

Paper #87

Risk Factors for Opioid Use following Anterior Cruciate Ligament Reconstruction

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Summary:

Risk factors for post-operative opioid usage after ACLR are presented.

Abstract:

Introduction

The misuse of opioid medications has contributed to significant national crisis affecting public health as well as patient morbidity and medical costs. We sought to determine postoperative opioid utilization in patients undergoing ACLR and examine demographic, patient, and medical factors associated with postoperative opioid utilization.

Methods

Primary elective ACLR were identified using an integrated healthcare system's ACLR registry (2005-2015). Patients with cancer or those who had other elective knee surgery in the preceding year were excluded. We studied the effect of preoperative risks factors on number of dispensed opioid medication prescriptions (Rx) in the early (0-90 days) and late (91-360 day) postoperative periods using logit regression. Preoperative risk factors studied included: number of opioid Rx in preceding year, age, gender, race, activity at the time of injury, time from injury to ACLR, concomitant procedure or injury, American Society of Anesthesiologists (ASA) classification, body mass index (BMI), medical comorbidities, chronic pain comorbidities, and opioid-use comorbidities.

Results

Of 21202 ACLR from 20813 patients, 25.5% used at least 1 opioid Rx in the one-year preoperative period; 17.7% and 2.7% used two or more opioid Rx in the early and late postoperative periods, respectively. Risk factors associated with greater opioid Rx in both the early and late periods included: preoperative opioid use, age>20, ASA classification of 3 or more, 'other' activity at the time of injury, other meniscal repair, cartilage repair, chronic pulmonary disease, and substance abuse. Risk factors associated with opioid Rx use during the early only included: 'other' race, time from injury to ACLR of <90 days, meniscal injury repaired thru other methods, multi-ligament injury, and dementia/psychoses. Risk factors associated with two or more opioid Rx during the late period included: female, BMI>25, motor vehicle accident as the mechanism of injury, and hypertension.

Conclusion

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We identified several risk factors for postoperative opioid usage after ACLR. Awareness of risk factors for postoperative opioid usage may encourage a more targeted utilization of opioids in pain management. Surgeons may consider additional support or referral to a pain specialist for those individuals at highest risk.