

Diagnostic and therapeutic outcomes after theatre visits – Post Bariatric Surgery

Hrishikesh Salgaonkar, Ning Lo, Nagammapur Balaji, Marimuthu Kanagaraj, Alistair Sharples, Vittal Rao

*Department of Bariatric and Upper GI Surgery
University Hospitals of North Midlands
Stoke-on-Trent, United Kingdom*



Aim

- Complications post bariatric surgery is not uncommon, especially abdominal pain
- Chronic abdominal pain after bariatric surgery is associated with diagnostic and therapeutic challenges
- The aim of this study was to determine important causes of abdominal pain after bariatric surgery and outcomes of elective surgical interventions done to manage this important problem in these patients

Methods

Study group

- *Patients between Jan 2016 to Dec 2022*
- *Patients who underwent laparoscopic bariatric procedures*
- *Patients subjected to elective surgical interventions for abdominal pain post bariatric surgery*
- *Patients with at least 30 day follow up post the therapeutic intervention*

Exclusion criteria

- *Emergency surgical interventions*
- *Revisional bariatric surgery*
- *Gastric band related complications*
- *Gallstone disease & related complications*
- *Banded sleeve/RYGB etc*
- *Patients presenting within 30 days of primary bariatric surgery*
- *Open bariatric surgery/Previous major abdominal surgery*

Methods

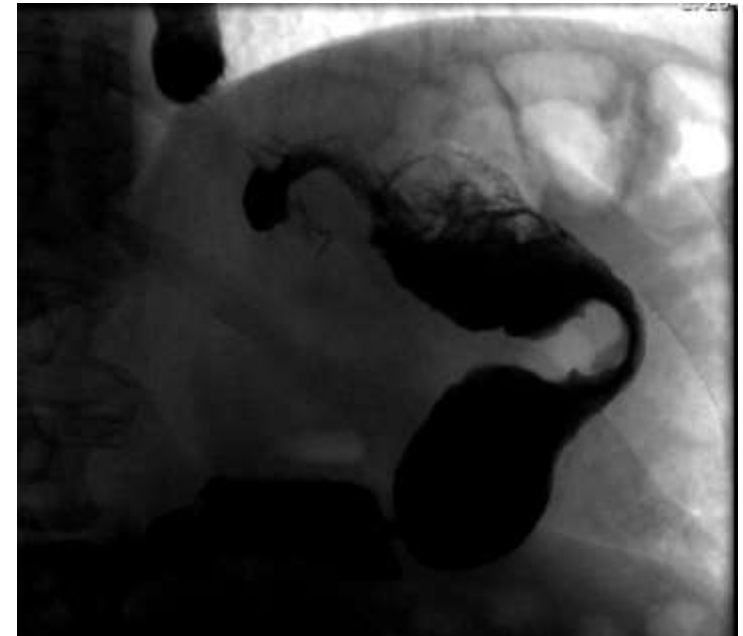
- Patient demographics
- Primary surgical intervention – LSG/RYGB/OAGB etc
- Time of presentation
- Investigations
- Therapeutic surgical intervention
- Intra-operative findings
- Symptom resolution

Results

- January 2016 to December 2022
- 1109 patients underwent bariatric interventions
- 124 sleeve gastrectomy, 11 OAGB, 974 RYGB
- 95 patients underwent elective surgical interventions in the form of diagnostic laparoscopy/definitive intervention +/- OGD

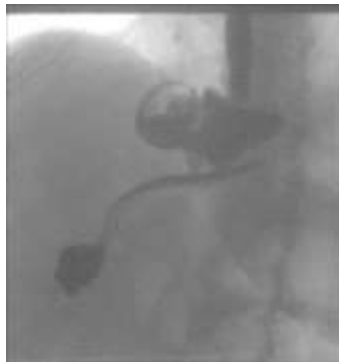
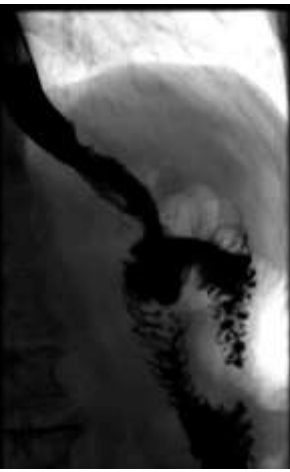
Post sleeve gastrectomy – 124 patients

