

Opioid Use Is Associated with Increased Risk of Postoperative Complications within a Colorectal Enhanced Recovery Protocol

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Abstract

Background: As the opioid epidemic escalates, preoperative opioid use has become increasingly common. Recent studies associated preoperative opioid use with postoperative morbidity. However, limited study of its impact on patients within enhanced recovery protocols (ERP) exists. We assessed the impact of preoperative opioid use on postoperative complications among colorectal surgery patients within an ERP, hypothesizing that opioid-exposed patients would be at increased risk of complications.

Methods: Elective colorectal cases from August 2013—June 2017 were reviewed in a retrospective cohort study comparing preoperative opioid-exposed patients to opioid-naïve patients. Postoperative complications were defined as a composite of complications captured by the American College of Surgeons National Surgical Quality Improvement Program. Logistic regression identified risk factors for postoperative complications.

Results: 707 patients were identified, including 232 (32.8%) opioid-exposed patients. Opioid-exposed patients were younger (57.9 vs 61.9 years; $p < 0.01$) and more likely to smoke (27.6 vs 17.1%; $p < 0.01$). Laparoscopic procedures were less common among opioid-exposed patients (44.8 vs 58.1%; $p < 0.01$). Median morphine equivalents received were higher in opioid-exposed patients (65.0 vs 20.1mg; $p < 0.01$), but compliance to ERP elements was otherwise equivalent. Postoperative complications were higher among opioid-exposed patients (28.5 vs 15.0%; $p < 0.01$), as was median length of stay (4.0 vs 3.0 days; $p < 0.01$). Logistic regression identified multiple patient- and procedure-related factors independently associated with postoperative complications, including preoperative opioid use ($p = 0.001$).

Conclusions: Preoperative opioid use is associated with increased risk of postoperative complications in elective colorectal surgery patients within an ERP. These results highlight the negative impact of opioid use, suggesting an opportunity to further reduce the risk of surgical complications through ERP expansion to include preoperative mitigation strategies for opioid-exposed patients.

Keywords: Enhanced recovery; colon and rectal surgery; opioids; postoperative complications