Fibromyalgia. According to the literature, prevalence FM in AS patients can reach from 12.6 to 28.5%, but prevalence estimates should be interpreted with care as no data that the criteria for FM have been validated for use in patients with AS and other chronic inflammatory arthritis [1, 2]. The lack of appropriate information needs further investigation for better identification FM.

Objectives: The aim of our study was to compare the presence of FM by 1990 ACR classification criteria, modified 2010 ACR diagnostic criteria, 2016 Fibromyalgia Diagnostic Criteria and new criteria FM 2019 - AAPT Diagnostic Criteria for Fibromyalgia in AS patients.

Methods: One hundred and thirteen AS patients (19 women and 94 men) with mean age (M $\pm$ SD) 42.3 $\pm$ 10.94 years were enrolled in the study. Diagnosis AS was established according to modified New York criteria. For FM detection were used 1990 ACR classification criteria, modified 2010 ACR diagnostic criteria, 2016 Fibromyalgia Diagnostic Criteria and AAPT Diagnostic Criteria for Fibromyalgia. All patients were asked to complete self-reported disease-related questionnaires for patients with AS.

Results: According 1990 ACR criteria, FM met in 26 patients (23%). 38.1% patients were positively screened for FM due to modified 2010 ACR diagnostic criteria, and in 31.9% patients according 2016 Fibromyalgia Diagnostic Criteria, and in 41.6% patients due to AAPT Diagnostic Criteria for Fibromyalgia. All new criteria correlated with 1990 ACR classification criteria with $p < 0.01$: $r = 0.654$, $r = 0.664$, $r = 0.520$, concordantly. Using the ROC analysis, we evaluated the sensitivity and specificity of different FM criteria in patients with AS. Our results showed high diagnostic value of all new criteria, but the most sensitive for detection FM in patients with AS were the modified 2010 ACR diagnostic criteria with sensitivity of 96% and specificity of 79%.

Conclusion: Our study results confirmed very high prevalence FM in patients with AS. The most sensitive tool for detection FM in patients with AS were the modified 2010 ACR diagnostic criteria with sensitivity of 96% and specificity of 79%. The similar percentages of FM due to different classification criteria might be a good sign in context of the validity of these criteria for AS patient.

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THURSDAY, 04 JUNE 2020

Back pain, mechanical musculoskeletal problems, local soft tissue disorders

THU0481

THE PREVALENCE OF CHRONIC MUSCULOSKELETAL PAIN IN PATIENTS WITH ULCERATIVE COLITIS IN COMPARISON TO CONTROLS FROM THE GENERAL POPULATION: A CROSS-SECTIONAL STUDY

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Background: Musculoskeletal symptoms are common in patients with ulcerative colitis (UC) but the knowledge of the prevalence of chronic regional pain (ChRP) and chronic widespread pain (ChWP) in patients with UC is scarce.

Objectives: To compare the prevalence of ChRP, ChWP and chronic pain in different body locations in patients with UC with controls from the general population and to investigate if disease activity in UC is related to chronic pain.

Methods: From a national inflammatory bowel disease (IBD) Register (SWI-BREG), all living patients with a confirmed UC diagnosis, aged 20-74 years ($n=1134$), who were residents in two counties in Northern Sweden were posted a validated questionnaire. Persons from the general population from a previous study (1) using the same questionnaires was used as controls ($n=3867$). The questionnaire comprises demography, history of pain and body localisation of pain. The disease activity of UC was measured by Patient- Simple Clinical Colitis Activity Index (P-SSCAI). ChRP and ChWP was defined as having pain for at least three months the last year. ChWP was defined as having pain on both left and right side of the body and both above and below the waist, and in the axial part of the body.

Results: The response rate for the patients with UC was 49.0% and for the controls 62.7%. The patients were older than the controls (mean age 52.8 vs 46.5 years; $p < 0.001$) but there was no difference in gender (men 50.5% vs 46.7%; $p = 0.086$). The reported prevalence of any chronic pain, ChRP and ChWP was higher in patients with UC versus controls (54.4% vs 39.5%; $p < 0.001$; 32.5% vs 24.2%; $p < 0.001$ and 19.4% vs 12.5%; $p < 0.001$). The differences for reported chronic pain (any pain) was seen in all age groups. The patients with UC reported significantly more pain in the regions "lower back", "hip/upper leg" and "lower leg/foot" compared to controls (Table). The patients with P-SSCAI > 5 ($n=121$) reported more ChWP than patients with P-SSCAI < 5 ($n=426$) (46.3% vs 12.7%; $p < 0.001$) and controls (46.3% vs 12.5%; $p < 0.001$) with significant differences compared to controls in all body regions. No significant difference in ChWP was found between patients with P-SSCAI < 5 and controls (12.7% vs 12.5%; $p = 0.917$). There was a slightly higher prevalence of reported any chronic pain between patients with P-SSCAI < 5 and controls (46.5% vs 39.5%; $p = 0.007$).

