SAT0355

IRRITABLE BOWEL SYNDROME SYMPTOMS IN AXIAL SPONDYLOARTHRITIS AND HEALTHY CONTROLS, AND THEIR RELATION TO DISEASE CHARACTERISTICS – IS IT AN OVERLOOKED COMORBIDITY?

Johan K. Wallman¹, Elisabeth Mogard¹, Jan Marsal², Kristofer Andréasson¹, Anna Jöud³, Mats Geijer⁴, Lars Erik Kristensen⁵, Elisabet Lindqvist¹, Tor Olofsson¹. ¹Lund University, Department of Clinical Sciences Lund, Rheumatology, Lund, Sweden; ²Lund University, Department of Clinical Sciences Lund, Gastroenterology, Lund, Sweden; ³Lund University, Division of Occupational and Environmental Medicine, Lund, Sweden; ⁴University of Gothenburg, Sahlgrenska Academy, Department of Radiology, Gothenburg, Sweden; ⁵The Parker Institute, Department of Rheumatology, Copenhagen University Hospital, Frederiksberg and Bispebjerg, Copenhagen, Denmark

Background: While inflammatory bowel disease (IBD) is a well-known comorbidity in axial spondyloarthritis (axSpA), little is known about the prevalence, drivers and impact of irritable bowel syndrome (IBS). In the general population, the IBS prevalence has been estimated to ~11%.[1]

Objectives: To compare the frequency of gut symptoms meeting IBS criteria between axSpA patients and controls, and to examine how such symptoms relate to disease characteristics.

Methods: Consecutive axSpA patients were examined and classified as non-radiographic axial SpA (nr-axSpA; ASAS criteria; n=63) or ankylosing spondylitis (AS; modified New York criteria; n=119), excluding cases with known IBD. Proportions reporting gut symptoms meeting the ROME III IBS criteria were compared between axSpA patients and sex and age matched controls (without rheumatic disease or IBD; n=50) by logistic regression.[2] Within the axSpA group, separate logistic regression models were also applied to examine whether the presence of IBS symptoms differed according to disease subtype (nr-axSpA/AS), sex, disease activity, level of systemic and gut inflammation, NSAID and DMARD use, and comorbid fibromyalgia (according to the 1990 fibromyalgia criteria).[3] Finally, we analysed associations between the presence of IBS symptoms and standard patient-reported axSpA outcomes and evaluator's VAS global assessment of disease activity. All analyses were sex and age adjusted.

Results: Symptoms meeting IBS criteria were significantly more common among axSpA patients (30%) than controls (16%; OR 2.5 [95%CI 1.1-5.7]; **Figure 1A**). Within the axSpA group, no difference was observed between nr-axSpA and AS (**Figure 1B**). Furthermore, no associations were observed with markers of systemic or gut inflammation, whereas the presence of IBS symptoms was significantly more frequent among patients with higher disease activity (OR 2.2 [95%CI 1.1-4.5] for ASDAS-CRP ≥ 2.1 vs. <2.1), in females (OR 3.0 [1.5-5.8] vs. men), among NSAID users (OR 2.3 [1.1-4.6] vs. non-users), and in patients fulfilling fibromyalgia criteria (OR 3.0 [1.0-8.6] vs. not); **Figure 1B**). All patient-reported outcomes, but not evaluator's VAS global, were significantly worse in patients reporting IBS symptoms (**Table**).

Statistical comparisons by logistic regression, adjusting for sex and age (or only for age regarding the sex analysis). Missing data ranging from 0-14%. IBS symptoms assessed by the ROME III criteria. IBS, Irritable bowel syndrome; AxSpA, Axial spondyloarthritis; nr-axSpA, Non-radiographic axial spondyloarthritis; AS, Ankylosing spondylitis; F-CRP, Fasting C-reactive protein (mg/L); ASDAS, Ankylosing spondylitis disease activity score; CRP, C-reactive protein (mg/L); NSAID, Non-steroidal anti-inflammatory drug; DMARD, Disease-modifying anti-rheumatic drug.

	No IBS symptoms n=127	IBS symptoms n=55	p-value *
VAS global (mm)	30 (25)	44 (25)	0.010
VAS pain (mm)	30 (26)	43 (26)	0.020
VAS fatigue (mm)	32 (27)	50 (27)	0.001
EQ-5D utility †	0.75 (0.22)	0.61 (0.30)	0.004
BASFI	1.8 (2.2)	2.9 (2.2)	0.016
BASDAI	2.6 (2.1)	4.3 (2.1)	<0.001
Evaluator's VAS global (mm)	16 (14)	19 (14)	0.569

Values are mean (SD). * Adjusted for sex and age by ANCOVA. † UK preference set. Missing data ranging from 3-9%.

