

Enhanced recovery pathway for colorectal pediatric surgery: initial experience

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Background

Post-surgical enhanced recovery pathways have demonstrated benefits to postoperative outcomes; however, these pathways have not been developed or employed in pediatric surgery until recently. We report our preliminary data from a newly implemented multidisciplinary pediatric colorectal enhanced recovery after surgery (ERAS) program.

Methods

After an enhanced recovery pathway was created, revised and implemented, colorectal surgery patients were followed prospectively using an institutional quality database linked to National Surgical Quality Improvement Program 30-day postoperative outcomes. Patient data collected included demographics, comorbidities, operative course, ERAS process measures, and post-operative outcomes.

Results

We followed seven patients (6 males, 1 female) for eight surgical admissions from preoperative consultation to 30-days after surgery from January 1st 2016 to July 31st 2016. Six of the operations included colon resections (4 laparoscopic, 2 open), and two operations were for isolated ostomy reversals. Patients had no major comorbidities, and 43% were on steroids for inflammatory bowel disease. ERAS process measures for this early group were intermittently adherent (37%) with the least adherence seen with early mobilization (20%) and early oral nutrition advancement (0%). 100% percent of patients received multimodal anesthesia with an epidural, for open procedures, or transversus abdominis plane block, for laparoscopic procedures. 100% received preoperative education and a mechanical bowel prep with oral antibiotics. There were no surgical site infections in this group. This result compares favorably with our 2014-2015 surgical site infection rate in pediatric colorectal surgery of 10.8%.

Cases by Year	Pre-ERAS (2014-2015)	2016 (All pediatric colorectal cases) Through 11/1	2016 (ERAS)
Total # Colorectal Cases	103	165	8
SSI/ Wound Occurrence Rate	NSQIP – 10.8%	JHH QI Team – 3.6%	0%

Conclusions

Multidisciplinary pediatric surgical care can be further standardized with the use of bundled evidence-based interventions such as enhanced recovery pathways. Measuring adherence is

important for continuous quality improvement. Standardization of care in pediatric surgery may lead to improved postoperative outcomes.