can be tried in patients with AS. The obstetric and perinatal outcomes in women with AS were also comparable to normal pregnant women.

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SAT0399 HEADACHE AS A CLINICAL COMPLAINT AT INITIAL PRESENTATION AND DURING THE DISEASE COURSE IN PATIENTS WITH SPONDYLOARTHRITIS INDICATES CONCOMITANT / SECONDARY FIBROMYALGIA

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Objectives: To evaluate the symptom of headache as being able to clinically distinguish associated secondary fibromyalgia in patients with spondyloarthropathies (SpA). To compare the incidence of MSK complaints (related to SpA) in patients with headache to those that did not. To assess headache during the SpA disease course

Methods: Registry data from 776 patients seen in clinic with SpA were analysed with reference to headache as symptom at presentation. The data of those patients presented with headache were compared with data of those patients who did not report headache with regards to demographics and disease characteristics. In addition, other MSK complaints, fatigue and pain during disease course were also analysed

Results: From a total of 776 patients (m: f=265:508) age 48.3 ( SD +14.1), 13 were excluded as no answer was recorded. 117/ 763 patients (15.08%) representing 28 males and 89 females (23.9% vs 76.1% ratio 1:3.1) reported headache at disease onset.

During the disease course, 13 patients out of the initial 117 did not record an answer to the question and were excluded. From remaining 104 patients, 95 patients (91.3%) continued to describe headache as a symptom.

From those not reporting headache as initial symptom, (n=659) 148 did not record an answer and were excluded. From the remaining 511 patients, 194 (37.9%) reported headache during the disease course.

On the data obtained from these 2 sub-groups, comparison took place using paired sample t-test.

Table shows demographics and disease characteristics as well as differences between the 2 SpA sub-groups. Those presenting with headache describe worse disease, more fatigue and a greater percentage describe pain at pressure points and MSK system.

	Headache at presentation (n=117)	No headache at presentation (n=656)	Statistical significance (p)	CI
Age (mean ± SD)	47.7 (13.16)	48.3 (14.3)	0.1	-5.757 to 0.912
Gender (M:F) ratio	28:89 (1:3.1)	219:419 (1:1.9)	0.3	-0.025 to 0.077
Disease duration (y)				
(mean ± SD)	11.4 (12.1)	10.9 (10.8)	0.4	-1.905 to 4.470
Delay in diagnosis (y)				
(mean ± SD)	6.43 (8.9)	6.3 (8.1)	0.7	-3.151 to 2.151
ESR (mean ± SD) mmHg	15.5 (14.8)	18.2 (18)	0.07	-11.064 to 0.582
CRP (mean ± SD) mg/dL	10.4 (36)	8.2 (9.8)	0.4	-6.106 to 12.536
BASDAI score (mean ± SD)	7.31 (3.7)	6.06 (2.08)	< 0.005	0.783 to 2.624
BASFI score (mean ± SD)	5.6 (2.7)	5.04 (2.7)	0.09	-0.143 to 1.626
Buttock pain (%)	31.6	12.8	0.001	0.083 to 0.293
Back pain (%)	82.9	58.8	< 0.005	0.125 to 0.337
Neck pain (%)	72.6	24.4	< 0.005	0.340 to 0.583
Knee pain (%)	63.2	30.6	< 0.005	0.284 to 0.520
Shoulder (%)	70.9	23	< 0.005	0.312 to 0.559
Foot (%)	57.2	22	< 0.005	0.279 to 0.524
Hip (%)	55.5	19.9	< 0.005	0.217 to 0.467
Eye (%)	23	4.3	< 0.005	0.102 to 0.274
Fatigue	77/116 (66.4%)	340/608 (55.9%)	0.018	0.029 to 0.299
Pain with pressure	71/117 (61.2%)	257/807 (42.4%)	0.000	0.122 to 0.378
Headache as co-morbidity	95 (109) 87.2%	195/509 (38.3%)	0.000	0.808 to 0.935

Conclusions: Headache can clinically represent secondary FM among SpA patients. A proportion of patients (representing 15%) report headache at presentation. The majority of those patients (>90%) continue to describe headache during the disease course. From those patients who did not have headache at presentation, 38% report headache during the disease course. Patients describing headache at presentation have more MSK complaints at presentation. Disclosure of Interest: None declared

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## SAT0400 IS WHIPLASH INJURY A TRIGGERING OR EXACERBATING FACTOR FOR AXIAL SPONDYLOARTHRITIS?

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Background: Axial spondyloarthritis (AxSpA) can be triggered by infection and environmental factors, and some cases involve trauma. Whiplash injury in a traffic accident may lead to exacerbation of symptoms of AxSpA.

Objectives: The aims of this study are to survey the prevalence of trauma before or after onset of AxSpA and to examine the prevalences of neck trauma and other trauma in patients with a history of AxSpA.

