musculoskeletal system disorders. Local inflammation could be the major cause of night pain, and using a deep diathermic modality might be contradictory.

Objectives: Investigation of the effectiveness of short wave diathermy SWD treatment in patient with SIS and to emphasize the significance of night pain (NP) status on treatment response.

Methods: In this double-blind, randomized placebo controlled trial, 57 patients aged between 35 to 65 years, diagnosed as SIS were classified into two groups as night pain positive NP(+) (n=28) and night pain negative NP(-) (n=29). Both groups were randomly assigned to SWD treatment NP(+) n=14, NP(-) n=14 and sham NP(+) n=15, NP(-) n=14 subgroups. Exercise, cold pack application and a non-steroidal anti-inflammatory drug treatment were applied to all groups. 27.12 MHz continuous SWD (daily 20 min per session, 5 days per week, for 2 weeks, 10 sessions) was applied to the treatment groups while sham SWD was applied to the sham groups with the same protocol. Rest, activity and night visual analog scale (VAS), Constant (Murley) Score (CS) and Shoulder Disability Questionnaire (SDQ) were used for evaluation of patients at 2 weeks before the treatment, 1 month and 2 months after the treatment.

Results: There were no statistical differences between the SWD treatment and sham groups in all outcome parameters except for the Constant pain scores in NP (+) group. In NP(-) group, SWD treatment improved the parameters of pain, strength, total scores of CS, and SDQ compared to sham group at 1 month. SWD treatment was superior to sham for all parameters except for the Constant daily living activity scores at 2 months.

Conclusions: In conclusion, addition of 27.12 MHz continuous SWD treatment to conventional therapies provides long term benefits when compared to sham SWD in terms of rest and activity VAS scores, Constant-Murley scores, and SDQ scores in SIS patients without night pain. However, there was no convincing evidence that SWD treatment is of additional benefit in SIS patients with NP. Therefore; night pain as a symptom should be regarded in the selection of treatment modalities in order to use the deep heaters effectively in the management of SIS.

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SAT0596 EFFICACY OF EPIDURAL STEROID INJECTION IN LUMBAR SPINAL STENOSIS IS NOT RELATED TO THE DEGREE OF SEVERITY BY MRI

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Background: Lumbar spinal stenosis (LSS) is a common degenerative disease. Treatment modalities for LSS vary and include medication, exercise, interventional techniques, and surgery. Epidural steroid injection has been used for the treatment of LSS with variable results. The relationship between severity of lumbar spinal stenosis and efficacy of lumbar epidural steroid injection is still undetermined.

Objectives: The aim of our study was to determine the relationship between the severity of LSS using MRI grading system and the response to lumbar epidural steroid injection.

Methods: Thirty patients with degenerative LSS were enrolled in this prospective study. All subjects underwent lumbar spine MRI (T2-weighted axial images). LSS was graded using MRI grading system (grade 1 = mild stenosis with separation of all cauda equine; grade 2 = moderate stenosis with some cauda equine aggregated; grade 3 = severe stenosis with none of the cauda equine separated). All fluoroscopy guided transforaminal epidural steroid injections (FG- TFESI) were performed in the procedure room. Outcome measures were obtained using the visual analogue scale (VAS) for both back and leg pain, Oswestry disability index (ODI), Roland 5-point pain scale, walking tolerance and patient's satisfaction scale at 2 and 8 weeks post-treatment.

Results: Thirty LSS patients treated with FG- TFESI, who were completely followed up, were included in this study, the injection rate was one injection per patient. The patients were followed at 2 weeks and 8 weeks. Fifty-six percent of patients at 2 weeks and 70% at 8 weeks had a successful outcome, reporting at least a >50% reduction between pre-injection and post-injection visual analogue pain scores. Roland 5 point pain scale showed pain reduction in 50% of patients by (26%) at 2 weeks and in 70% of patients by 50% pain reduction at 8 weeks. Oswestry low back pain disability questionnaire (ODI) scores showed statistically significant improvement from initial scores to 2 weeks and from 2 weeks to 8 weeks in 70% of patients. Walking tolerance showed improvement at 2 weeks in 50% of patients and at 8 weeks in 70% of patients. The outcome was statistically significant even in severe stenotic patients when comparing initial scores of moderate and severe stenosis at 2 weeks and 8 weeks scores in walking tolerance ($P=0.006$), Back VAS ($P=0.717$), Leg VAS ($P=0.139$), ODI (0.139), and Roland ($P=0.001$).

Conclusions: FG-LESI may reduce pain and improve walking tolerance in the short term for the treatment of patients with LSS for a period of 8 weeks. The

outcome does not seem to correlate with the degree of lumbar spinal stenosis. Patients with severe LSS may have the same chance to get benefits from FG-LESI as patients with moderate LSS.

