

Conference abstract

An Opioid-Sparing Hernia Repair Pathway Lowers Opioid Use in Children While Providing Effective Pain Management

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INTRODUCTION

Protocolizing perioperative pain management may reduce opioid exposure in children. We designed a multimodal pain management protocol for pediatric ambulatory hernia surgery with the intent to reduce opioid use. This study reviews the impact of this protocol on opioid use, pain control, and patient/proxy satisfaction.

METHODS

Our protocol utilized child life services, regional anesthesia, and non-opioid analgesic adjuncts in the perioperative period. We reviewed all pediatric ambulatory hernia cases two years pre- and post-implementation. Protocol adherence was stratified by level of opioid use: high (no opioid use), medium (opioids used intra-operatively or post-operatively), and low adherence (opioids used intra-operatively and post-operatively). Patient or patient proxy surveys were used to measure satisfaction with the protocol and pain control.

RESULTS

A total of 721 cases were reviewed with 356 pre-implementation and 365 post-implementation cases. The median age and weight were 4.9 years (IQR 1.8, 7.5) and 18.7 kg (IQR 11.5, 26.1). The pre-implementation group included more male patients (65.7% vs 57.8%), but demographics and her-

nia types were otherwise similar. Following protocol implementation, there was a significant increase in the use of regional anesthesia (6.2% to 44.1%, $p<.0001$) and non-opioid analgesics intraoperatively (34.5% to 95.3%, $p<.0001$). This was accompanied by a significant decrease in intraoperative opioid use (86% to 8.2%, $p<.0001$) and postoperative opioid use (50.8% to 16.4%, $p<.0001$). Opioid prescriptions at discharge also decreased from 11.5% to 1.9% ($p<.0001$). Maximum reported pain scores were unchanged ($p=.706$), while minimum reported pain scores decreased ($p<.0001$). Rates of postoperative nausea/vomiting, postoperative complications, and unplanned emergency department visits or readmissions were also similar. Overall, 82.1% of patients or their proxy reported extreme satisfaction with their pain control in the hospital, and 76.1% of respondents reported extreme satisfaction with their pain control at home. High protocol adherence was observed in 77.3% of post-implementation cases.

CONCLUSIONS

Our opioid free pediatric hernia repair protocol significantly reduced perioperative opioid use, without compromising pain control, postoperative outcomes, or patient/proxy satisfaction. These findings support the wider integration of opioid-free multimodal pain regimens in pediatric surgical care.

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