domains than those of the comparison group: desire 1.98 ± 1.28 and 3.19 ± 1.45 ; arousal 1.98 ± 1.46 and 3.74 ± 1.45 ; lubrication 2.35 ± 2.25 and 4.37 ± 1.32 ; orgasm 1.75 ± 1.68 and 4.06 ± 1.66 ; satisfaction 2.28 ± 1.19 and 3.95 ± 1.61 ; no pain 2.49 ± 1.77 and 4.30 ± 1.42 . In General, total FSFI score was 12.86 ± 10.97 on fibromyalgia group versus 23.55 ± 8.24 in the healthy group (maximum possible being 36 points, $p < 0.0001$).

We tried to see if sexual function was affected by psychological status or stile of life. We found that only arousal, lubrication, orgasm and satisfaction had minimal values for clinically expressed anxiety while all parameters of sexual dysfunction were reduced in women on fibromyalgia group with borderline and clinically significant depression. There was the best index of sexual function married patients compared to divorced women. Unexpectedly, the minimal scores for all FSFI domains were in the fibromyalgia subgroup of 8 women with body mass deficiency and 20 women with Overweight, while normal body mass index and obesity were protective factors in sexual function.

Conclusion: Thus, a significant sexual function decrease was detected in female with fibromyalgia. The most severe dysfunction being associated with the abnormal anxiety, borderline and abnormal depression, divorced status, body mass deficiency and overweight.

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Back pain, mechanical musculoskeletal problems, local soft tissue disorders

AB0960

RELATIONSHIP BETWEEN THE CAREGIVER BURDEN AND UPPER LIMB-NECK DISABILITY AND PAIN IN BABY CAREGIVERS

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Background: Although caregiving is a normal part of being a parent of a young child, it is still unclear whether caregiving causes upper limb or neck disability in the caregiver.

Objectives: The aim of this study was to investigate the relationship between caregiver burden and upper limb-neck disabilities and pain in baby caregivers.

Methods: Sixty caregivers who are responsible for the caregiving of a 0-2 year old healthy baby, were included in this study. Physical characteristics and the gender of the caregivers were recorded. Caregiver burden was assessed by the Zarit Burden Interview; upper limb problems by DASH and neck problems by the Neck Disability Index and Neck Bournemouth Questionnaire. In addition, pain severity related to neck and upper limb was evaluated by using Visual Analog Scale over a 10 level scale.

Results: The mean age of the caregivers was 30.96 ± 6.43 year. The mean body mass index of the caregivers was 23.34 ± 3.29 indicating normal body composition. Height and weight were 163.75 ± 6.01 and 62.55 ± 8.98 , respectively. Ninety-five percent of the caregivers were mother and the others were the babysitter. A weak relationship was determined between the Zarit Burden Interview and DASH ($p=0.02$, $r=0.2$), while no relationship was found between caregiver burden and other assessments. Caregivers were found to have very low pain severity in the upper limb and neck.

Conclusion: It has been previously reported that caregiving for a disabled child or adult causes care burden and various musculoskeletal disorders¹⁻⁴. Current study demonstrated that giving care for a healthy child did not create care burden, and caused lower levels of pain in the upper limb and neck.

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AB0961

MYOFASCIAL TRIGGER POINTS ARE THE UNDEREVALUATED HYPOXIC NISCHES ALTERING POSTURE AND PHENOTYPE

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Objectives: Myofascial trigger point (MTrP) is a pillar pathophysiological unit in development of myofascial pain [1] and postural imbalance [2]. Dry needling (DN) of MTrP under ultrasound (US) guidance is prioritized method for treatment myofascial pain. Hypoxia-related signaling pathways play important role in development of rheumatic diseases and cancer [3,4].

Hypothesis: MTrP are spastic hypovascularized hypoxic low energy areas that can produce organismic signaling, associated with niches in Flammer syndrome [3,4].

Objectives: The aim was to evaluate structure of MTrP in regard to stiffness and "ischemic pattern" before and after DN.

Methods: We included 40 patients (26 females, aged 18–68 y.o.) with low back pain. Healthy 20 individuals (aged 18–52 y.o.) were controls. All patients underwent general exam, MRI, precise physical tests, extensive functional multiparameter neuromuscular US including M-mode, elastography (SWE), B-Flow (LOGIC E9 GE) of multifidus muscles. Then patients received DN of detected MTrP under US guidance.

Results: We successfully detected MTrP as hypoechoic, stiff and hypovascular small areas with different patterns of decreasing motility, contractility (muscle contracted/rested thickness) in all patient and did precise DN. After DN muscle structure improved, motility, contractility restored, VAS scores changed from 7.4 to 2.3 ($p < 0.05$). SWE was 11 ± 6 kPa in MTrP (27 kPa in active, 5-8 kPa in latent MTrP) vs 3.8 ± 0.3 kPa in controls and decreased to 4 ± 0.4 kPa after treatment. Hypovascularity ("ischemic pattern") size decreased from 3-4 mm to 0-1.5 mm, correlated with muscle function. Preliminary we found MTrP with more expressed hypovascular pattern, higher sensitivity and retaining levels of in individuals lower BMI and patient with Flammer phenotype [3,4] (13-15/15 positive responses to questionnaire).

