Paper #33

Effects of Cannabis Use Disorder Following Primary Total Hip Arthroplasty

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Introduction: With the continued legalization of cannabis use within the United States, studies evaluating the effects of cannabis use disorder (CUD) following primary total hip arthroplasty (THA) are limited. Therefore, the purpose of this study was to utilize a nationwide administrative database and determine whether CUD patients undergoing primary THA have higher rates of 1) in-hospital lengths of stay (LOS); 2) medical complications; and 3) costs of care.

Methods: CUD patients undergoing primary THA were identified and matched to controls in a 1:5 ratio by age, sex, and medical comorbidities by utilizing International Classification of Disease, Ninth Revision (ICD-9) codes. The query yielded 44,154 patients within the CUD (n=7,361) and control (n=36,793) cohorts. Primary endpoints of the study included comparing in-hospital LOS, 90-day medical complications, and 90-day episode of care (EOC) costs. Mann-Whitney-U tests were used to compare LOS and costs. Multivariate logistic regression analyses were used to calculate the odds (OR) of developing complications adjusting for age, sex, geographic region, and Elixhauser-Comorbidity Index. A p-value less than 0.001 was considered statistically significant.

Results: The study found CUD patients had significantly longer in-hospital LOS (4- vs. 3-days, $p<0.0001$) compared to controls. Additionally, CUD patients were found to have significantly higher incidence and odds (11.23 vs. 4.82%; OR: 1.47, $p<0.0001$) of developing medical complications within 90-days following the index procedures, such as pneumonia (1.30 vs. 0.27%; OR: 2.87, $p<0.0001$), respiratory failure (1.24 vs. 0.26%; OR: 2.28, $p<0.0001$), cerebrovascular accidents (1.10 vs. 0.30%; OR: 2.01, $p<0.0001$) in addition to other complications. Furthermore, CUD patients incurred significantly higher 90-day EOC costs ($24,585.96 vs. $23,725.93, $p<0.0001$).

Conclusions: With the continued legalization of cannabis use, the study is vital as it can allow orthopaedists and other healthcare professionals to adequately educate CUD patients of the potential complications following their procedure.

Notes