Epidemiology and treatment of pain in RMDs

POS0011 THE ASSOCIATION BETWEEN BARIATRIC SURGERY AND CARPAL TUNNEL SYNDROME: A COHORT STUDY FROM SWEDISH NATIONAL HEALTHCARE REGISTRIES

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Background: Carpal tunnel syndrome (CTS) is a chronic compression neuropathy caused by entrapment of the median nerve in the wrist causing pain and sensory loss. Prior observational research suggested that obesity increased the risk of CTS. However, the impact of weight loss among obese patients on CTS has not been assessed to date.

Objectives: To assess the association between bariatric surgery and CTS in a secondary care setting.

Methods: We performed a propensity score (PS)-matched cohort study using data from Swedish nationwide healthcare registries (patient registry [secondary care], causes of death registry, prescribed drug registry). Patients aged 18-79 years who underwent bariatric surgery between 2006 and 2019 were matched to up to 2 obese bariatric surgery-free patients (called unexposed patients) based on their PS. PS-matching was carried out in order to select patients from the same distribution of age, sex, and baseline health status. The outcome was CTS diagnosed as a diagnosis of CTS in secondary care or carpal tunnel decompression surgery. After a 1-year run-in period, patients were followed in an "as-treated" approach. We applied Cox proportional hazard regression analysis to calculate hazard ratios (HR) with 95% confidence intervals (CIs). The primary outcome was the risk of CTS overall, and in subgroups of age, sex, bariatric surgery type, and by duration of follow-up.

Results: A total of 40,619 bariatric surgery patients were PS-matched to 63,540 obese unexposed patients. A total of 72.3% of bariatric surgery patients were women. Bariatric surgery patients had a mean age of 41.7 years and a mean BMI of 45.6. Bariatric surgery patients were younger and had a higher BMI compared to obese unexposed patients. The risk of CTS overall, and in subgroups of age, sex, bariatric surgery type, and by duration of follow-up is shown in Table 1.

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References:
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 greatest 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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EPILOGUE OF FIBROMYALGIA HOSPITALIZATIONS IN THE UNITED STATES

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Background: Fibromyalgia is a chronic pain syndrome that is associated with pro- tean 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 erythemato- tus 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 main- tained 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, mortal- ity, length of stay, and cost of care.

Results: Of 1,351,234 patients with fibromyalgia identified, 437,145 were admit- ted 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, 81.5%). 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 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 of 10,605 (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.

REFERENCES:

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MUSCULOSKELETAL MANIFESTATIONS IN PATIENTS WITH ENDOCRINE DISEASES IN TERTIARY SERVICE

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Background: Musculoskeletal diseases represent about 50 to 70% of the fre- quency 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 ostearticular 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 muscu- loskeletal 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 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 preva- lence 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 Anthypertensives and 25% Oral Anticoagulants. The most notable diagnoses in rheumatology are: Rheuma- toid 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 pre- liminary results showed the mutuality between endocrine diseases and muscu- loskeletal 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 pathophysiologic 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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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 poten- tially preventable public health issues. To our knowledge, epidemiological studies