Conclusion: MTrP are stiff and most likely hypoxic areas, parameters improved after precise DN. US hunting for "ischemic pattern" markers can be important for patient stratification and targeted treatment and prevention. Metabolic profiling including HIF signaling, proteomic data collecting needed for further investigation for effective patients stratification. For the follow-up studies a correlation of the Flammer syndrome phenotype with individualised profiles of patients and diagnosed ischaemic patterns is recommended.

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AB0962

LOW BACK PAIN AMONG MEDICAL STUDENTS: PREVALENCE AND RISK FACTORS

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Background: Low back pain (LBP) is a common health problem among all age groups. Medical students do not seem to be spared. In fact LBP is one of the most common musculoskeletal disorder and its prevalence is variable ranging from 41% to 72%.

Objectives: The aim of our study was to determine the prevalence of LBP among Tunisian medical students and to assess its associated factors.

Methods: We conducted a cross-sectional study over 2 months carried out on medical students in a Tunisian medical college. A digital questionnaire entered by Google forms was sent by e-mail and was completed by the students. Our study included students from the first year of the first cycle of medical studies up to the third year of

the second cycle. Socio-demographic, personal characteristics and life habits were collected. LBP was assessed using the Nordic musculoskeletal health questionnaire. The impact of low back pain was assessed using the Oswestry disability index (ODI).

Results: One hundred and seventy-nine students were included. The mean age was 22.9 ± 2.3 years [19.64-38.21]. The sex ratio was 0.29. The average body mass index was 23.55 ± 4.22 kg / m² [17.67-43.07]. 82% of the students were in the second cycle of medical studies. 26.4% of the students had a regular sports activity. 91.2% spent more than 4 hours a day in a sitting position. The point, annual, and lifetime prevalence of LBP among medical students was 41.2%, 80.4% and 90.6%, respectively. Low back pain was acute in more than 58.8%, subacute in 14.9% and chronic in 26.3%. The mean ODI score was 10.32% ± 8.48% [0-32%]. Students with LBP were significantly younger than students without LBP ($p = 0.015$). LBP was more common in students who spent more than 4 hours in a sitting position with a difference at the limit of significance ($p = 0.059$). Being in the 2nd cycle was significantly associated with the occurrence of LBP ($p = 0.006$). Poor screen projection in the amphitheater was significantly associated with the occurrence of LBP ($p = 0.029$). We found a statistically very significant relationship between the occurrence of LBP and the poor layout of the amphitheaters ($p = 0.000$). The feeling of depression was significantly higher among LBP students ($p = 0.018$). Feelings of fatigue, being overwhelmed, irritability and worry were more frequently found in LBP students, but this difference was not statistically significant. In a multivariate analysis, the only factors that remained statistically significant were feeling of depression ($p = 0.046$, OR = 3.88; CI = [1.3-11.55]) and the poor layout of the amphitheaters ($p = 0.006$, OR = 8.99; CI = [2.55-31.69]).

Conclusion: The annual prevalence of LBP was 80.4%. These results testify to the magnitude of this health problem. The factors associated to LBP seemed to be essentially modifiable factors. This encourages special attention from medical schools to increase students' awareness of low back pain and to provide appropriate measures at reduce this musculoskeletal disorder.

Disclosure of Interests: None declared

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AB0963

HOW OFTEN DO DOCTORS TREAT PATIENTS WITH LOCAL DAMAGE TO THE PERIARTICULAR SOFT TISSUES IN REAL CLINICAL PRACTICE?

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Background: Damage of the periarticular soft tissues (DPST) - tendinitis, entesitis, bursitis, etc. are one of the most common reasons for patients to contact rheumatologists and orthopedic surgeons.

Objectives: To evaluate the frequency and localization of DPST in real clinical practice, as well as the effectiveness of therapy for this pathology in the acute period.

Methods: 68 outpatient orthopaedic surgeons evaluated the frequency of initial patient recourse due to DPST within one month. The study did not include patients with systemic rheumatic diseases such as spondyloarthritis. The localization of DPST and the dynamics of clinical manifestations were evaluated in 1227 patients (women 42.5%, cf. age 51.3±15.5 years). Non-steroidal anti-inflammatory drugs (NSAIDs), mainly meloxicam, were used as a first-line treatment for DPST. The results of treatment were evaluated after 10-14 days with repeated visits of patients.

Results: 7766 cases of primary outpatient treatment by orthopedic surgeons were evaluated. DPST was the cause of treatment in 1227 (15.8%) patients. This was the third highest incidence after acute injuries (37.2%) and knee osteoarthritis (20.6%).

