

Mental Health Disorders and Pain Modulation in Orthopaedic Shoulder Patients

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INTRODUCTION:

Various studies have examined the relationship between preoperative mental health diagnoses (MHD) and postoperative outcomes in orthopaedic shoulder patients. However, few investigations delve into the relationship between a preoperative MHD and postoperative opioid pain control regimens in patients who have undergone rotator cuff repair (RCR), total shoulder arthroplasty (TSA), and reverse total shoulder arthroplasty (RTSA). We hypothesize that orthopaedic shoulder patients with a preoperative MHD will be prescribed more opioids postoperatively than those without a MHD.

METHODS:

An IRB-approved retrospective chart review was performed on 438 patients, 18 years or older, who underwent RCR, TSA or RTSA. Patients were divided into two groups: those diagnosed with depression, anxiety, bipolar disorder, and/or schizophrenia (n=193); and those with no previous MHD (n=245). Demographics and comorbidities were collected. The prescription monitoring program (PMP) database was utilized to obtain the 30/90-day pre- and postoperative opioid scripts and the total 90-day postoperative Morphine Milligram Equivalents (MMEs) prescribed. Statistical outcomes were analyzed with the independent T-test, Mann-Whitney U test, One-way ANOVA, and Kruskal-Wallis test.

RESULTS:

Univariate analysis demonstrated significant differences between the MHD group and non MHD group in average 90-day postoperative opioid scripts (2.10 versus 1.55 respectively, $p<0.001$) and median 90-day postoperative Morphine Milligram Equivalents (MMEs) prescribed (225 MME versus 185.25 MME respectively, $p<0.001$). Among patients who were opioid naive 90 days preoperatively, significant differences were found in MMEs prescribed between the MHD and non MHD group (225 MME versus 150 MME respectively, $p<0.001$). Further analysis of opioid naive patients with specifically depression compared to patients with an alternate or no MHD diagnosis yielded significant differences in scripts (1.78 versus 1.33 respectively, $p=0.031$) and MMEs prescribed (225 MME versus 150 MME respectively, $p<0.001$).

DISCUSSION AND CONCLUSION:

This study found that RCR, TSA, or RTSA patients with a preoperative MHD were prescribed significantly more postoperative MMEs and more opioid scripts than those without MHD. Our findings support our hypothesis and emphasize the clinical importance of recognizing mental health disease while navigating postoperative pain control expectations. Given the rising prevalence of mental health disorders nationwide, considering the effect of these comorbidities on postoperative pain in RCR, TSA, and RTSA patients will be essential to enhance postoperative counseling and management by orthopaedic surgeons.