Outcomes for revision of gastric bypass for abdominal pain: is bypass revision for pain a worthwhile endeavor?

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Background

Abdominal pain accounts for 15-30% emergency department after gastric bypass[1].

Common etiologies; marginal ulcers, afferent loop syndrome, small bowel obstruction, internal hernia GERD[2].

Some etiologies can progress with need for procedures, interventions and eventual surgery to manage symtpoms while others necessitate urgent to emergent surgical intervention.

We hypothesize that certain intraoperative findings in patients with abdominal pain after gastric bypass will respond better to a surgical intervention than some other clinical findings.

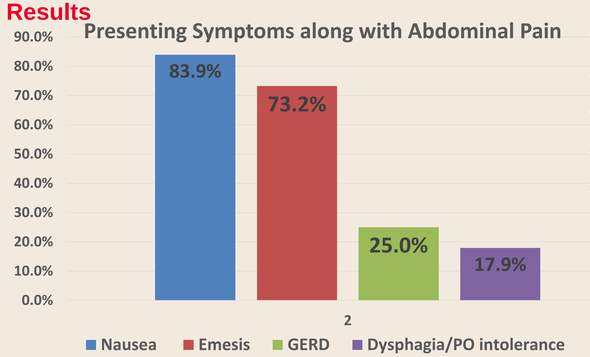
Study Design

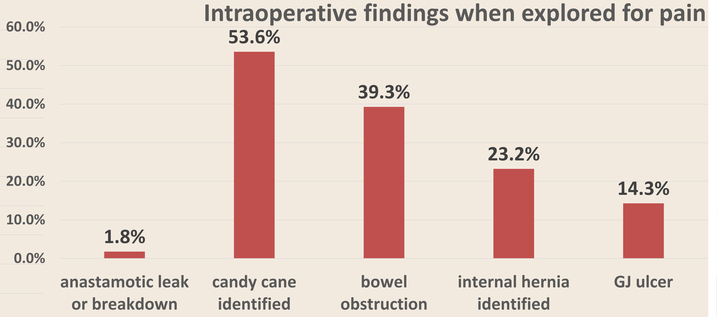
- Single hospital system retrospective cohort study of 201 gastric bypass revision patients from 1/1/12 to /29/21.
- In depth chart review of 56 patients who presented with abdominal pain was reviewed for demographics, presenting symptoms, radiographic, endoscopic and intraoperative findings and postoperative outcomes (symptom resolution).
- Univariate analysis was used to compare findings with post op outcome.
- During the follow up period, significant improvement in abdominal pain was defined as resolution or improvement from pre revision symptoms.

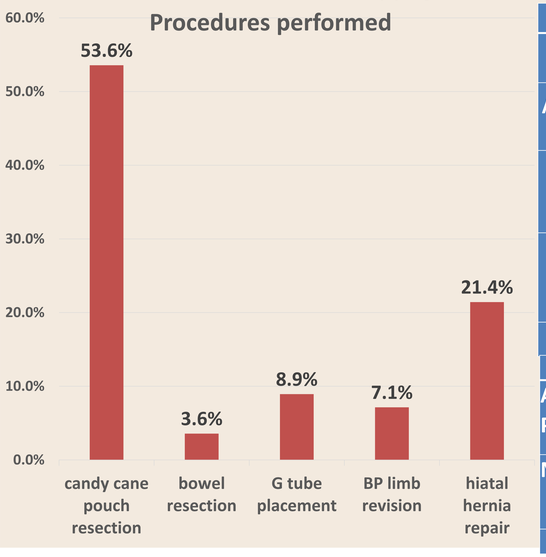
Results

- 52 females/4 males
- Mean age 47.6 ± 10.1 years
- Mean interval to revision from initial bypass was 88.9 ± 62.5 (range 0.6 to 216) months.
- Follow up available for patients was between 0.13 to 60 months.

Results







Overall trend of abdominal pain and nausea/vomiting after revision

		0-1 month	1-3 month	3-6 month	6-12 month	12-24 month	24-36 month	>36 month	final follow up
Abdominal Pain	n	53	42	34	27	30	23	11	0.0%
	worse	0.0%	0.0%	0.0%	0.0%	3.3%	4.3%	0.0%	1.8%
	unchanged	22.6%	35.7%	52.9%	48.1%	53.3%	52.2%	54.5%	39.3%
	improved	77.4%	64.3%	47.1%	51.9%	43.3%	43.5%	45.5%	58.9%
Nausea and Vomiting	worse	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	unchanged	25.5%	32.6%	40.0%	51.9%	40.0%	33.3%	33.3%	30.4%
	improved	74.5%	67.4%	60.0%	48.1%	60.0%	66.7%	66.7%	69.6%

		Internal hernia	Candycane
Abdominal Pain	0	7.7%	3.33%
	1	30.8%	36.67%
	2	61.5%	60.00%
Nausea	0	0.00%	0.00%
	1	30.77%	26.67%
	2	69.23%	73.33%

0=worse, 1=persistent, 2= improved

Results

Of the 33 patients with improved/resolved pain;

- 27.3% had isolated candy cane resection,
- 21.2% had candy cane resection with hiatal hernia repair.
- 3% had candy cane resection and internal hernia reduction.
- 3% had candy cane resection and gastrojejunostomy (GJ) revision for ulcer.
- 18.2% had isolated internal hernia reduction.
- 3% had internal hernia with GJ ulcer and perforation.
- 3% had partial gastrectomy and fistula take down from GJ ulcer.

Conclusions

1. The most common associated symptom with pain was nausea and vomiting. These symptoms showed improvement that persisted even at long term follow up.
2. Pain improvement was greatest immediately after the procedure but this benefit was noted to decrease as follow up time went further out in over 50% of patients.
3. Candy cane resection was the pain etiology that responded the most favorably to intervention.
4. **In conclusion,** surgical intervention for pain after gastric bypass is most successful if candy cane is the condition that is found and treated. Pain resolution is in early follow up but wanes with time. Nausea and vomiting likely to have persistent improvement after intervention.

References

1.Greenstein AJ, O'Rourke RW. Abdominal pain after gastric bypass: suspects and solutions. Am J Surg. 2011 Jun;201(6):819-27. doi: 10.1016/j.amjsurg.2010.05.007. Epub 2011 Feb 18. PMID: 21333269; PMCID: PMC3123682.
2.Griffith PS, Birch DW, Sharma AM, Karmali S. Managing complications associated with laparoscopic Roux-en-Y gastric bypass for morbid obesity. Can J Surg. 2012 Oct;55(5):329-36. doi: 10.1503/cjs.002011. PMID: 22854113; PMCID: PMC3468646.

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