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Background: Musculoskeletal symptoms represent the most common extraintestinal manifestations of inflammatory bowel disease (IBD) and a major cause of impaired quality of life in these patients. Spondyloarthritis (SpA) is classically associated with IBD, but other rheumatic manifestations may occur.

Objectives: To characterize musculoskeletal symptoms and rheumatic diseases in an IBD cohort.

Methods: Retrospective monocentric descriptive study including all the patients with IBD consecutively referred from Gastroenterology to the Rheumatology Department between January of 2013 and December 2020 in a tertiary university hospital. Demographic and clinical data and musculoskeletal symptoms were collected at the time of the first visit in the Rheumatology outpatient center and the rheumatic diseases diagnosed during the entire follow-up were registered.

Results: A total of 234 patients were included, 136 (58.1%) females, 20 (8.5%) smokers. At the first Rheumatology consultation the mean age was 43.6 (± 13.7) years and the mean IBD duration was 11.7 (± 9.7) years. Concerning IBD: 172 (73.5%) had Crohn's disease and 62 (26.5%) had ulcerative colitis; azathioprine (39.7%), infliximab (28.2%) and mesalazine (26.5%) were the most frequently used drugs; eleven patients (4.7%) were taking glucocorticoids and 106 (45.3%) had already been treated with glucocorticoids.

Regarding musculoskeletal symptoms: 76 (32.5%) patients had peripheral symptoms and 98 (41.9%) had axial symptoms (Table 1).

Table 1. Characterization of peripheral and axial musculoskeletal symptoms in patients with Inflammatory Bowel Disease.

		N (%)
Peripheral symptoms	No	158 (67.5%)
	Arthritis / "inflammatory" joint pain	24 (10.3%)
	"Mixed" rhythm joint pain	15 (6.4%)
	"Mechanical" joint pain	29 (12.4%)
	Enthesopathy	8 (3.4%)
Axial symptoms	No	136 (58.1%)
	"Inflammatory" back pain	46 (19.7%)
	"Mixed" rhythm back pain	35 (14.9%)
	"Mechanical" back pain	17 (7.3%)
Total		234 (100%)

Twenty-six (11.1%) patients had radiographic sacroiliitis, 14 (6.0%) had sacroiliitis in computed tomography and 9 (3.8%) in magnetic resonance. Forty-four (18.8%) patients fulfilled *Assessment of SpondyloArthritis international Society* (ASAS) criteria for axial SpA and 5 (2.1%) for peripheral SpA. Also of note, 16 (6.8%) patients had a previous diagnosis of psoriasis and 5 (2.1%) had uveitis in the past.

Concerning other rheumatic diagnosis, we observed: osteoarthritis in 64 (27.3%), osteoporosis in 16 (6.9%), diffuse idiopathic skeletal hyperostosis in 6 (2.6%), systemic lupus erythematosus in 4 (1.7%), rotator cuff tendinopathy in 2 (0.9%), rheumatoid arthritis, gout, calcium pyrophosphate deposition disease, fibromyalgia, drug-induced lupus, osteitis condensans ilii, Dupuytren's contracture and avascular necrosis of the femoral head in 1 (0.4%), each.

Conclusion: Our results demonstrate a high prevalence of musculoskeletal symptoms and rheumatic diseases in patients with IBD. These diagnoses are not limited to the group of SpA and osteoporosis, emphasizing the importance of rheumatologists being alert to other rheumatic diagnoses in patients with IBD.

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POS1271

PREVALENCE OF JOINT EFFUSION, HYPERPERFUSION AND ENTESITIS IN YOUNG HEALTHY INDIVIDUALS

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Background: The European League Against Rheumatism (EULAR) recommends using ultrasound (US) in patients with rheumatoid arthritis and psoriatic arthritis in diagnosis (1). In addition, US examination is crucial for detecting enthesitis in the above mentioned rheumatic diseases. However, abnormal findings on US may also occur in healthy individuals as indicated by recent studies focusing on small joints like metacarpophalangeal joint, metatarsophalangeal joint or the elbow. (2,3)

Ultrasound assessment of large joints in healthy individuals has not been extensively studied so far, causing a lack of information concerning normal values in musculoskeletal US examination.