Disclosure of Interest: None declared

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SAT0597 RELATIONSHIP BETWEEN LUMBAR DISC HERNIATION AND BENIGN JOINT HYPERMOBILITY SYNDROME

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Background: Benign joint hypermobility syndrome (BJHS) can present with a wide variety of musculoskeletal disorders. Benign joint hypermobility syndrome (BJHS) is a hereditary disorder characterized by the presence of musculoskeletal symptoms in persons with generalized joint laxity in the absence of systemic rheumatologic disease (1–3). Lumbar disc herniation (LDH) is a common cause of low back pain. On the other hand, low back pain may be a presenting symptom in patients with BJHS.

Objectives: to evaluate relationship between Lumbar disc herniation and BJHS.

Methods: The study included 100 patients diagnosed with LDH depending on history, clinical examination and MRI findings and another 100 healthy control participants. All, patients and healthy controls were assessed for BJHS using the revised (Brighton 1998) criteria.

Results: the mean age was (35.4±8.9) year and (33.72±8.3) for patients and controls respectively, there were 43 males and 57 females in each group. The mean BMI was (27.6±4.8) kg/m² in patients and (28.3±4.6) in controls. No significant differences found between the groups regarding the age, sex and BMI in all comparisons (P -value>0.05). The mean Beighton score was significantly higher among patients in comparison to controls; it was (2.3±1.62) versus (1.2±1.35) in controls group; on the other hand major and minor criteria were significantly more prevalent among patients rather than controls, in all comparisons (P -value<0.05). BJHS was more prevalent among patients rather than controls, 55% of the patients had BJHS compared to 21% of controls, the odds ratio was (4.6) and (P -value <0.05). BJHS was more prevalent among females compared to males, from the total number of all participants, BJHS was present in 76 participants, and of them 47 were females versus 29 males, (P -value <0.05).

It had been significantly found that subjects with BJHS in both groups (patients and controls) were relatively shorter than those without BJHS, P -value <0.05. The correlation analysis of BJHS with the MRI findings of LDH in patients group showed no significant differences among patients with and without BJHS, in all comparisons P -value >0.05.

Conclusions: BJHS is more prevalent among patients with LDH. There is no significant relationship between presence of BJHS in LDH patients and MRI findings.

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SAT0598 EVALUATION OF THE QUALITY OF SEXUAL LIFE DURING CHRONIC LOW BACK PAIN

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Background: Sexual life has an important role in preserving the good quality of life of patients and their partners. Chronic low back pain (CLBP) as well as other musculoskeletal diseases, can affect all life activities including sexual function.

Objectives: The aim of this study is to assess the impact of chronic low back pain on sexual life and to identify the associated factors.

Methods: It's a study of 144 patients suffering from chronic low back pain, during a period of nine months (from February to October 2016). We have specifically studied the relationship between chronic low back pain and sexual quality of life, using the Sexual Quotient (QS) (a validated questionnaire), which consists in 10 questions, rated each one from 0 to 10, to have a final score rated from 0 to 100.

Results: The average age of our patients was 53.87 years [23–79 years], with a female predominance in 64% of cases. The mean visual analogue scale for pain was 4.72 [1–9].

The average duration of low back pain was 6.5 years. The average score of Quebec was 45.3 [5–92], concerning the mean Dallas score, the segmental results were as follows: 53.1% of impact on daily activities, 47.6% of impact on work/leisure ratio, 45% of impact on anxiety/depression ratio and 33.4% of impact on sociability.

In our study, 57.2% of cases were under analgesic treatment, 85.5% were under

non-steroidal anti-inflammatory drugs, 20% had at least one local corticosteroid infiltration, 34% had functional rehabilitation and 4, 1% had surgical treatment.

Regarding sexual dysfunction, 34.5% of our patients didn't have any sexual activity, 2.1% had a catastrophic sexual life (score <20), 9% had a disappointing sexual life (score between 20 and 40), 20% had an average sexual life (score between 40 and 60), 17.9% had a satisfying sexual life (score between 60 and 80), while only 13.1% had a very fulfilling sexual life (score between 80 and 100). We showed that the alteration of the sexual quotient in our patients is more marked when the age of the patients is more advanced. But we didn't find a significant correlation with the duration of the disease, the mean visual analogue scale for pain and the functional scores of Quebec and Dallas.

Conclusions: Our study suggests that sexuality is profoundly disrupted in chronic low back pain. The advanced age is proved to be correlated with the deterioration of the sexual life. So, sexuality must be taken into account in the management of patients with chronic low back pain.

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SAT0599 LOW BACK PAIN IN MEDICAL STUDENTS LINKED TO POOR SLEEP QUALITY: RESULTS FROM THE PAX-I STUDY

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Background: Low Back Pain (LBP) is a major public health problem and is classified by the Global Burden of Disease Study among the ten diseases most responsible for Disability-Adjusted Life Years worldwide. All ages may be affected, mostly young adults, with a prevalence going up to 50%. Medical students may be particularly vulnerable due to sedentary lifestyle and high stress levels.