Conclusion: In axSpA patients without an IBD diagnosis, gut symptoms meeting IBS criteria were twice as common as in healthy controls. While IBS symptoms do not appear to be driven by subclinical gut inflammation or systemic inflammation, the associations with criteria-assessed fibromyalgia, female sex, and worse levels of patient-reported outcomes indicate a link to central pain sensitization, although side effects of NSAIDs may also play a role.

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SAT0356

DACTYLITIS IN EARLY SPONDYLOARTHRITIS. DATA FROM THE DESIR COHORT

Daniel Wendling¹, Clément Prati¹, Alain Saraux², Anna Moltó³, Thao Pham⁴, Maxime Dougados³, Xavier Guillot⁵. ¹CHRU, Rheumatology, Besançon, France; ²CHU, Rheumatology, Brest, France; ³Hopital Cochin, Rheumatology, Paris, France; ⁴CHU, Rheumatology, Marseille, France; ⁵CHU Réunion, Rheumatology, Saint Denis de la Réunion, France

Background: Dactylitis is a particular feature shared across the several phenotypical forms of spondyloarthritis (SpA), part of the classification criteria. There are only few data available about impact of dactylitis in early stage of SpA, and factors associated with the presence/history of dactylitis.

Objectives: To study, at baseline and after 5 years in the DESIR cohort, the presence/history of dactylitis in an attempt to evaluate frequency of dactylitis in SpA and to look at the factors associated with presence of dactylitis.

Methods: DESIR is a prospective observational cohort of patients with recent onset (less than 3 years) inflammatory back pain, beginning before 50 years, suggestive of axial SpA. All available factors in the database (clinical, biological, imaging and medico economic) were compared between patients with and without past or present dactylitis at baseline (for categorical variables : odds-ratio +/- 95% CI and chi-square/Fisher tests, for continuous variables : unpaired t-tests/Mann-Whitney), by uni and then multivariate analysis(logistic regression). Significance: p less than 0.05.

Results: At baseline, 708 patients were analyzed. 97 had a past history or a concomitant dactylitis [prevalence 13.7% (CI 95% : 11.6 – 16.2)]. Dactylitis occurred before axial symptoms in 41.3% and before any other symptom in 14.1% of the cases. By univariate analysis, dactylitis was significantly associated with history of arthritis, enthesitis, psoriasis, with elevated CRP and ESR, enthesitic and arthritis scores, BASDAI, ASDAS, BASFI, SF-36, HAQ, ASQoL, shorter disease duration, systemic and local steroids use, and with lower structural damage (sacro iliac, spine). Table shows the result of the multivariate analysis at baseline.

item	OR	CI 95%
Arthritis history or presence	2.9	[11.2 – 30.9]
csDMARD use during the past 6 months	5.2	[2.9 – 9.1]
Calcaneal enthesitis history or presence	6.7	[3.0 – 14.7]
BASDAI > median	1.08	[1.05 – 1.11]
BASFI > median	1.04	[1.02 – 1.06]
SF36 phys <median	0.92	[0.87 – 0.97]
Systemic steroids during the past 6 months	5.49	[2.93 – 10.28]
Sacro iliac erosion (MRI central reading)	0.02	[0.004 – 0.13]
mSASSS (central reading)	0.37	[0.21 – 0.66]

After 5 years, 138 cases were recorded in 480 patients with complete follow-up : prevalence 28.75% [CI 95% 24.75-32.75], with estimated incidence of 1.7/100 patient-years. At 5 years, dactylitis was significantly associated (multivariate analysis) with : Achilles enthesitis (OR : 3.3), history of psoriasis (OR: 3.9), cumulative number of ASAS criteria (OR: 7.2), modified New York criteria fulfillment (OR: 0.35), DMARD use (OR: 2.7) and elevated CRP (OR:0.9).

Conclusion: In the DESIR cohort of patients suspected for early SpA, history of dactylitis is present in 13.7% of the cases at baseline and an estimated incidence of 1.7/100 p-y over 5 years. It is an early feature associated with peripheral involvement, and associated with more burden of the disease, more frequent use of DMARDs and steroids, but with less structural damage.

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SAT0357 PREVALENCE OF RADIOGRAPHIC ENTHESEAL LESIONS AT THE HIP AND PELVIC REGION IN PATIENTS WITH ANKYLOSING SPONDYLITIS

Freke Wink^{1,2}, Thomas Diemel², Suzanne Arends^{1,2}, Anneke Spoorenberg^{1,2}.

¹Medical Center Leeuwarden, Rheumatology, Leeuwarden, Netherlands;

²University Medical Center Groningen, Rheumatology and Clinical Immunology, Groningen, Netherlands

Background: Enthesitis is one of the features of ankylosing spondylitis (AS). High prevalence of structural and inflammatory ultrasound lesions of peripheral entheses are found in AS patients. Furthermore, plain radiographs provide good imaging of peripheral enthesopathy at well-defined skeletal sites¹. There are several enthesal sites at the pelvis and hip region, but little is known about the presence of structural enthesal anomalies at these sites in AS.

