unexposed patients. Restrictive bariatric surgery yielded lower risks of CTS (HRs of 0.81, 95% CI 0.69-0.88) than did malabsorptive bariatric surgery (HR of 0.95, 95% CI 0.88-1.02) when compared to obese unexposed patients. The risk of CTS increased with duration of follow-up. The lowest risk was observed 1-3 years after bariatric surgery (HR of 0.77, 95% CI 0.68-0.88) and the highest risk 6-13 years after bariatric surgery (HR of 1.20, 95% CI 1.05-1.36) when compared to obese unexposed patients.

Conclusion: Our results suggest that substantial weight loss is not overall associated with severe CTS in an obese patient population. However, bariatric surgery was associated with an initial decreased risk of CTS after bariatric surgery followed by an increased risk in later follow-up. Furthermore, restrictive bariatric surgery but not malabsorptive bariatric surgery was associated with a decreased risk of CTS.

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POS0012

EPIDEMIOLOGY OF FIBROMYALGIA HOSPITALIZATIONS IN THE UNITED STATES

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Background: Fibromyalgia is a chronic pain syndrome that is associated with protean symptoms including musculoskeletal pain, psychiatric symptoms, cognitive dysfunction, memory difficulty, and sleep disturbance. Fibromyalgia can be a primary diagnosis, or it can be associated with other conditions. Fibromyalgia is often seen in conjunction with autoimmune diseases such as systemic lupus erythematosus and rheumatoid arthritis. In 1990, the American College of Rheumatology released classification criteria for fibromyalgia that included symptoms of diffuse pain and physical exam findings of at least 11 of 18 defined tender points. In 2010, the ACR updated these criteria and eliminated the requirement of tender points. In 2011, these criteria were further modified to that they could be self-administered. A previous study used the national inpatient sample to examine hospitalization data for patients with fibromyalgia from 1999-2007.¹ No studies, however, have examined this data since the new ACR criteria were established in 2010.

Objectives: We aim to characterize the epidemiology of hospitalized patients with diagnosis of fibromyalgia.

Methods: Hospitalized patients with a diagnosis of fibromyalgia were identified in the 2016-2018 National Inpatient Sample (NIS) using the International Classification of Diseases 10 system (ICD-10). The NIS is an all-payer inpatient database that estimates over 37 million annual U.S. hospitalizations and is maintained by the Healthcare Cost and Utilization Project. The primary outcomes were prevalence of fibromyalgia and comorbid rheumatologic conditions among hospitalized patients. Secondary outcomes included cause of admission, mortality, length of stay, and cost of care.

Results: Of 1,351,234 patients with fibromyalgia identified, 437,145 were admitted in 2016 increasing to 461,820 in 2018. On average 59.1 years old, more likely female (1,262,735, 93.5%) and white (1,060,845, 81.3%). Patients were most likely to have Medicare (775,420, 57.5%) and were in the bottom quartile of income (402,945, 30.3%). The most common rheumatologic comorbidities were rheumatoid arthritis (142,195, 10.5%), lupus (69,980, 5.2%), and inflammatory bowel disease (38,165, 2.2%). Notably fibromyalgia was commonly associated with depression (500,420, 37.0%), obesity (379,324, 28.1%), hypothyroidism (334,585 24.7%), and congestive heart failure (213,790, 15.8%). The mortality rate was 13,605 (1.0%) patients, the average length of stay was (4.53 days), and the average cost of hospitalization (\$12,522). The most common causes of admission were inflammatory syndromes and joint disorders (13.4%) of which OA (4.2%) was most common complaint, digestive complaints (12.1%) of which IBD (4.4%) was most common.

Conclusion: The yearly number of fibromyalgia hospital discharges were greater than previously described. This may be a result of a more sensitive classification criteria. Further investigation into the etiology of this increase in fibromyalgia hospitalization diagnosis is warranted.

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POS0013

MUSCULOSKELETAL MANIFESTATIONS IN PATIENTS WITH ENDOCRINE DISEASES IN TERTIARY SERVICE

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Background: Musculoskeletal diseases represent about 50 to 70% of the frequency of chronic diseases according to previous studies (SOUZA, OLIVEIRA, 2015). Chronic pain is often associated with these diseases and is an important cause of care in the health service. Thus, medical professionals are required to adequately manage their patients. Despite the lack of knowledge of some, endocrine diseases are basic diseases linked to musculoskeletal manifestations. Thus, secondary arthropathies of the non-rheumatologic origin or osteoarticular complaints that simulate or show rheumatic diseases can be seen in patients with endocrine diseases during their evolution or in the initial phase along with other systemic symptoms.

Based on this concept, the musculoskeletal manifestations presented by patients with endocrine disorders in tertiary health service were monitored and evaluated.

