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 highest 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

EPILOGMEOLOGY OF FIBROMALGIA HOSPITALIZATIONS IN THE UNITED STATES

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Background: Fibromyalgia is a chronic pain syndrome that is associated with profound 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 the hospitalization 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 more 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 inflammatory bowel disease (38,165, 2.2%). Notably fibromyalgia was commonly associated with depression (500,420, 37.0%), obesity (379,324, 28.1%), hypothyroidism (367,895, 27.0%) and similar. About 63% of those who have pain are not seen by a rheumatologist; however, 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 Diabetics. 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 reasons patients 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 similarity between fibromyalgia 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.

References:


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estimating burden of cocaine or hallucinogen use disorders in common Musculo- 
skeletal 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 Interna- 
tional 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 coun-
seling, 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=6,880). 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 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) fol-
lowed by OA (n=400), RA (n=395), gout (n=135) and fibromyalgia (n=125). Respec-
tive rates per 1 million U.S NIS hospitalizations in 2013-2014 and the relative increase from 1998-2000 to 2013-2014 were: Gout, 0.12 (increase, 1.2-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 disorders (A), non-home discharge (B), and in-hospital mortality (C) per 100,000 NIS hospi-
talization claims. The x-axis shows rate per 100,000 NIS hospitalization claims and the y-axis the study periods  

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tology. JAS is on the speaker’s bureau of Simply Speaking. JAS is a member of the 
executive of Outcomes Measures in Rheumatology (OMERACT), an organ-
ization that develops outcome measures in rheumatology and receives arms-
length funding from 12 companies.  

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Table 1. Subtypes of NP in RMD  

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axial NP</td>
<td>14/31 (45%)</td>
</tr>
<tr>
<td>Demyelinating NP</td>
<td>2/31 (6%)</td>
</tr>
<tr>
<td>Mixed axonal and demyelinating NP</td>
<td>4/31 (12%)</td>
</tr>
<tr>
<td>Sensory NP</td>
<td>9/31 (28%)</td>
</tr>
<tr>
<td>SENSOMOTOR NP</td>
<td>5/31 (16%)</td>
</tr>
<tr>
<td>Motor NP</td>
<td>1/3 (3%)</td>
</tr>
</tbody>
</table>

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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 (VF), it is of interest to study the functional 
abilities of those patients. The scientific hypothesis suggests that osteoporo-
tic VF would cause muscle weakness, muscle dysfunction and conditional 
disturbances.  

Objectives: to estimate muscle strength, motor function and coordination disor-
ders 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 pro-
gram included back muscles tensodynamometry, balance tests and stabiometry.  

Results: Muscle strength deficiency was estimated in study group in trunk flexors 
(TF) — 40.9% and in trunk extensions (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 TF (15.6±4.9 vs 27.7±3.9 kgs, 
p=0.0002), TF (14.61±8.98 vs 21.28±8.38 kgs, p=0.0006), LLF (13.10±7.2 vs