- Gastric sleeve herniation – 2 pts underwent Hiatal hernia repair
- Adhesions – 4 pts underwent adhesiolysis
- Sleeve torsion/stricture -2 pts – underwent revision to RYGB
- Port site hernia – 1 pt - hernia repair



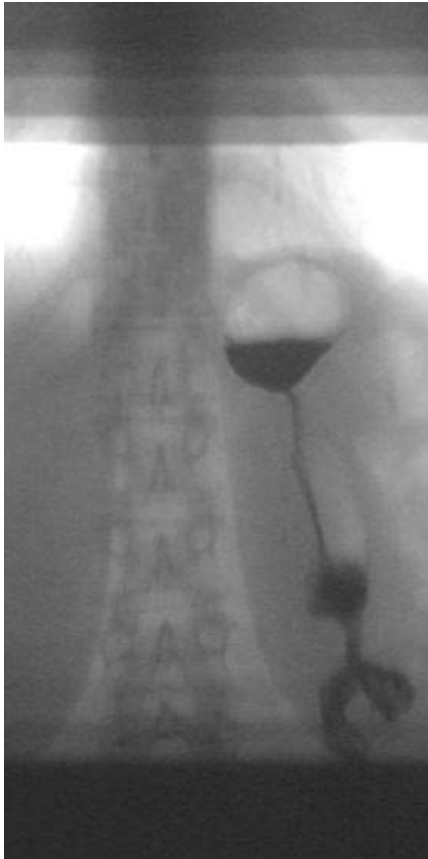
Post Roux-en-Y gastric bypass

- Candy cane deformity – 24 pts – *candy cane segment excision*
- Internal hernia – 25 pts – *closure of defect*
- Internal hernia + candy cane deformity – 6 pts - *defect closure + segment excision*
- Adhesions between blind end of GJ and JJ anastomosis – 2 pts – *adhesiolysis*
- Adhesions (abdo wall or interloop) – 6 pts - *adhesiolysis*
- Gastric pouch herniation – 3 pts – *hiatal hernia repair*
- Roux-O misconstruction – 1 pts – *correction to RYGB*
- JJ anastomosis intussusception – 2 pts – *reduction and plication*
- Gastro-gastric fistula – 1 pt – *fistula division*



One anastomosis gastric bypass

- Internal herniation and gastric pouch twist – revision to RYGB



- 15 patients had a negative diagnostic laparoscopy and no cause for the abdominal pain was found

Results

Complications	No. of patients	Median presentation	Range
Internal hernia	25	35 months	7 – 157 months
Candy cane segment	24	48 months	7-184 months
Candy cane/internal hernia	6	30.5 months	9-67 months
Adhesions between GJ & JJ anastomosis	2	14 months	8-20 months
Gastric pouch hiatal hernia	3	26 months	17-40 months
Gastric sleeve herniation	2	33.5 months	22-45 months
Roux-O misconstruction	1	13 months	13 months
Intra-abdominal adhesions	10	91.5 months	11-184 months
Port site hernia	1	19 months	19 months
JJ intussusception	2	49.5 months	33-66 months
Post OAGB gastric pouch torsion/twist	1	14 months	14 months
Gastric sleeve torsion/stricture	2	13.5 months	11-16 months
Gastro-Gastric fistula	1	44 months	44 months
No cause found on laparoscopy	15	52 months	10-172 months
Total	95	47 months	7-184 months

Summary

- Total 1109 patients over 7 years study duration
- 124 sleeve gastrectomy, 11 OAGB, 974 RYGB
- 95 patients required elective interventions
- 15 patients no cause found despite laparoscopy
- 80 patients underwent definitive intervention
- 77 patients (96.2%) demonstrated – resolution/improvement in symptoms

Role of investigations

- Barium – remains good modality for Sleeve/gastric pouch/GJ anastomosis anatomical abnormality
- CT scan – 84% false negative rate
- Diagnostic laparoscopy – important modality in our armamentarium.
- Surgeons should keep a low threshold to offer the same, if persistent symptoms despite negative investigations

Conclusion

- Post bariatric surgery patients may present with a wide range of complications, including life threatening entities
- Evaluation should include a detailed history, clinical examination and targeted investigations
- In absence of a clear diagnosis, a low threshold for diagnostic laparoscopy is of paramount importance
- Understanding the pathogenesis of complications associated with operative technique at the primary surgery can help us to reach an early diagnosis and reduce overall morbidity