Objectives: The objective of this study is to characterize the musculoskeletal manifestations in patients with endocrine diseases: type 1 and type 2 diabetes mellitus; hypothyroidism; hyperthyroidism and pituitary diseases and to clinically classify the patients based on physical and imaging findings.

Methods: A cross-sectional and descriptive study, where clinical screening was performed at the endocrinology outpatient clinic, in which patients with musculoskeletal complaints were identified. These patients were referred for evaluation with a rheumatologist with clinical, laboratory and imaging investigation for the diagnosis of rheumatic disease. A questionnaire with epidemiological and clinical data was applied.

Results: In this study, 325 patients with endocrine diseases were interviewed, 53 ± 16.4 years old, 258 (80%) were female and 64 (20%) males. Of the interviewed patients, 236 (72.8%) reported musculoskeletal pain, being that 196 (75.9%) of the women and 33% of the men indicated this type of symptom. Regarding endocrine diseases, the most frequent was Diabetes Mellitus type 2 with 158 patients (48.6%), and 75% of these people have chronic musculoskeletal pain, most 5 to 7 times a week, showing an intrinsic character of this disease with pain complaints from a large part of this population. It was also identified the prevalence of 25% of Hypothyroidism, 12% of Diabetes type 1, 9% of Hyperthyroidism and less expressive amounts of other endocrine diseases such as Acromegaly (2.1%), Gigantism (0.3%) and similar. About 63% of those who have pain are not followed up in the service of rheumatology, 42% of these have already indicated these pains to their endocrinologist, however they have not had their complaint properly flagged. Of these patients, 94 (29%) use Antihypertensives and 25% Oral Antidiabetics. The most notable diagnoses in rheumatology are: Rheumatoid Arthritis (29%); Osteoarthritis (27%); Osteoporosis and Fibromyalgia both with 20.6% of diagnoses and Psoriatic Arthritis and GOUT with 6%. The main regions that are subject to pain are the Hands (52%); Knees (40%); Spine and feet with 30% each.

Conclusion: Although there is a demand of more confirmatory studies, our preliminary results showed the mutuality between endocrine diseases and musculoskeletal manifestations and, therefore, that rheumatological findings are increasingly frequent in this population. The high prevalence of these symptoms secondary to endocrine diseases raises serious questions in order to improve the quality of life of these patients, and also to increase the number of researches in this field, because the pathophysiological mechanisms of this association are not well elucidated and, from this, expand this information to professionals who may not be aware of this relationship.

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POS0014

TIME-TRENDS IN COCAINE AND HALLUCINOGEN USE DISORDER HOSPITALIZATIONS IN RHEUMATIC DISEASES: A NATIONAL TIME-TRENDS STUDY

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Background: Cocaine use disorder is a frequent cause of drug use disorders in the U.S. Although hallucinogen use disorder is less common, both are potentially preventable public health issues. To our knowledge, epidemiological studies

estimating burden of cocaine or hallucinogen use disorders in common Musculoskeletal diseases (MSDs) are lacking.

Objectives: To assess national time-trends in cocaine use and hallucinogen use disorders in people with MSDs

Methods: This study used the U.S. National Inpatient Sample (NIS), a de-identified national all-payer inpatient health care database (<https://www.hcup-us.ahrq.gov/nisoverview.jsp>) from 1998-2014. The NIS is a 20% stratified sample of hospital discharges in the U.S. It is commonly used to derive national estimates of hospitalization and outcomes. Cocaine or hallucinogen use disorder hospitalization was defined in a validated approach as the presence of the following International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnostic codes: cocaine use disorder, 304.2x, or 305.6x; and hallucinogen use disorder, 304.5x or 305.3x; hospitalizations for drug use in remission, drug counseling, rehabilitation or detoxification were excluded, as in previous studies. MSDs were identified based on the respective ICD-9 codes, a validated approach (5-9), in non-primary position: Gout: 274.xx; rheumatoid arthritis (RA): 714.xx; Fibromyalgia: 729.1; osteoarthritis (OA): 715.xx; or low back pain (LBP): 724.

Results: In 1998-2000, the highest frequency of cocaine use hospitalizations was in people with LBP: LBP (n=5,914), followed by OA (n=4,931), gout (n=2,093), RA (n=2,026), and fibromyalgia (n=1,620). In 2013-2014, the order changed slightly with OA (n=22,185), followed by LBP (n=16,810), gout (n=10,570), RA (n=8,975), and fibromyalgia (n=5,680). Respective rates per 1 million U.S. NIS hospitalizations in 2013-2014 and the relative increase from 1998-2000 to 2013-2014 were: Gout, 10.2 (increase, 4.1-fold); OA, 21.4 (3.5-fold); fibromyalgia, 5.48 (2.5-fold); RA, 8.66 (3.4-fold); and LBP, 16.22 (1.8-fold; Figure 1).