Objectives: The purpose of this study was to determine the prevalence of joint effusion, hyperperfusion of the synovia and enthesitis in large and medium-sized joints of healthy individuals.

Methods: Ultrasound assessment of shoulder, elbow, wrist, hip, knee and ankle joints as well as corresponding enthesal sites including the Achilles tendon and the plantar aponeurosis was performed in healthy individuals below the age of 30 years. Additionally, participants filled out a survey on their physical activity level, underwent a bioelectrical impedance analysis (BIA) and conducted a supervised weight training to determine their training volume. Prevalence of US findings was calculated, and a binary logistic regression model was applied to determine the association between the present findings and sex, age, handedness, hours of sports activity per week, BMI, amount of skeletal muscle mass (SMM) or training volume of strength training.

Results: We included 51 healthy individuals with a mean age of 23.7 years, 52.9% were female with a mean BMI of 22.5 kg/m². Ultrasound examination detected joint effusion in one joint in 25.5% (n=13), 29.4% (n=15) showed effusion in two of twelve examined joints. Joint effusion in three, four and five joints was detected in 9.8% (n=5), 3.9% (n=2) and 3.9% (n=2) of the cases, respectively. In 27.5% (n=14) of the individuals no joint effusion was observed. The most frequently affected joint was the elbow joint. Synovial hyperperfusion was not detected in any participant. Enthesitis was observed in one, two and three examined enthesal sites in 19.5% (n=10), 5.9% (n=3) and 2% (n=1), respectively. In 72% (n=37) of the examined individuals no pathology of the enthesal sites was found. Hyperperfusion presented to be the most frequent pathology observed in enthesitis (23%), followed by calcification (6%).

Binary logistic regression model demonstrated a significant association between reported hours of sports activity per week and the prevalence of effusion in the knee (p = 0.017). The odds of joint effusion in the knee increased with the hours of sports activity by 34.1% (Exp(B)= 1.341, 95%-CI(1.054, 1.705)). Additionally, the odds of enthesitis in any enthesal site increased with BMI (p= 0.015, Exp(B) = 1.407, 95%-CI(1.068, 1.852)).

Binary logistic regression model did not show any significant association between sex, age, handedness, amount of SMM or training volume of strength training and the prevalence of joint effusion or enthesitis pathology in the examined participants.

Conclusion: Joint effusion in large and mid-sized joints as well as enthesitis are not only detected in patients with rheumatic diseases but also in healthy individuals. Hours of sports activity and BMI have a significant association with the findings and should be considered during ultrasound examination.

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Disclosure of Interests: Julia Konstanze Schreiner: None declared, Dennis Scheicht: None declared, Pantelis Karakostas: None declared, Charlotte Behning: None declared, Peter Preuss: None declared, Peter Brossart: None declared, Valentin Schäfer Speakers bureau: AbbVie, Novartis, BMS, Chugai, Celgene, Medac, Sanofi, Lilly, Hexal, Pfizer, Janssen, Roche, Schire, Onkowsen, Royal College London, Consultant of: Novartis, Chugai, AbbVie, Celgene, Sanofi, Lilly, Hexal, Pfizer, Amgen, BMS, Roche, Gilead, Medac, Grant/research support from: Novartis, Hexal, Lilly, Roche, Celgene, Universität Bonn

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POS1272

DIFFERENCES IN RANGE OF MOTION AND MECHANICAL MUSCLE CHARACTERISTICS AMONG INFLAMMATORY AND MECHANICAL SPINAL PAIN: A CASE-CONTROL STUDY

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Background: The spinal range of motion (ROM) and the mechanical muscle properties (MMPs) at rest are defined as relevant clinical factors in inflammatory (i.e. axial Spondyloarthritis -axSpA) and mechanical spinal pain (i.e. Mechanical

Neck pain -NP- or Mechanical Low Back pain -LBP-). Nevertheless, there is not enough evidence regarding if ROM and MMPs are different in both types of spinal pain.

