MUSCULAR-SKELETAL DISORDERS – Health Care Use & Policy Studies

PMS46
 statistical data analysis of diagnosis related group 244: bone diseases and specific arthropathies with complications

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OBJECTIVES: To examine data for patients with DRG code 244 and compare that data to a control group of patients in order to identify statically significant variations amongst the groups. METHODS: A data set was obtained from the 2006 Healthcare Cost and Utilization Project (HCUP) Kids’ Inpatient Database (KID) consisting of 562 patients who had been diagnosed with patients with DRG code 244 and an additional 562 patients for the control group which was made up of patients with orthopedic, mental health, and substance abuse DRG codes other than 244. These data were analyzed using SAS Enterprise Guide. RESULTS: Analysis of frequency counts discovered a significantly lower percentage of patients in the study for women. This study compared with the control group’s 66%. African Americans in particular showed the greatest increase in patients for the study group with 36% of the study group consisting of African Americans in comparison to just 13% of the control group. Additionally, females represented a lower percentage in the study group. These observations were verified to be statistically significant via logistic regression. Additionally, linear regression models showed patients in the highest income quartile had significantly higher total charges than patients in lower income ranges. The wide range of ICD-9 diagnostic codes indicated that DRG 244 consists of a broad group of locally related conditions. CONCLUSIONS: The statistical analysis verified that many bone related diseases are much more prevalent in patients with darker skin tone, and more melanin in their skin. This supports current knowledge that melanin blocks UV radiation and reduces the body’s ability to make Vitamin D. The findings related to total charges warrant further research to determine if patients are receiving the proper care for their illness and also not receiving unnecessary tests and procedures.

PMB47
under of BMD measurements and bisphosphonate treatment in woman over age 50 with osteoporosis in a nationally-representative EMR database

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OBJECTIVES: To assess the extent of reporting of bone mineral density (BMD) measurements and pharmacologic treatment amongst women over age 50 and diagnosed with osteoporosis in a nationally-representative Electronic Medical Record (EMR) database. The diagnosis of osteoporosis is based on a history of a prior fragility fracture or a low BMD, defined as a T-score ≤ −2.5 on a dual energy x-ray absorptiometry (DEXA) test. DEXA is the standard measurement for bone density, which is usually calculated at the hip, and T-scores represent the number of standard deviations below (or above) the mean for young healthy women. Bisphosphonates are first-line pharmacologic therapy for both women and men with T-scores diagnostic of osteoporosis.

METHODS: The EMR database reviewed was the Medical Quality Improvement Consortium (MQIC) database from GE. This database contains EMR data collected from over 11,000 ambulatory providers in the United States and includes over 12 million patients as of April, 2009. Records were reviewed for all women over age 50 for the presence of a BMD test result and bisphosphonate prescriptions. RESULTS: Of 2,382,357 women over age 50, only 16,550 had a BMD test documented in their medical records. Of these, 16,505 had a T-score < −2.5, indicating osteoporosis. Among the women with a T-score diagnostic of osteoporosis, only 38% had a bisphosphonate prescription on record. Furthermore, nearly 10% of women with no BMD result on record were also prescribed bisphosphonates. CONCLUSIONS: The extent of under-reporting of BMD results in the outpatient records of these patients is difficult to assess. Of those patients with a BMD test result available indicating osteoporosis, surprisingly few (38%) are receiving first-line therapy with bisphosphonates. The possible underuse of BMD testing, and under treatment of osteoporosis, requires further investigation. In addition, the available data suggest that many providers may be prescribing bisphosphonates in the absence of a documented BMD measurement.

PMS48
hyaluronic acid management of knee osteoarthritis: impact on pain

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OBJECTIVES: To observe, under actual conditions of use, the pain effect obtained, in the context of management of knee osteoarthritis, using hyaluronic acid (injectable route). METHODS: Pragmatic, longitudinal and prospective follow-up carried out by rheumatologists in the context of their daily professional activities; the investigator does not change the prescription or management habits. RESULTS: A total of 191 patients are treated with hyaluronic acid. The average age is 64.72 years (± 7.34). Average pain scores of daily living (ADL) was measured by means of a visual analogue scale (VAS). It is 50.12 ± 19.32 at inclusion. At 6 months, this same average pain measured under the same conditions is 36.95. At 6 months, this same average pain measured under the same conditions is 36.95 ± 25.10. A third measurement at 12 months situates it at 38.10 ± 23.19. Pain during ADL is significantly reduced between inclusion and month 6 (p = 0.0023) and between inclusion and month 12 (p = 0.0012). With regard to pain measured at rest, it was also measured at inclusion, at 6 and 12 months, by means of VAS. There is a significant reduction in pain at rest between inclusion and 6 months (p = 0.0004) and the reduction between inclusion and month 12 is also significant (p = 0.0007). At inclusion, 6 and 12 months, the average pain observed is 33.48 ± 22.45, 19.90 ± 19.88 and 21.64 ± 22.94, respectively.

CONCLUSIONS: Our study, which assesses the effect on pain obtained in the context of management of subjects with knee osteoarthritis, using hyaluronic acid, showed a reduction in pain during ADL. This reduction in pain, which is significant at 6 months, then perpetuated at 12 months, shows the relevance of the treatment.