Table. The prevalence of reported chronic musculoskeletal pain in different body regions in patients with ulcerative colitis and controls.

Body region	Ulcerative colitis (n = 556)	Controls (n = 2425)	P-value
Anterior chest	32 (5.8 %)	115 (4.7 %)	0.2
Neck	119 (21.4 %)	460 (19.0 %)	0.3
Dorsal chest	63 (11.3 %)	236 (9.7 %)	0.3
Lower back	168 (30.2 %)	557 (23.0 %)	0.0008
Shoulder/upper arm	126 (22.7 %)	482 (20.0 %)	0.2
Elbow/lower arm/hand	103 (18.5 %)	405 (16.7 %)	0.4
Hip/upper leg	113 (20.3 %)	319 (13.1 %)	<0.0001
Knee	95 (17.1 %)	335 (13.8 %)	0.07
Lower leg/foot	97 (17.4 %)	300 (12.4 %)	0.003

Conclusion: Patients with UC reported more chronic pain than controls from the general population, especially from the lower back and hip region. Higher UC disease activity was associated with more pain in all body regions.

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THURSDAY, 04 JUNE 2020

Pain in rheumatic diseases, including fibromyalgia

THU0482

PAIN CATASTROPHIZING AND DISEASE PERCEPTION DIFFERS BETWEEN NORWEGIAN AND FINNISH OUTPATIENT CLINIC PSORIATIC ARTHRITIS PATIENTS DESPITE COMPARABLE OUTCOMES ON OBJECTIVE MEASURES OF DISEASE

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Background: Pain catastrophizing (the tendency to describe a pain experience in more exaggerated terms than the average person, to ruminate on it more, or to feel more helpless about it), has been associated with reduced likelihood of achieving remission in rheumatoid arthritis patients (1). Cultural and societal differences between countries may have an impact on outcome such as patients' perceptions of disease.

Objectives: To compare patient pain catastrophizing, patient perception of disease, objective measures of disease and treatment in psoriatic arthritis (PsA) patients between a Norwegian and a Finnish outpatient clinic. Further, to explore for associations with pain catastrophizing.

Methods: All PsA patients followed at the outpatient clinics are routinely monitored using a structured medical support system (GoTreatIT® Rheuma). Data collection, done in 2018-19 is listed in the table. Patients reported their pain catastrophizing answering the two questions, "When I feel pain it is terrible and I feel it is never going to get any better. When I feel pain, I can't stand it anymore." Each question is scored 0-6 and mean value of both is calculated. Pain catastrophizing was defined if mean score ≥ 4 .

Categorical variables were presented as numbers (%) and continuous variables as mean (SD) and associates explored using univariate and multivariate analysis. **Results:** A total of 302 Finnish and 363 Norwegian PsA patients were examined. Pain catastrophizing was reported significantly less commonly among the Finnish as compared to the Norwegian PsA clinic patients, both expressed as mean (SD) values (1.48 (1.42) vs 2.05 (1.42), $p < 0.001$) and proportions of patients having a score ≥ 4 (7.6% ($n=23$) vs 12.5% ($n=45$), $p=0.043$, respectively). As shown in the table the Finnish patients had significantly more years of education, shorter disease duration and less pain and fatigue than the Norwegian patients. For the other features, no significant differences between the two cohorts were found.

	Finland (n=302)	Norway (n=363)	P
Age, years	54.0 (13.3)	54.7 (12.5)	0.49
Females	153 (50.7%)	181 (49.9%)	0.84
BMI, Kg/m ²	28.8 (5.6)	28.1 (5.1)	0.06
Current smoking	44 (14.6%)	51 (14.1%)	0.86
Education, years	13.6 (3.5)	12.7 (3.8)	0.001
Disease duration, years	4.7 (4.3)	9.9 (8.9)	<0.001
CRP, mg/L	4.3 (6.8)	4.0 (8.8)	0.69
MDglobal assessment, VAS 0-100 mm	6.84 (1.29)	5.71 (8.50)	0.19
28 swollen joint count	0.48 (1.35)	0.31 (1.16)	0.14
28 tender joint count	1.01 (2.83)	1.37 (2.80)	0.14
DAPSA	9.66 (8.95)	11.33 (9.60)	0.06
Pain, VAS 0-100 mm	30.73 (25.92)	35.55 (25.76)	0.023
Fatigue, VAS 0-100 mm	29.96 (29.24)	42.56 (31.94)	<0.001
MHAQ, 0-3	0.39 (0.44)	0.43 (0.41)	0.24
Body surface area for psoriasis	2.45 (8.15)	2.66 (6.15)	0.17
Current b-tsDMARDs	121 (40.1%)	139 (38.3%)	0.64

In univariate analyses female gender, higher BMI, less years of education, Dr. global, tender joint count, DAPSA, pain, fatigue, MHAQ and psoriasis body surface area were found to be associated with more pain catastrophizing.