Objectives: Our aim was to investigate the prevalence of radiographic enthesal lesions at the hip and pelvic region in patients with AS.

Methods: The present analysis was performed in 214 patients from the Groningen Leeuwarden Axial SpA (GLAS) cohort study, who were included between November 2004 and December 2010 and had available anteroposterior (AP) pelvis radiographs at baseline. All patients fulfilled the modified New York criteria for AS. Radiographs were scored by two trained readers blinded for patient characteristics and treatment. Anomalies with absolute agreement were reported. The enthesal sites scored were: trochanter major, trochanter minor, os ischium, crista iliaca, both left and right side and symphysis pubis. The following 3 anomalies were scored: cortical irregularities/erosions, calcifications and enthesophytes.

Results: Of the 214 patients, 148 (69%) were male, mean age was 42.5 ± 11.6, 171 (80%) were HLA-B27 positive and median symptom duration was 16 years (IQR 8-24). Reader agreement on the enthesal lesions was moderate to excellent with Cohen's kappa's between 0.474 and 0.882. 122 patients (51%) showed enthesopathy with 309 lesions in total. The most prevalent lesions were irregularities/erosions (n=220; 71%), followed by enthesophytes (n=71; 23%) and calcifications (n=16; 5%). Most

lesions were found at the os ischii (n=168; 54%), followed by the tuberculum majus (n=42; 14%), crista iliaca (n=40; 13%), tuberculum minus (n=30; 10%) and symphysis pubis (n=29; 9%).

Conclusion: In this cohort of established AS patients, a high prevalence of radiographic enthesal lesions at the hip and pelvic region was found. Irregularities and erosions were most frequently found, especially at os ischium. These new findings concerning structural enthesal lesions at the pelvis and hip region contributes to the knowledge of enthesal involvement in AS.

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SAT0358 EROSION MIGHT INCREASE PROBABILITY OF POSITIVE AXIAL SPONDYLOARTHRITIS (SPA) DIAGNOSIS IN PATIENTS WITH EARLY INFLAMMATORY BACK PAIN(IBP). A PROSPECTIVE 3.5 YEAR FOLLOW UP OF 133 PATIENTS

Liliya Yankova Komsalova¹, Pilar Martinez², Jose Fermin Gomez², Antonio Valdivia². ¹Hospital Marina Salud, Denia, Rheumatology, Denia, Spain; ²Hospital Marina Salud, Denia, Radiology, Denia, Spain

Objectives: To analyse sensitivity, specificity and predictive values of inflammatory back pain (IBP), positive HLA B27 antigen, increased C-reactive protein (CRP), clinical features (CF) such as peripheral arthritis, dactylitis, psoriasis, uveitis, inflammatory bowel disease and enthesitis, familial history (FH) of SPA and assess probabilities to develop SPA. To evaluate the impact of chronic (T1) MRI lesions in early diagnosis of SPA

Methods: We prospectively collected and followed up 133 patients referred to our department with suspicion of SPA from September 2014 to March 2018. Data such as IBP, HLA B27 antigen, increased CRP, CF, FH and sacroiliac X-rays were collected for each patient. STIR and T1 MRI imaging were separately and independently evaluated by a rheumatologist and two radiologists. In case of disagreement, agreement between two readers was regarded as conclusive. MRI STIR sacroiliac joints (SI) images were assessed in a semi-qualitative way as follows: 1) strongly positive MRI imaging (SPMRI): patients with at least 2 highly specific bone marrow oedema (BME) lesions, easily classifiable as SPA. 2) Weakly positive MRI imaging (WPMRI): patients with at least 2 tiny BME lesions, suggestive, but not easily classifiable as SPA. 3) Clearly negative MRI imaging: patients without any of those features. T1 SI MRI images were assessed for erosion, fat metaplasia, backfill and sclerosis in a qualitative way as positive, if there were 1 or more than one, or negative, if there were none of those lesions.

Results: The average age in our study was 38.9 years. 47(35.3%) patients received diagnosis axial SPA. Radiographic sacroiliitis had 8 (17%). Sensitivity (St), specificity (Sf) and predictive positive values (PPV) were found as follows for each item (p<0.001): IBP: 83% St, 81.4% Sf, 71%PPV, positive HLA B27: 49% St, 80% Sf, 57.5% PPV, increased CRP: 40.4% St, 93% Sf, 76% PPV, and CF: 36.2% St, 91% Sf, 68%PPV. Multivariate logistic regression binary analysis applied to the group of patients with non-radiographic SPA showed Odds Ratios for positive diagnosis, 64.8 for IBP (p=0.000), 9.4 for increased CRP (p=0.005) and 11.9 for CF (p=0.006). For the total group of patients the Odds Ratios were as follows: 49.2 for IBP