Objectives: To identify differences between axSpA patients and NP or LBP subjects, in cervical and lumbar ROMs and MMPs at rest.

Methods: Subjects with axSpA and with NP or LBP composed the Inflammatory pain Group (IG) and the Mechanical pain Group (MG), respectively. For the analysis of the spinal mobility, two Inertial Measurement Units (IMU) were used. For both spinal regions (cervical and lumbar - Figure 1A,B) 3 repetitions of flexion-extension, lateral-flexion, and rotation were executed separately[1]. A record of the MMPs using a hand myotonometer was made in both lumbar (muscular belly of the erector spinal - Figure 1D) and cervical (the semispinalis capitis muscles at C4 - Figure 1C) spine in prone position with both arms along the body. The MMPs recorded in this study included: frequency (tone), stiffness, decrement (elasticity), relaxation and creep (viscosity). The order of assessments (right/left) was randomized. Since no side-to-side differences in either group were observed, the mean of both sides was considered. Student-t tests were used to compare the groups, and Cohen-d effect size index was estimated as a measure of the size of difference. $P < 0.05$ was considered statistically significant.

Results: 61 subjects in IG (42% women, age 41 ± 12 years, BMI 25 ± 3) and 66 in MG (51% women, age 38 ± 13 years, BMI 25 ± 3) participated in this study. No significant differences were identified in sociodemographic data between both groups. Table 1 shows ROM and MMPs between groups. All lumbar ROMs were significantly lower in the IG, with the different between means achieving the minimum clinical important difference ($> 8^\circ$) for flexion-extension and lateroflexion. On the contrary, the cervical ROMs were not different between groups, and showed the highest variability, probably related to compensatory mechanisms due to lumbar ROMs restrictions. The IG showed greater Lumbar stiffness than the MG with large effect size ($d = 0.94$). No other difference in MMPs was identified in this region ($p > 0.05$). Regarding the cervical region, all MMPs showed differences between groups. Thus, tone, stiffness and elasticity were higher in the IG, while relaxation and viscosity were lower. In all cases, except for decrement, the effect size was from moderate to large ($0.6 < d < 0.8$).

	IG (n=61)	MG (n=66)	p-value	Cohen-d
Lumbar flexion- extension ($^\circ$)	62.7 ± 20.2	70.8 ± 17.9	0.019 *	0.42
Lumbar rotation ($^\circ$)	25.6 ± 8.3	30.1 ± 10.1	0.007 *	0.48
Lumbar lateral-flexion ($^\circ$)	46.6 ± 12.3	54.8 ± 10.8	< 0.001 *	0.70
Cervical flexion- extension ($^\circ$)	96.5 ± 21.6	96.2 ± 18.8	0.941	0.01
Cervical rotation ($^\circ$)	130.9 ± 27.3	131.9 ± 25.6	0.817	0.01
Cervical lateral-flexion ($^\circ$)	66.4 ± 21.5	71.6 ± 15.6	0.122	0.27
Lumbar tone (Hz)	15.32 ± 3.40	14.52 ± 1.93	0.129	0.29
Lumbar stiffness (N/m)	330.85 ± 56.93	272.48 ± 65.59	0.001 *	0.94
Lumbar decrement	1.33 ± 0.41	1.29 ± 0.32	0.480	0.10
Lumbar relaxation (ms)	19.11 ± 7.58	20.23 ± 4.29	0.312	0.18
Lumbar creep	1.16 ± 0.43	1.21 ± 0.22	0.519	0.14
Cervical tone (Hz)	17.27 ± 1.93	16.17 ± 1.84	0.001 *	0.58
Cervical stiffness (N/m)	313.93 ± 54.17	282.61 ± 50.07	0.001 *	0.59
Cervical decrement	1.34 ± 0.23	1.42 ± 0.18	0.020 *	0.39
Cervical relaxation (ms)	16.66 ± 2.52	18.49 ± 2.74	< 0.001 *	0.69
Cervical creep	1.02 ± 0.14	1.13 ± 0.14	< 0.001 *	0.80

Conclusion: AxSpA patients present lower lumbar ROMs than NP and LBP subjects. Further, posterior cervical MMPs of axSpA are more rigid and less viscoelastic than those of NP and LBP subjects. ROMs and MMPs show a different behavior pattern in cervical and lumbar regions when spinal pain from different origin is assessed.