In multivariate analysis (mandatory adjusting for age, gender, BMI, years of education and disease duration) fewer years of education, higher scores for pain, fatigue and MHAQ and being patient at the Norwegian center were independently associated with more pain catastrophizing.

Conclusion: Our data indicate that cultural differences across countries may have a significant impact on outcomes that reflecting patients' perceptions of disease. This may have an implication when merging heterogeneous databases across countries.

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Back pain, mechanical musculoskeletal problems, local soft tissue disorders

THU0483 ASSOCIATION OF CENTRAL SENSITIZATION AND ATTENTION DEFICIT IN MEDICAL STUDENTS WITH CHRONIC BACK PAIN

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Background: Back pain is one of the most common health complaints among university students. A subset of people suffering from chronic back pain exhibit features of increased pain sensitivity and altered pain processing, suggesting central sensitization (CS) to pain¹. The mechanisms behind these processes are, to date, not fully understood². Evidence shows that in chronic pain, cognitive factors could contribute to the occurrence of central pain sensitization^{3,4}.

Objectives: To assess the association between CS and features of adult Attention Deficit Hyperactivity Disorder (ADHD) in medical students suffering from chronic back pain.

Methods: Data was collected from medical students during the academic year 2018-2019 at Suez Canal University using an online survey. The survey included a section on self-reported musculoskeletal pain including back pain lasting more

than 3 months in the neck, upper back and lower back, part (A) of the central sensitization inventory (CSI) and the Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (ASRS-v 1.1). Associations between CSI and ASRS-v 1.1 in students with back pain was assessed using Spearman's correlation. Linear regression was used to estimate cross-sectional associations adjusted for age and gender.

Results: Two hundred and thirty students completed the survey, 93 (40.4%) had back pain for more than 3 months. Students with back pain had significantly higher CS and attention deficit according to CSI ($P < 0.01$), and the ASRS-v 1.1 scores ($P = 0.09$). Correlation results showed a strong positive association between CS and ADHD in students with back pain (correlation coefficient = 0.41, $P < 0.001$). This association remained significant after adjusting for age and gender ($P < 0.001$).

Conclusion: Results of this study suggest that in students suffering from chronic back pain, features of attention deficit are associated with elevated CS. The direction of the association requires further study and may provide novel insights into the interaction between CS and cognitive factors.

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Pain in rheumatic diseases, including fibromyalgia

THU0484 FIBROMYALGIA AND MULTIPLE SWITCHING OF BIOLOGICS IN SPONDYLOARTHRITIS

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Background: Fibromyalgia (FM) is a condition characterized by chronic widespread pain, tender points, fatigue and disturbed sleep rhythm. Some of these symptoms such as fatigue, tender points and diffuse pain seen in patients with spondylarthritis (SpA). Moreover, FM and SpA can coexist creating a diagnostic challenge, particularly in early disease course and influence clinical disease activity assessment.

Objectives: With this cross-sectional study, we aim to estimate the prevalence of FM in SpA and to elaborate its effect on biological treatments.

Methods: FM was identified according to the ACR 2010 diagnostic criteria. SpA patients identified according to rheumatologist using various SpA subsets criteria. A review of the electronic medical files for SpA patients attending the rheumatology outpatient clinic and infusion unit at a major tertiary hospital during the period from June to December 2018 were included. Patients' demographics, socioeconomics, disease characteristics, activity, HLA status and abnormal MRI sacroiliac were explored. Regarding SpA medications, number, frequency and dose of DMARDs and biological agents were obtained.

Continuous variables were reported by their mean and standard deviation (SD) and qualitative variables by frequency and percentage. Statistical significance was set at $p < 0.05$. Statistical analysis was performed using SPSS version 23.

Results: Of the 305 enrolled SpA patients, 43 (14.1%) had FM. Females represents 57.4% of the patients, mean age was 44.07 ± 11.85 years. Arab ethnicity represents most of our cohort 84.9%, the majority were Emirati 64.6%. Smokers were 8.2% and ex-smokers were 3.3%. Axial SpA represents 38.4% while peripheral SpA 61.6% of our cohort according to ASAS classification.

HLA B27 tested in a sample of 180 patients; it was positive in only 17.8%. CRP found to be elevated in 20.3% of the patients at baseline. Abnormal MRI SIJ bone marrow edema changes were found in 10.8%, while other SIJ changes was seen in additional 20.6%. The prevalence of FM showed no statistically significant difference between axial and peripheral SpA. Patients SpA and FM have longer disease duration than SpA alone, $P = 0.034$. Table.1 show demographics, socioeconomics and clinical data of our cohort.

Regarding medication, the use of biologics among SpA patients with FM is more frequent than SpA patients without FM (74.4% vs 51.5 % respectively), $P = 0.005$.