 0.6–1.4); DESIR: HLA-B27 OR 2.1 (95%CI 1.5–2.9), ASAS PFH OR 1.0 (95%CI 0.7–1.3); SPACE: HLA-B27 OR 6.6 (95%CI 4.7–9.3), ASAS PFH OR 1.0 (95%CI 0.7–1.4)). In all cohorts, the relative risk of an axSpA diagnosis was highest in HLA-B27+/ASAS PFH- patients (Abstract THU0232 – figure 1).. Similar results were found for a PFH of AS and AAU (data not shown).

Abstract THU0232 – Figure 1. Relative risks of axSpA diagnosis in patients suspected of axSpA stratified on HLA-B27 status and a positive family history according to the current ASAS definition (ASAS PFH) per cohort. HLA-B27-/ASAS PFH- is the reference category (RR=1).

Conclusions: A PFH does not contribute to the likelihood of an axSpA diagnosis in back pain patients with a known HLA-B27 status. This suggests that asking for a PFH of SpA in patients presenting with back pain is redundant if HLA-B27 status is known.

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THU0233

SICK LEAVE AND ITS PREDICTORS IN ANKYLOSING SPONDYLITIS: LONG-TERM RESULTS FROM THE OUTCOME IN ANKYLOSING SPONDYLITIS INTERNATIONAL STUDY

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Background: Sick leave (SL) among patients with ankylosing spondylitis (AS) is a relevant outcome for individuals and for society. Disease related factors, contextual factors, but also SL itself may be risk factors for future adverse work outcome. To reveal predictors of SL over time, longitudinal studies are necessary. If SL itself is an independent predictor for further SL, this further underpins initiatives in clinical care to support worker participation.

Objectives: To investigate the occurrence of AS-related SL over 12 years and to explore which factors predict or explain SL.

Methods: Data from employed patients from the Outcome in Ankylosing Spondylitis International Study were used. At each visit, patients indicated the occurrence of SL (yes/no) in the previous inter-assessment period. Cox regressions were used to predict the hazard for a first episode of SL using baseline predictors. Generalised estimating equations (GEE) were used to investigate the association between SL and (time-lagged) predictors. To investigate whether SL predicts future SL, SL in the first year was included as covariate in a separate GEE analysis. Due to collinearity between ASDAS, BASDAI and BASFI, separate multivariable models were computed.

Results: 139 patients (76% males, mean [SD] age 38.7 [10.0] years) were at risk for SL during a mean (SD) period of 7.9 (3.9) years. Among the 88 patients (63%) who ever reported SL, 62 (70%) reported SL at more than 1 assessment. In separate multivariable Cox baseline predictors models, baseline ASDAS (HR 1.67 [95%CI 1.23–2.28]), BASDAI (HR 1.33 [95%CI 1.18–1.51]) and BASFI (HR 1.17 [95%CI 1.02–1.34]) were associated with increased hazard of SL, but only in male patients with a low level of education. In separate multivariable time-varying GEE models, 1 year time-lagged ASDAS (OR 1.48 [95%CI 1.07–2.03]), BASDAI (OR 1.31 [95%CI 1.15–1.49]) and BASFI (OR 1.31 [95%CI 1.16–1.47]) were associated with SL, but only in patients with a low level of education. Further adjustment for job type did not lead to different results, and job type itself was not significantly associated with SL. SL during the first year predicted SL over time (OR: 2.62–8.37 in different models, all p<0.05), independently of educational level, disease activity or physical function.

Conclusions: Disease activity and physical function predict and explain variation in SL, but only in patients with a low level of education. Prior SL results in future SL, and SL should be considered an actionable factor for support to prevent future adverse work outcome. Research into which SL is beneficial with regard to recovery and which SL is a risk for work disability is needed.

Disclosure of Interest: None declared

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THU0234

BMI DOES NOT AFFECT CLINICAL OUTCOME IN PSORIATIC ARTHRITIS PATIENTS TREATED WITH TIGHT CONTROL STRATEGY

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Background: Psoriatic arthritis (PsA) is characterised by several comorbidities; among these obesity and overweight have a major impact on patients' quality of

life and on disease treatment. Obesity increases the risk of developing psoriatic arthritis in the general population compared to normal-weight subjects. Obesity increases the risk of developing arthritis in patients with psoriasis, especially for HLA B27 negative and late onset forms.

Objectives: Aim of the study was to evaluate the incidence of overweight and obesity in a cohort of PsA patients, the differences between disease phenotypes and therapeutic response between patients with normal weight and overweight/obesity.

Methods: In this retrospective observational study 332 PsA patients, afferent to our unit between 2010 and 2017, were assessed. At each visit data on disease characteristics, BMI, ongoing treatment, joint count and clinimetric indexes were collected.

The baseline was defined as the onset of the disease in bio-naïve patients or the start of the last bDMARD therapy for patients previously treated with cs or bDMARDs, while the last follow-up is considered the last visit at our unit

Results: The 332 patients had a mean age of 52.5±7.3 years; 35% of the patients were normal weight, 39.5% were overweight and 25.5% obese. No differences were observed in terms of disease characteristics according to BMI category at baseline and during follow-up, with comparable percentages of peripheral arthritis, enthesitis, dactylitis, axial arthritis or uveitis, as well as cutaneous psoriasis among the groups.