Objectives: The primary objective is to evaluate the prevalence of LBP in Lebanese medical students. The secondary objective is to identify predictive factors associated with LBP and to identify prevalence and components of inflammatory back pain (IBP).

Methods: PAX-I is a cross-sectional study, completed at the St-Joseph University of Beirut from April to June 2016. All students from the first to the sixth year of medicine were invited to fill a questionnaire about their demographic data, lifestyle habits, Patient Health Questionnaire for Depression and Anxiety (PHQ4) and LBP characteristics, including components of IBP as per ASAS criteria. Student test and ANOVA were used for quantitative variables, chi-square test was used for qualitative variables and logistic regression was used for predictive factors for low back pain. Analysis was performed on IBM SPSS Statistics 23.

Results: Response rate was 51.3% (258/502). Mean age was 20.86 years (SD 1.92). 54.3% were female, 76.7% drank caffeine, 66.3% had a regular sports activity and 9.7% were smokers. 38% had the habit of walking while studying. All habits were similar across years of studying except for sports activities which decreased over the years (p 0.018). 80% were satisfied with their studies. Only 46% were satisfied with their quality of sleep. Mean PHQ4 score was 7.17 and increased with the years of studies (p 0.045).

55.8% of students reported a LBP event during the past year, with a mean number of 3.6 episodes per year. 91% of these students had LBP while studying, with high reported intensity (5.18/10), 62.5% reported LBP after exercise. 80% had episodes of less than one month and 7% of more than three months duration. 12% had IBP according to the ASAS criteria (Details of IBP in Figure 1). Predictive factors for LBP in univariate analysis were: smoking (p 0.040), alcohol consumption (p 0.005), caffeine consumption (p 0.041), television watching (p

Figure 1. Components of Inflammatory Back Pain according to the ASAS criteria.

0.042) –positive association–, and number of hours of sleep (p 0.011) and satisfaction with sleep quality –negative association– (p 0.017). Satisfaction with sleep quality remained the only significant association in multivariate analysis (p 0.014).

Conclusions: LBP is a frequent problem among medical students with high intensity, especially when studying, and a high recurrence rate. The main predictive factor was poor satisfaction with sleep quality. A significant percentage fulfills IBP criteria by auto-questionnaire and should benefit from further investigation.

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SAT0600 USEFULNESS OF VERTEBROPLASTY IN VERTEBRAL FRACTURES WITH PERSISTENT BACK PAIN. A REPORT OF 64 VERTEBRAL AUGMENTATION FROM A UNIVERSITY HOSPITAL

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Background: Management options for patients with persistent back pain after a vertebral fracture include vertebral augmentation, but its use is controversial.

Objectives: Our aim was to evaluate the fracture cause, efficacy and complications of consecutive vertebroplasties performed in our Hospital in a 12 years period.

Methods: Retrospective study of vertebroplasties performed at a University Hospital in the last 12 years (April 2004 to April 2016). The duration of follow-up was more than 12 months. Epidemiological variables, indications, time elapsed, efficacy and complications of the procedure were collected. The indication of vertebroplasties in fractures was pain refractory to usual symptomatic treatment in these pathologies: osteoporosis, trauma, leukemia/lymphoma, metastasis and hemangioma. Efficacy was assessed at 6 and 12 months with a simple verbal scale according to the pain response (improvement/non-improvement). Patients who died before 12 months period were excluded for the that parameter. A comparative study of the efficacy between a) cause of fracture, b) location, c) time elapsed, d) access route and e) complication was performed. For the descriptive analysis we used frequencies and percentages in the case of qualitative variables, and mean and standard deviation (SD) or median and interquartile range for quantitative variables. Chi-square test or Fisher's exact test was used in for qualitative variables, and Wilcoxon's non-parametric test for evolution time. Statistic analysis was performed with the SAS System for Windows V 9.2.

Results: 66 vertebroplasties were performed in 44 patients (75% female/25%

FRACTURE CAUSE, n(%)	
Osteoporosis	50 (78.13)
Trauma	6 (9.38)
Lymphoma/leukemia, n (%)	5 (7.81)
Metastasis	2 (3.13)
Hemangioma	1 (1.56)
FRACTURE LEVEL, n(%)	
Lumbar	25 (39.06)
Dorsal	37 (57.81)
Cervical	2 (3.13)
VERTEBROPLASTY ACCESS ROUT, n(%)	
Unipedicular	15 (23.44)
Bipedicular	44 (68.75)
Parapedicular	2 (3.13)
Spine-Jack	1 (1.56)
Anterior	2 (3.13)
CEMENT LEAKAGE, n(%)	
No	38 (59.38)
Mild	20 (31.25)
Moderate	5 (7.81)
Severe	1 (1.56)
REFRACTURE, n(%)	
No	56 (87.5)
Yes	8 (12.5)
EFFICACY AT 6 MONTHS/12 MONTHS, n(%)	
Improvement	38 (59.38)/43 (75.44)
Lack of improvement	26 (40.63)/14 (24.56)