Robotic Approach to Reduction of Retrograde Small Bowel Intussusception in Bariatric Patients

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Abstract

Small bowel intussusception (SBI) after Roux-en-Y gastric bypass is a rare complication occurring in 0.1 – 1.2% of cases[1]. Although antegrade and retrograde intussusception can occur at both the gastro-jejunal or jejuno-jejunal anastomosis, the latter is more likely to be associated with small bowel obstruction. Surgical approaches can vary from reduction alone, reduction and enteropexy or resection and reconstruction[2]. Recurrence is estimated at 22% with resection and reconstruction associated with the lowest incidence[3]. However, here is a paucity of literature on clear recommendations for management. We report a case series of patients with jejuno-jejunal SBI managed surgically using the robotic approach

Methods

This is a retrospective case series of patients who presented to our institution with SBI causing obstruction after Roux-en-Y gastric bypass. Electronic medical records of patients diagnosed with SBI requiring surgery were reviewed and 6 patients were identified. Patient demographics were collected, as well as postoperative outcomes and complications

Results

All patients included in our cohort were female with a median age of 39.5 years. The median BMI at the time of presentation was 25.5 kg/m^2. The median time of presentation after Roux-en-Y gastric bypass was 6.5 years. On presentation, all patients were hemodynamically stable. Diagnosis of small bowel obstruction at an intussusception lead point was confirmed on Computed Tomography scan (Figure 1).

All patients underwent robot-assisted diagnostic laparoscopic within 12 hrs of presentation which revealed retrograde intussusception immediately distal to jejuno-jejunal anastomosis. Five patients underwent reduction only; resection and reconstruction was performed in 1 patient due to inability to reduce retrograde intussusception (Figure 2). Out of 5 patients who underwent reduction only: 1 patient had immediate recurrence on post-operative day 2 and was taken back for resection and reconstruction. Return of bowel function occurred at a median of 2 days with a median length of stay of 4 days. On long term follow up, 2 patients had recurrent small bowel obstruction within 1 year without evidence of intussusception which were managed non-operatively with successful return of bowel function within 2 days.



Figure 1: Computed Tomography (CT) scan of the abdomen and pelvis; coronal view (left); axial view (right).

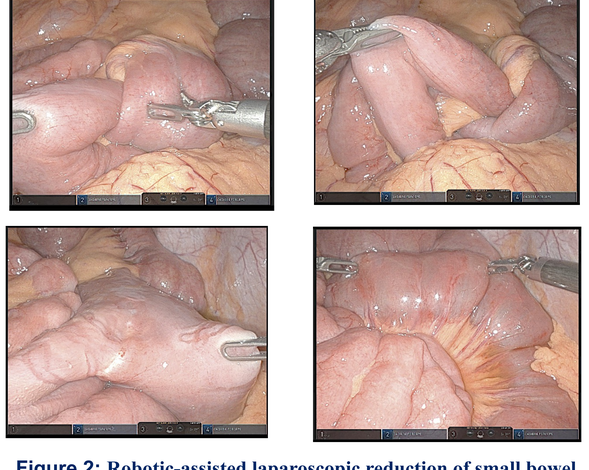


Figure 2: Robotic-assisted laparoscopic reduction of small bowel jejuno-jejunal intussusception.

	Overall Cohort (N=6) n (%)
Age (years) Median (IQR)	39.5 (36.7, 40.7)
Sex (Female)	6 (100)
Race (White)	5 (83.3)
ASA class III	4 (66.6)
BMI (kg/m2) Median (IQR)	25.5 (22.3, 32.3)
Presentation after index Roux-en-Y gastric bypass (years) Median (IQR)	6.5 (5.2, 6.8)
Surgery Performed	
Reduction Only	5 (83.3)
Resection and Reconstruction	1 (16.7)
Operative Time (min) Median (IQR)	36 (30.5)
Reoperation (for recurrent intussusception)	1 (16.7)
Total LOS (days) Median (IQR)	4 (2.2, 5)

Conclusion

Small bowel intussusception after Roux-en-Y gastric bypass is a poorly understood entity with limited evidence on best approaches to management. Reduction only using the robotic approach has been shown to be effective in our cohort. Multi-center future studies are necessary to compare outcomes of different approaches and can help mitigate the rare presentation of retrograde intussusception in bariatric patients.

References

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