

Retrospective Cohort Study Examining the Effect of Having a Prior Colectomy on Postoperative Outcomes of Adult Laminectomy Patients

Introduction: The impact of having a colectomy on postoperative outcomes of adult patients undergoing a laminectomy is poorly understood. This retrospective cohort study examines postoperative outcomes of adult patients undergoing laminectomy surgery who have had a prior colectomy and who have not had a prior colectomy.

Methods: The National Inpatient Sample was queried to identify patients who underwent laminectomy surgery from 2005 – 2012. Patient demographics and incidence rates of patients that have had a prior colectomy were reported. A 1:1 propensity score match was used to control for age, sex, and obesity. A univariate analysis was used to identify differences in postoperative complications in the colectomy cohort. A multivariate logistic regression analysis was used to determine colectomy status as an independent risk factor for postoperative outcomes.

Results: 630 colectomy patients and 630 non-colectomy patients were identified with similar sex (45.4% vs 44.6% female), age (66.7 vs 66.8 years) and obesity (12.7% vs 13.7%) distributions. Prior colectomy patients were found to be at increased risk for postoperative surgical complications (OR=1.8 [1.3-2.4]), wound complications (OR=2.1 [1.3-3.4]), transfusions (OR=1.6 [1.1-2.5]), medical complications (OR=3.3, [2.2-4.7]), gastrointestinal complications (OR=8.3 [2.5-27.6]), acute renal failure (OR=2.9 [1.6-5.2]), sepsis (OR=6.3 [2.9-13.4]), and in-hospital mortality (OR=9.0 [2.7-29.9]) (all $p < 0.05$) (Table 1).

Conclusions: Adult laminectomy patients with prior colectomies had increased risk of postoperative surgical complications, medical complications, and in-hospital mortality. These findings should be taken into consideration in colectomy patients to optimize them prior to laminectomy surgery and to prepare providers for such potential complications in the postoperative period