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POS1273 A CHANGE IN A REHABILITATION MODEL INCREASES WORK CAPACITY AT 36 MONTHS IN LOW BACK PAIN

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Background: In chronic low back pain, the most expensive patients are them with long-standing sick-leave of more than 6 months. Several studies have showed the importance of rehabilitation models working with kinesiophobia (fear of movement). One possibility of treating chronic low back pain is a multidisciplinary rehabilitation program.

Objectives: The aim of this study was to analyze the impact of a change in a rehabilitation program for chronic lumbar pain by introducing a progressive exposure procedure to decrease apprehension associated with low back pain. We studied its impact on work capacity after 3 years, compared to our classic program.

Methods: We have compared the results of 1004 of our patients that have accomplished a multi-disciplinary program and that have been followed over 12 months. They were divided in two groups: one before the implantation of PHODA (PHOTO of Daily Activity: photos showing activities) associated with occupational training and work exposure. Then a second one including 200 patients that followed the new program. The program contained physical training, occupational tasks developed on the basis of the apprehension following a cognitive-comportemental approach.

We have analyzed the evolution of apprehension according to different questionnaires (FABQ, Tampa scale (TSK) and PACT (evaluating the subjective work capacity)), the Phoda results and the official work capacity at beginning of the program and after 36 months.

Results: We saw a clear increase in the global work capacity at 12 months after completing the program: passing from 40 to 79% ($p < 0.01$) in the old program comparing to the new one with an increase of 86% ($p < 0.01$). These results were confirmed at 36 months, with stabilized results. In parallel there was an increase in the subjective sensation of physical capacity (Pact), but less in the new program. This increase was correlated with a decrease in fear-avoidance according to the Fabq, and in the TSK

Conclusion: In chronic low back, a multidisciplinary rehabilitation program, gives a global work capacity of 79%. This capacity could be increased on focalising on patient's apprehensions with gradual exposure according the fear-avoidance model developed by Waddell and explored by Vlaeyen. The correlation were confirmed on the psychological part, with less apprehension and less anxiety. Finally, the SF 36 showed an increase in body confidence as an important factor in these functional restoration programs.

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POS1274 THERAPEUTIC MANAGEMENT OF RHEUMATOLOGISTS VERSUS OTORHINOLARYNGOLOGISTS OF CERVICOGENIC DIZZINESS

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Background: The treatment of patients presenting with cervicogenic dizziness (CGD) may be challenging. Indeed, there is no consensual treatment approach for CGD, nor is there no gold-standard assessment for diagnosis.

Objectives: Our study aimed to assess the management of CGD by rheumatologists versus otorhinolaryngologists.

Methods: We conducted a cross-sectional study including Tunisian doctors dealing with CGD. Rheumatologists (RTO) and otorhinolaryngologists (ORL) were invited to answer a questionnaire via google form about CGD daily management. Outcomes of interest were treatment modalities.

Results: The study included 30 RTO and 32 ORL. Most of the doctors (RTO, vs ORL) were females (88.3%, vs 56.3%), aged between 35 and 45 (43.3%, vs 62.5%), and worked at a private practice (33.3%, vs 59.4%). The number of patients diagnosed with CGD by RTO was as follows: 1-2 per year (33.3%), 1-2 per month (18.8%), 1-2 per week (20%), less than one patient a year (10%) and none in 3.3% of cases. The number of patients diagnosed with CGD by ORL was as follows: 1-2 per year (50%), 1-2 per month (33.3%), 1-2 per week (6.2%), less than one patient a year (15.7%) and none (9.4%). Most patients presenting with CGD were females in both groups (93.1%, vs 82.8% respectively) with a mean