Early Discharge after Enhanced Recovery Colectomy does Not Increase ED Visits and Readmissions: A Single Institution Analysis

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Background: With continued advancements in Enhanced Recovery Pathway (ERP) protocols, we have noticed a significant decrease in colorectal surgery emergency department (ED) visits and readmissions. When considering same-day discharge after colorectal surgery in ERP patients, it would be important to know if early discharge is associated with increased ED visits and readmissions. This study is to determine if discharge on postoperative days (POD) one or two is associated with increased rates of ED visits and hospital readmissions after left and right colectomy.

Methods: This is a single institution analysis of a prospectively maintained institutional colorectal surgery database between 07/01/2018 and 07/15/2022. The primary outcomes were ED visit and readmission rates for enhanced recovery open and minimally invasive right and left colectomy using logistic regressions models.

Results: 820 patients met inclusion criteria; mean age 62.8 years; 47.4% ASA-3, and 83.2% had a minimally invasive surgical approach. Hospital length-of-stay decreased over the study period. There were significant differences in discharge-day by diagnosis - 58.5% of patients with Crohn's disease were discharged on POD≥4 and 21.6% of those with benign colon neoplasia were discharged on POD 0-1 ($p < 0.001$). ED visits occurred in 12.9% of the study population and were not significantly different between discharge-day groups (p=0.096). Overall readmission rate was 8.5% and significantly different between discharge-day groups (0% POD-0 vs 8.3% POD-1 vs 5.8% POD-2 vs 6.9% POD-3 vs 12.9% POD≥4, p=0.041). Logistic regression showed that ED visits and readmissions for longer discharge-days (POD-2, POD-3, POD≥4) were not significantly different than POD-0-1. Readmission diagnoses for the study population were higher for ileus (17.1%) and SSI III (22.9%) than for AKI (1.4%) and SSI I/II (1.4%). Readmissions were not related to discharge day of the week (p=0.494).

Conclusions: Early discharge after left and right colectomy is not associated with increased rates of ED visits and readmissions. Same-day discharge may be feasible in selected enhanced recovery patients. Risks and benefits associated with same-day discharge require further investigation.