

Is There a Higher Risk of Complications with Increased Opioid Use after Shoulder Arthroplasty?

Vani Janaki Sabesan¹, Kiran Chatha, Justin N Elkhechen, Clyde Kehbama Fomunung, Alessia Carolina Lavin
¹Palm Beach Shoulder Service - HCA Atlantis Orthopaedics

INTRODUCTION: Although opioid-based medications have proven effective in both managing chronic arthritis pain and postoperative pain after orthopaedic surgery, there is a growing epidemic of prescription opioid abuse and dependence. The purpose of this study was to examine the impact of high opioid consumption on outcomes and complication rates following shoulder arthroplasty (SA).

METHODS: A retrospective review of 225 patients undergoing total shoulder arthroplasty (TSA) from 2014-2016 was performed. Opioid data was collected for a year surrounding surgery from PDMDs and dependence was defined as 3 months of continuous opioid prescriptions. Pre- and postoperative opioid use was stratified into low (0-2 prescriptions), mid (3-4 prescriptions) and high (5+ prescriptions) levels. Complications were recorded up to 1 year following surgery and categorized as revision surgeries, medical complications, and readmissions.

RESULTS: The average age of the cohort was 69.1 years with 122 females and mean ASA grade was 2.74. In the cohort, 81 patients were in the high consumption group, 73 were in the mid consumption group and 71 were in the low group. There were no differences in age, gender, or ASA class between groups ($p>0.05$). The rate of postoperative opioid dependence was significantly higher in the high consumption group at 47% compared to 30% in the overall population ($p<0.001$). For patients in the high, mid, and low opioid consumption groups, revision rates were 10%, 4.3%, 0% respectively. Relative risk of a revision in the high opioid consumption group was 6.07 times higher than mid and low consumption groups ($p=0.073$). Perioperative medical complication rates were 14% and 12% for the high and low groups ($p=0.675$) and the relative risks of medical complications and readmissions for other reasons in the high opioid consumption group (1.16 [CI: 0.56-2.39]) were comparable to the overall population (1.00 [CI 0.21-4.83]).

DISCUSSION AND CONCLUSION: It appears that high opioid consumption in the perioperative period may lead to an increased risk of opioid dependence and correlate with higher revision rates after TSA. Further research is needed to utilize risk assessment tools and follow opioid usage more closely to elucidate the link between increased opioid consumption and higher revision rates.