At baseline, obese patients had more tender (4.4±5.2 vs 2.3±3.6 p=0.003) and swollen joints (mean value 2.3 vs 1 p=0.03) and higher activity indexes, as for DAS28 (3.3±1.2 vs 2.7±1.2 p=0.002) and DAPSA (15.6±9.9 vs 11.5±9 p=0.004) compared to normal weight patients. The same difference was observed between normal-weight and overweight patients, with higher values of DAS28 (3.04±1.4 vs 2.7±1.2, p=0.17) and DAPSA (13.6±11 vs 11.5±9, p=0.025) in overweight patients. No significant difference was observed in patients treated with NSAIDs, csDMARDs or bDMARDs according to BMI category.

In 190 patients followed according to the tight control strategy, with evaluations every 3 months, the disease activity indexes after two years of follow-up became similar in obese patients compared to normal weight patients.

Among the normal-weight patients, 69.4% took csDMARDs, 48.7% were treated with bDMARDs. 74.7% of obese patients took csDMARDs, while 36.1% took bDMARDs, with no statistically significant differences between the two groups (p=ns).

In particular low-disease activity according to DAPSA was achieved in 76% of normal weight patients, compared with 68.9% of obese patients (p=ns), and also the percentage of patients reaching Minimal Disease Activity in the two groups was comparable (28.4% vs 22.7%, p=ns).

Conclusions: Clinical manifestations of psoriatic disease do not seem to differ according to BMI category; however, at the first evaluation, obese patients appear to have more disease activity than non-obese patients.

At the same treatment intensity, obese patients seem to achieve a percentage of remission comparable to normal weight patients, suggesting that the an intensive treatment strategy allows to obtain optimal results also in a more challenging group of patients.

Disclosure of Interest: None declared

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THU0235 ANKYLOSING SPONDYLITIS AND RHEUMATOID ARTHRITIS HOSPITALISATION TRENDS IN THE US: DATA FROM NATIONAL INPATIENT SAMPLE

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Background: Ankylosing spondylitis (AS) imposes significant morbidity and disability in the affected population. Hospitalisation trends provide an insight as to

burden of disease and long-term data is lacking. We evaluated AS related hospitalisation trends in the US from 2001–13, comparing it to the more common inflammatory arthritis- rheumatoid arthritis (RA).

Objectives: To evaluate AS related hospitalisation trends in the US in comparison to the more common inflammatory arthritis- RA

Methods: Using the Nationwide Inpatient Sample (NIS) data from 2009–2011, we identified patients ≥18 years with AS and RA at primary diagnosis positions based on ICD-9 codes 720.0 and 714.0, 714.2, 714.30–714.33 respectively. We also excluded patients with psoriatic arthritis and inflammatory bowel disease to improve the specificity of codes used. We used the trend weight (contained in the variable TRENDWT) supplied by HCUP to study the annual trends of hospitalizations in AS and RA (2001–13). We used Stata version 13.0 (College Station, TX) and Joinpoint regression analysis software to calculate yearly trends.

Results: NIS database from 2001–2013 contained 36 883 (weighted count, n=175,356) patients with RA and 1377 (weighted count- 6,554) patients with AS. A decreasing trend in AS and RA hospitalizations was noted with an annual percentage change (APC) of 5.35 and 4.28 respectively (p<0.05) (table 1 and figure 1).

Conclusions: While recent studies have shown a rise in incidence of AS, the hospitalisation rates have declined similar to RA. Our study findings may reflect increased recognition of inflammatory back pain in the primary care setting and prompt referral and diagnosis due to improved imaging techniques of the spine and pelvis. Furthermore, the use of biologics, such as TNF and IL-6 inhibitors have significantly improved outcomes.

Disclosure of Interest: None declared

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THU0236 ANKYLOSING SPONDYLITIS RELATED FACTORS PREDICT THE PRESENCE OF CARDIAC CONDUCTION DISTURBANCES – A SWEDISH LONGITUDINAL COHORT STUDY

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Background: Despite a well-known association between ankylosing spondylitis (AS) and cardiac conduction disturbances (from here CCD), it's not clear which factors that predict their presence.

Year	RA, n	RA, N	SE, N	RA, per 1,000,000	SE, per 1,000,000	AS, n	AS, N	SE, N	AS, per 1,000,000	SE, per 1,000,000
2001	3473	16 883	927	564	29	120	578	66	19	2
2002	3797	17 527	842	579	26	131	593	66	20	2
2003	3206	15 028	648	490	18	115	536	60	18	2
2004	3469	16 328	853	527	26	133	622	66	20	2
2005	3256	15 390	646	497	18	132	642	72	21	2
2006	3073	14 415	631	456	17	106	499	54	16	2
2007	2892	13 779	713	437	20	95	455	49	14	2
2008	2759	13 004	574	406	15	112	527	62	16	2
2009	2419	11 803	517	373	14	97	471	55	15	2
2010	2377	11 380	471	363	14	93	451	56	14	2
2011	2386	10 939	488	348	13	99	460	54	15	2
2012	1986	9930	223	323	7	78	390	44	13	1.4
2013	1790	8950	291	299	9	66	330	42	11	1.4
TOTAL	36 883	1 75 356		5662		1377	6554		212	
APR		(-5.39)*		(-5.35)*			(-4.03)		(-4.28)*	