Methods: The patients completed a questionnaire, and clinical presentation, inflammatory markers (ESR, CRP), radiographs, MRI of sacroiliac joints, Bath ankylosing spondylitis disease activity index (BASDAI), Bath ankylosing spondylitis functional index (BASFI), and Bath ankylosing spondylitis metrology index (BASMI) were assessed. Onset of symptoms was evaluated using European criteria for spondyloarthritis and patients were asked about mechanical stress (spinal trauma, extremity trauma, and internal organ injury). Patients with rheumatoid arthritis (RA) were included as controls and underwent the same evaluation. Patients with neck trauma were divided into four groups based on a short (<3 years) (group A) or long (≥3 years) (group B) period between disappearance of trauma symptoms and onset of inflammatory back pain (IBP); continuous IBP after trauma (group C); and a gradual change from minor symptoms to severe IBP after trauma (group D). Results: The subjects were 124 patients with AxSpA and 102 with RA. Trauma occurred at a significantly higher rate in patients with AxSpA than in those with RA (66 (53.2%) vs. 12 (11.8%), p<0.0001). Neck trauma was also significantly more frequent in patients with AxSpA (63 (53.2%) vs. 9 (8.8%), P<0.0001) (Table 1). There were no significant differences in clinical background between patients with AxSpA with and without trauma (Table 2). Regarding the period from neck trauma to onset of IBP in patients with AxSpA, there were 4 (6.3%), 22 (34.9%), 14 (22.2%), and 23 (36.5%) cases in groups A, B, C and D, respectively.

Table 1. Prevalence of items related to mechanical stress in patients with axial spondyloarthritis (AxSnA) and rheumatoid arthritis (RA)

Item	AxSpA	RA	P value
	n (%) (95%CI)	n (%) (95%CI)	
Cases (male/female)	124 (46/78)	102 (15/87)	
Mean age (yrs)	51.8±12.9* (49.5-54.1)	66.0±11.7* (63.7-68.2)	<0.0001
Mean duration of illness (yrs)	25.8±14.4*(23.3-28.3)	23.4±10.5* (21.3-25.6)	0.1294
Trauma to date	66 (53.2%) (44.4-62.0)	12 (11.8%) (5.5-18.0)	<0.0001
Neck trauma to date	63 (50.8%) (41.2-58.8)	9 (8.8%) (3.3-14.3)	<0.0001
Neck trauma before onset	25 ** (20.2%) (13.1-27.2)	9 (8.8%) (3.3-14.3)	0.1046
Lumbar trauma	2 (1.6%) (-0.6-3.8)	1(1%) (-0.1-3.0)	0.9244
Operation before onset	33 (26.6%) (18.8-34.4)	16 (15.7%) (8.6-22.7)	0.1048
Fracture before onset	9 (7.3%) ( 2.7-11.8)	7(6.9%) ( 2.0-11.8)	0.9001

n: Number of patients. Cl. confidence interval. \* standard deviation. \*\* groups A and B

Table 2. Clinical features in patients with AxSpA and without trauma

	AxSpA with trauma average ± SD (95% CI)	AxSpA without trauma average ± SD (95% CI)	Statistical significance
ESR (mmHg/h)	10.48±9.39 (8.21-12.75)	12.84±15.32 (8.90-12.78)	ns
CRP (mg/dl)	0.23±0.42 (0.13-0.33)	0.35±0.78 (0.15-0.55)	ns
BASDAI	2.66±1.24 (2.36-2.96)	2.40±1.23 (2.08-2.72)	ns
BASFI	2.95±2.46 (2.36-3.54)	2.36±2.70 (1.67-3.05)	ns
BASMI	2.62±1.58 (2.24-3.00)	2.48±1.69 (2.05-2.91)	ns

SD: standard deviation, CI: confidence interval, ns: not significant (P>0.05)

Conclusions: The remarkable finding in this study is that half of patients with AxSpA had a history of whiplash injury. These results suggest that trauma may influence the course of AxSpA through the immunological system or hypothalamic-pituitary-adrenal axis.

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## SAT0401 PREVALENCE OF ULTRASONOGRAPHIC LOWER AND UPPER ENTHESITIS IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE

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Background: Spondyloarthritis (SpA) occurs in up to 20% of patients with inflammatory bowel disease (IBD) [1]. Symptomatic enthesitis is a characteristic feature of SpA and represents an early sign of SpA [2]. The prevalence of enthesitis in patients with IBD is not known.

Objectives: This study was designed to evaluate whether patients with IBD showed an increased prevalence of entheseal involvement, even in the absence of clinical symptoms.

Methods: Thirty-five IBD patients (25 M and 10 F, median age 41 yrs), 25 with Crohn's disease (CD) and 10 with ulcerative colitis (UC), all with moderate intestinal activity, and 22 (13 M and 12 F, median age 44 yrs) control subjects with irritable bowel syndrome underwent a thorough clinical evaluation followed by entheses ultrasonography of upper limb (brachial triceps) and lower limb (quadriceps, proximal and distal rotuleus, Achilles tendon and plantar fascia). The Madrid sonographic entheses index (MASEI) was used to score entheses abnormalities [thickness, enthesophytosis, bursitis, erosions with and without power doppler (PD)]. Correlation between IBD features (type, duration and