Beth Israel Lahey Health
Lahey Hospital & Medical Center

Impact of Inflammatory Bowel Disease on the Risk of Venous Thromboembolism Following Bariatric Surgery

Racquel S. Gaetani MD, Victoria Valdez MD, Jerry Zhang MD, Rachel Brandes MD, Abigail Solom MD MBA, Georgios Orthopoulos MD PhD FACS

Beth Israel Lahey Health
Winchester Hospital

INTRODUCTION

- Inflammatory bowel disease (IBD), including Crohn's Disease and Ulcerative Colitis, is associated with an increased risk of venous thromboembolism (VTE) due to systemic inflammation and coagulation abnormalities.
- Bariatric surgery is increasingly being performed in patients with IBD and is associated with an increased risk of VTE irrespective of IBD
- VTE risk assessment tools exist and extended thromboprophylaxis is recommended for patients with moderate to high risk, though these tools do not account for unique thrombotic risk in IBD patients.
- No IBD-specific guidelines for postoperative thromboprophylaxis in bariatric surgery exist.

OBJECTIVES

1. Evaluate the incidence of VTE in IBD patients undergoing bariatric surgery
2. Observe current post-operative thromboprophylaxis prescribing practices

METHODS

Retrospective cohort study of patients with IBD who underwent bariatric surgery between July 1, 2015 and March 30, 2024 at 4 hospitals within a larger hospital system.

Inclusion criteria:

- Patients ≥ 18 years of age who underwent bariatric surgery (sleeve gastrectomy, Roux-en-Y gastric bypass, gastric band, biliopancreatic diversion with duodenal switch) identified via CPT code
- who had a diagnosis of IBD identified via ICD 9 and/or 10 code.

RESULTS

Patient demographics

- 36 patients with IBD underwent bariatric surgery during the study period
- 55.6% had Crohn's disease and 44.4% had Ulcerative colitis. Most (77.8%) were in disease remission.
- Most common procedure was sleeve gastrectomy (86.1%)

Postoperative outcomes

- There were no observed cases of deep venous thrombosis, pulmonary embolism, or porto-mesenteric vein thrombosis within 90 days of surgery
- All patients received postoperative inpatient chemoprophylaxis
  - 2/3 subcutaneous low molecular weight heparin (Lovenox)
  - 1/3 subcutaneous unfractionated heparin.
- The median duration of VTE prophylaxis was **1.47 days** with no difference between groups
- 2 patients, both of which had Crohn's disease, required extended chemoprophylaxis for 6 weeks
- 66.7% of patients did not experience any post-operative complications. The most common complications for both groups was nausea/vomiting (11.1%) followed by dehydration requiring intravenous fluids (8.3%)

	Crohn's Disease N = 20	Ulcerative Colitis N = 16	P value
Post-operative VTE prophylaxis, n (%)			0.61
Unfractionated heparin	7 (35.0%)	7 (43.8%)	
Low molecular weight heparin (Lovenox)	13 (65.0%)	9 (56.2%)	
Chemoprophylaxis beyond hospitalization, n (%)	2 (10.0%)	0 (0.0%)	0.49
Duration of VTE prophylaxis (days), median (IQR)	1.47 (0.98 – 2.13)	2.13 (2.13 – 2.13)	0.40
90-day DVT, PE, or port-mesenteric vein thrombosis, n (%)	0 (0.0%)	0 (0.0%)	-
90-day bleeding complication, n (%)	0 (0.0%)	0 (0.0%)	
90-day complications, n (%)			0.54
None	14 (70.0%)	10 (62.5%)	
Dehydration requiring IVF	2 (10.0%)	1 (6.2%)	
Nausea/vomiting	2 (10.0%)	2 (12.4%)	
SBO requiring re-operation	0 (0.0%)	1 (6.2%)	
Abbreviations: DVT, deep vein thrombosis; IVF, intravenous fluid; PE, pulmonary embolism; SBO, small bowel obstruction; VTE, venous thromboembolism;			

CONCLUSIONS

Bariatric surgery in patients with IBD was not associated with increased postoperative VTE risk or major complications within 90 days postoperatively

These findings underscore the potential for bariatric surgery to be safely performed in IBD patients

Larger cohorts are needed to refine chemoprophylaxis recommendations for IBD patients undergoing bariatric surgery

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CONTACT

Racquel Gaetani, MD
Racquel.s.Gaetani@lahey.org
X: @Racquelgaetani