In patients with DPST, the most common lesions were in the knee area (knee entesopathy, prepatellar bursitis, pes anserinus area tendinitis/bursitis) - 21.2%, the foot (plantar fasciitis) - 16.9%, the shoulder (tendinitis of the rotator cuff) - 16.4%, and the elbow (lateral and medial epicondylitis) - 15.3%. After treatment, there was a significant decrease in the severity of pain during movement - from 6.58±1.61 to 2.48±1.60 points on the numerical rating scale ($p < 0.001$), a decrease in the intensity of pain at rest, at night and during palpation, as well as the severity of functional disorders. The need for local injection of glucocorticoids occurred in 22.1% of patients. Significant improvement was observed in all DPST localities, with 68.1% of patients rating the treatment result as "good" and "excellent". Adverse reactions were observed in 15.0% of patients, and no serious complications were reported.

Conclusion: DPST is the third most frequent reason of recourse to a doctor after acute injuries and osteoarthritis of large joints in the practice of outpatient orthopedic surgeons. The use of NSAIDs in the maximum therapeutic dose for 10-14 days allows for significant improvement in DPST of different localization.

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AB0964

THE ASSOCIATION BETWEEN RESIDUAL SYMPTOMS AND CERVICAL SPINE LESIONS IN RHEUMATOID ARTHRITIS

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Background: Treatment outcomes in rheumatoid arthritis (RA) have been improved with advances in drug therapy. In daily clinical practice, the outcomes are assessed based on the presence of swollen or tender joints, global assessment using a visual analog scale by a patient (GVAS) and a physician (DrVAS), etc., in addition to inflammatory findings. Although inflammation and joint symptoms are suppressed, many patients show no improvement in GVAS scores. The reported residual RA symptoms include morning stiffness (MS), pain (P), and dullness (D), but their causes are not completely known. Latent cervical spine lesions sometimes exist in RA, but their association with residual RA symptoms is unknown.

Objectives: We examined cervical spine lesions and residual symptoms in patients with RA who achieved the therapeutic goal.

Methods: Of 124 patients with RA, 82 (25 men and 57 women) who achieved a low disease activity (LDA) state on the Disease Activity Score for 28 joints with erythrocyte sedimentation rate (DAS28-ESR) were included. The mean age was 65.7 (28-83) years, and the disease stage was Stage I in 28 patients, Stage II in 14, Stage III in 13, and Stage IV in 27. Dysfunction was graded as Class 1 in 63 patients, Class 2 in 18, and Class 3 in one (Steinbrocker classification). Biopharmaceuticals had been administered in 27 patients. As for disease activity, the DAS28-ESR scores indicated complete remission in 54 patients and LDA in 28. The survey form was used to investigate the presence or absence/duration of MS, the presence or absence/severity of P (Pain VAS), and the presence or absence/severity of D (Dullness VAS). On lateral functional radiographs of the cervical spine, patients with spinal lesions were selected and divided into the asymptomatic stability (ASS; atlantoaxial dislocation ≥3mm) + vertical setting (VS; Ranawat value <13mm) group, the cervical spondylolisthesis group (≥3mm of slippage on dynamic radiographs), and the spondylolisthesis group (≥3mm of slippage on dynamic radiographs). They were examined for association with residual symptoms.

Results: According to cervical spine lesions, the patients who achieved the therapeutic goal were divided into the ASS+VS group comprising 15 patients (18.3%), the spondylolisthesis group comprising 11 (13.4%), and the stenosis group comprising 18 (22.0%). Among them, only the spondylolisthesis group showed significant differences in residual RA symptoms. In the spondylolisthesis group, the disease duration was longer, but there was no difference in age. MS, P, and D were significantly severer. The duration of MS was longer, and both Pain and Dullness VAS scores were higher. The score on each component of the DAS28 showed no difference in inflammatory findings. GVAS and DrVAS scores were higher. No common perceptions of spinal symptoms were shared between any patients with cervical spine lesions and physicians.

Conclusion: Improved patient-reported outcomes (PROs) are considered to be important to achieve more complete remission. There are various reports on the causes of residual RA symptoms, but many aspects remain unknown. Based on the results of this study, because asymptomatic subaxial subluxation is one of concerns in patients with spondylolisthesis with dynamic instability of the cervical spine, cervical spine diseases should also be considered in patients with severe residual symptoms. Not only radiography but also magnetic resonance imaging needs to be performed.

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AB0965

EVALUATION OF THE IMPACT OF THE JOB STRESS ON THE ONSET OF MUSCULOSKELETAL DISORDERS IN THE HEALTHCARE WORKERS OF THE GENERAL HOSPITAL OF DOUALA, CAMEROON

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Background: Job stress (workload) and its repercussions on health have already been described. However, very few publications have been performed in sub-Saharan Africa.

Objectives: To assess the link between job stress and musculoskeletal disorders (MSD) among healthcare workers of the Douala General Hospital.

Methods: In this cross-sectional study, the job stress, evaluated according to the Karasek model, made it possible to measure job-strain (high psychological