BLEEDING AFTER BARIATRIC SURGERY

H. Hande Aydinli MD, Cornelius Vulpe MD, Nilufar Tursunova MD, Sharique Nazir MD, George Ferzli MD
Department of Surgery, New York University Langone Medical Center, NY

NYU Langone Health

INTRODUCTION

- Bleeding is one of the most common complications after bariatric surgery
- Given the medical comorbidities of the bariatric population, management may be very challenging
- Therefore, we established a quality improvement project to identify the reasons behind bleeding after bariatric surgery and implement a perioperative protocol to optimize outcomes
- We aimed to share our initial experience with bleeding after bariatric surgery

METHOD

- Patients who underwent robotic or laparoscopic sleeve gastrectomy or Roux-en-Y gastric bypass surgery over the last 3 years were identified from a prospectively collected retrospective institutional database
- Bleeding was defined as extraluminal bleeding requiring blood transfusion within 30 days of surgery
- Demographics, preoperative and operative factors and management were reviewed

RESULTS

A total of 789 patients were reviewed and 10 were included in the study (Table)

Table- Demographics, preoperative comorbidities and management

	Age, years	Gender	BMI, kg/m2	Procedure	Comorbidities	Etiology of bleeding	Intervention/ Management
Patient 1	39	M	48.3	LSG	CAD w stents on ticagrelor, HTN, HL	Unknown	EGD, no source of active bleeding
Patient 2	54	F	54.7	LSG	GERD, COPD, CAD w stent, Asthma, HIV	Staple line bleeding	EGD, staple line bleeding identified and treated via clipping
Patient 3	53	F	45.1	LSG	OSA, DM, HTN, HL, CKD	Unknown	Close hemodynamic monitorization
Patient 4	23	F	54.8	LSG	None	Port site bleed	Close hemodynamic monitorization
Patient 5	40	M	41.5	LSG	HTN, Ankylosing Spondylitis, Hyperthyroid, Psoriasis	Staple line bleed	Close hemodynamic monitorization
Patient 6	58	F	44.9	RSG	DM, HTN, Hypothyroid	Staple line bleed	Close hemodynamic monitorization
Patient 7	34	F	36.1	RSG	Asthma, Essential thrombocytosis (JAK2 mutation), Pseudo motor cerebri, h/o DVT	Staple line bleed	Close hemodynamic monitorization
Patient 8	48	F	37	LRYGB	DM, GERD, HTN	Unknown	EGD, no source of active bleeding
Patient 9	69	M	47.9	LRYGB	OSA, CAD, MI w stent, AF on apixaban, GERD, HL	Marginal ulcer bleed	EGD, managed nonoperatively
Patient 10	48	F	39.3	LRYGB	OSA, GERD	Port site bleed	Close hemodynamic monitorization

AF: atrial fibrillation, CAD: Coronary artery disease, CKD: Chronic kidney disease, COPD: chronic obstructive pulmonary, DM: Diabetes mellitus, DVT: Deep venous thrombosis, EGD: esophagogastroduodenoscopy, GERD: Gastroesophageal reflux disease, HTN: Hypertension, HL: Hyperlipidemia, LSG: Laparoscopic sleeve gastrectomy, RSG: Robotic sleeve gastrectomy, LRYGB: Laparoscopic Roux-en-Y gastric bypass, MI: myocardial infarction, OSA: Obstructive sleep apnea.

RESULTS

- Eighty-one percent of the patients underwent sleeve gastrectomy (n=641), and 10.7% of these patients underwent robotic approach
- Incidence after robotic sleeve gastrectomy (RSG) was highest (2.9%) which was followed by LRYGB (2%) and LSG (0.8%) (p=0.5)
- Patient demographics, preoperative comorbidities, etiology of the bleeding and management are demonstrated in Table
- Etiology was not identified in three patients
- All patients were managed non-operatively, however an EGD was done in four patients
- Most common reason for bleeding was staple line bleeding (40%)
- All patients were given appropriate VTE prophylaxis preoperatively

CONCLUSIONS

- The incidence of postoperative bleeding was more common after Robotic Sleeve Gastrectomy
- The differences in stapler height and reinforcement as well as trocar placement with robotic surgery might be related with the results

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