In 1998-2000, hallucinogen use disorder hospitalizations were as follows: LBP (n=176), followed by OA (n=63), RA (n=42), fibromyalgia (n=41) and gout (n<10; cells with frequency of 10 or fewer are reported as <10 per NIS guidance). In 2013-2014, the frequency order was the similar, with the highest numbers for LBP (n=525) followed by OA (n=400), RA (n=395), gout (n=135) and fibromyalgia (n=125). Respective rates per 1 million US NIS hospitalizations in 2013-2014 and the relative increase from 1998-2000 to 2013-2014 were: Gout, 0.13 (increase, 25-fold); OA, 0.39 (5.5-fold); fibromyalgia, 0.12 (2-fold); RA, 0.38 (8.5-fold); and LBP, 0.51 (2-fold; Figure 1).

Conclusion: This study confirmed an increasing rate of both, cocaine use and hallucinogen use disorder hospitalizations in people with 5 MSDs over a 17-year period from 1998-2014 in the U.S.

Figure 1. Time-trends in the rates of hospitalization with cocaine use and hallucinogen use disorder (A), non-home discharge (B), and in-hospital mortality (C) per 100,000 NIS hospitalization claims. The x-axis shows rate per 100,000 NIS hospitalization claims and the y-axis the study periods

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POS0015

PREVALENCE OF NEUROPATHIES IN RHEUMATIC AND MUSCULOSKELETAL DISEASES

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Background: In rheumatic and musculoskeletal diseases (RMDs), peripheral neurons can be affected, which can result in sensory symptoms like pain, burning, tingling, numbness and motor symptoms like muscle-atrophy or even paresis. More detailed knowledge about the prevalence and the cause of neuropathy (NP) in RMD are urgently needed, especially as RMD patients may develop different subtypes of NP.

Objectives: The aim of this project was to assess the prevalence and the individual types of NP in rheumatoid arthritis (RA), spondyloarthritis (SpA) and systemic sclerosis (SSc) patients, and to elucidate the clinical, neurophysiological and neuropathologic features of associated NP.

Methods: Baseline questionnaires and neurological and physical examination were used to elucidate the presence of neuropathic pain and autonomic dysfunction. Laboratory tests were performed to exclude other causes for NP. Electrophysiological tests were performed to differentiate demyelinating from axonal large fiber (LF)NPs. Additionally, skin biopsies were used to detect an involvement of small fibres (SF).

Results: A total of 31 patients (median age 64 years (range 43-75)) were included. The majority of patients were female (90%). The mean disease duration was 10 years (1-41 years). More than 50% of the patients were diagnosed with RA, 7 with SpA and 6 with SSc. Of 31 patients, 48% (15/31) had clinical signs of NP and of those, neurophysiological examination showed 14 axonal 2, demyelinating and 4 mixed types. A combined LFNP and SFNP was present in 35% (11/31) of the patients. In 4 patients, only a SFNP was detectable, and in only two patients, no NP was detectable.

Conclusion: NP was detectable in 94% (29/31) of the RMD patients, with LFNP predominating. This high proportion of NP in RMD suggests a surprisingly high coincidence of both diseases.

Table 1. Subtypes of NP in RMD

	Number of patients
Axonal NP	14/31 (45%)
Demyelinating NP	2/31 (6%)
Mixed axonal and demyelinating NP	4/31 (12%)
Sensory NP	9/31 (26%)
Sensorimotor NP	5/31 (10%)
Motor NP	1/31 (3%)

Disclosure of Interests: None declared.

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POS0016

THE EVALUATION OF FUNCTIONAL ABILITIES OF PATIENTS WITH OSTEOPOROTIC VERTEBRAL FRACTURES AS A BASIS FOR REHABILITATION PROGRAMS DEVELOPING

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Background: Due to the demand for special rehabilitation programs for patients with osteoporotic vertebral fractures (VFs), it is of interest to study the functional abilities of those patients. The scientific hypothesis suggests that osteoporotic VFs would cause muscle weakness, muscle dysfunction and conditional disturbances.

Objectives: to estimate muscle strength, motor function and coordination disorders in patients with VFs in the setting of systemic osteoporosis as a basis for rehabilitation programs developing.

Methods: 120 patients aged 43–80 with primary osteoporosis were enrolled. Study group comprised of 60 subjects (56 women, 4 men) with at least 1 VF confirmed by X-rays. Control group included 60 subjects (56 women, 4 men) with osteoporosis but without any osteoporotic fracture. The examination program included back muscles tenzodynamometry, balance tests and stabilometry. **Results:** Muscle strength deficiency was estimated in study group in trunk flexors (TF) — 40.9% and in trunk extensors (TE) — 18.1% with an adequate function of the left lateral flexors (LLF) and in right lateral flexors (RLF). Patients with VFs had the lower muscle strength vs controls of TE (15.64±9.8 vs 27.73±9.9 kg, p=0.00002), TF (14.61±8.98 vs 21.28±8.38 kg, p=0.0006), LLF (13.10±7.2 vs