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Clinical aspects of spondyloarthritis

POS0236

COMPARISON OF WORK PRODUCTIVITY OUTCOMES BETWEEN CHRONIC BACK PAIN PATIENTS WITH AND WITHOUT A DIAGNOSIS OF AXIAL SPONDYLOARTHRITIS AFTER 2-YEAR PROTOCOLISED FOLLOW-UP: DATA FROM THE SPONDYLOARTHRITIS CAUGHT EARLY COHORT

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Background:

Objectives: To compare work-productivity and activity impairment outcomes between chronic back pain (CBP) patients with and without an axSpA diagnosis after two years of protocolised follow-up.

Methods: Work productivity was assessed using the Work Productivity and Activity Impairment (WPAI) general health version 1.0 questionnaire. Presenteeism was defined as a reduction in performance due to disease while at work; absenteeism was time missed from work due to disease; work productivity loss (WPL) was a combined measure of presenteeism and absenteeism; and activity impairment was impairment due to disease in all non-work related activities. All WPAI outcomes were presented as percentages; higher scores implying greater impairment. Additionally, the proportion of patients with any (>0%) absenteeism, presenteeism, WPL and activity impairment were given.

This study used data from the SPACE cohort, which consists of patients with CBP (≥ 3 months <2 years) suspected of axSpA. Analyses were restricted to patients with a diagnosis axSpA or no axSpA (CBP group) with a level of confidence ≥ 7 (on a 0-10 scale) after locally read imaging. Additionally, data had to be available on the WPAI questionnaire at both timepoints. Assessment of presenteeism, absenteeism and WPL was restricted to the working population, defined as having paid work at baseline and 2-year follow-up. Activity impairment was assessed for the entire study population.

Regression models were used to test the difference between groups at two-year follow-up for all WPAI variables. Baseline WPAI values and NSAID-use over time were tested as confounders.

Results: Patients with a diagnosis of axSpA were more frequently male (56% vs 30%) and HLA-B27 positive (73% vs 31%) and had more SpA features at baseline compared to the patients with CBP [mean (SD) 5(2) vs 3(1)]. Age, symptom duration, NSAID-use and the percentage of patients with paid work at baseline were similar between groups.

The population having paid work at baseline and 2 years consisted of 124 patients (69%) in the axSpA group and 52 patients (70%) in the CBP group. In both groups the proportion of patients with any as well as the mean WPL reduces. This reduction was apparent in both presenteeism and absenteeism. Nevertheless, presenteeism, WPL and activity impairment were significantly higher at two-year follow-up in the group with CBP (Table 1). In these regression models with baseline values and NSAID-use over time as covariates, axSpA was an independent predictor of lower presenteeism, WPL and activity impairment at two-year follow-up.

Table 1. Work-productivity outcomes at baseline and two-year follow-up for the group with a diagnosis of axSpA and the group without a diagnosis.

	Diagnosis axSpA	CBP	p-values
	Baseline 2 years	Baseline 2 years	between groups at 2yrs
Working population	N=124	N=52	
Presenteeism, mean (SD) %	31 (28)	40 (29)	p=0.003*
Presenteeism present, %	73	87	
Absenteeism, mean (SD) %	7 (18)	12 (25)	p=0.334
Absenteeism present, %	22	27	
Overall work impairment, mean (SD) %	33 (29)	43 (30)	p=0.005*
Overall work impairment present, %	72	87	
Total population	N=181	N=74	
Activity impairment, mean (SD) %	38 (28)	50 (29)	p=0.001*
Activity impairment, n(%)	86	93	

* Significant difference between groups at two years; after correction for baseline values and NSAID use over time† Significant improvement within group over time

Conclusion: Despite significant improvements in both groups, patients with axSpA have significantly better work-related outcomes after two years of protocolised follow-up compared to those without axSpA.

Disclosure of Interests: None declared

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POS0237

GUT DYSBIOSIS LINKED TO WORSE DISEASE STATUS IN AXIAL SPONDYLOARTHRITIS

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Background: Based on clinical and genetic associations, axial spondyloarthritis (axSpA) and inflammatory bowel disease (IBD) are suspected to have a linked pathogenesis. Gut dysbiosis, intrinsic to IBD, has also been observed in axSpA. It is, however, not established to what degree gut dysbiosis is associated with axSpA disease severity.

Objectives: To compare presence and degree of gut dysbiosis between axSpA patients and controls, and to explore whether gut dysbiosis is associated with axSpA disease activity, function and pain.

Methods: The GA-map Dysbiosis Test (Genetic Analysis, Oslo, Norway) was used to identify and grade gut dysbiosis based on faecal samples from 44 non-radiographic axSpA (nr-axSpA; ASAS criteria) and 88 ankylosing spondylitis (AS; modified New York criteria) patients without IBD, consecutively enrolled in a population-based cohort study, and from 46 controls without rheumatic disease or IBD (frequency-matched to the patients for age/sex). The GA-map Dysbiosis Test is a validated method grading microbiota aberration on a 1-5 scale (Dysbiosis Index, DI), where ≥ 3 denotes dysbiosis. Analysis of covariance (ANCOVA) was used to compare DI between axSpA patients (nr-axSpA and AS combined) and controls, adjusted for age, sex, body mass index (BMI) and smoking. Within the axSpA group, disease activity (ASDAS-CRP; BASDAI), function (BASFI) and pain (VAS pain) were compared between patients with various DI levels by One-way analysis of variance (ANOVA) or Kruskal-Wallis test, as appropriate. Finally, axSpA patients were subdivided by presence of dysbiosis (DI ≥ 3 vs. <3) followed by comparison of ASDAS-CRP, BASDAI, BASFI, VAS pain and Evaluator's global assessment of disease activity (EvalGlobal; 0-4: remission-maximal) by ANCOVA. Analyses were conducted unadjusted and adjusted for age, sex, BMI, smoking, axSpA subtype, gut inflammation (faecal calprotectin ≥ 50 mg/kg), irritable bowel syndrome symptoms (ROME III criteria), ASAS 3-month NSAID score and cs/bDMARD treatment.

Results: Characteristics of the patients/controls are shown in the Table 1. Gut dysbiosis (DI ≥ 3) was observed in 33% of axSpA patients and 17% of controls. DI was significantly higher among the patients (β -estimate [bootstrapped 95%CI] for the between-group difference: 0.34 [0.04-0.65]; p=0.027). In the axSpA group, higher DI was associated with worse scores in all assessed outcomes (Figure 1, panel A). Moreover, presence of dysbiosis (DI ≥ 3) was associated with worse ASDAS-CRP, BASDAI, BASFI, VAS pain and EvalGlobal (Figure 1, panel B; EvalGlobal not shown in the Figure: unadjusted β [bootstrapped 95%CI]: 0.32 [0.09-0.55], adjusted: 0.28 [0.03-0.52] for patients with DI ≥ 3 vs. <3), with between-group differences remaining significant after adjustment, except for ASDAS-CRP (p=0.079) and VAS pain (p=0.064).

Conclusion: Gut dysbiosis, present to a higher degree in axSpA patients than controls, is associated with worse axSpA disease activity and function. These