The Need for Treatment of Acute Cholecystitis Post RYGB: A Comparison of incidence Between Perigastric Dissection and Pars Flaccida Transection Techniques for Creating Gastric Pouch in RYGB Patients

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INTRODUCTION

- There are two methods for gastric pouch creation in Roux-en-Y Gastric Bypass Surgery (RYGB):
  - **Pars Flaccida Transection:** direct transection of the perigastric neurovascular bundle containing branches of the vagus nerve
  - **Perigastric Dissection:** creation of a tunnel adjacent to the lesser curvature of the stomach, which preserves the structures of the perigastric neurovascular bundle
- Prior studies have reported increased rates of dumping symptomatology and intra-abdominal abscess in the pars flaccida transection
- No prior studies have compared the need for subsequent cholecystectomy between these methods

PURPOSE

- **Study Question:** Do the rates of cholestasis differ between patients who underwent RYGB Surgery via the Pars Flaccida Transection compared to those who underwent a Perigastric Dissection?
- **Hypothesis:** We hypothesized that the patient who underwent pars flaccida transection would have a higher risk of cholecystectomy secondary to cholestasis, given the loss of parasympathetic innervation of the gallbladder from vagus nerve damage.

METHODS

- Retrospective review of all adult patient who underwent RYGB surgery at our institution from January 2020-September 2023, grouped by method of gastric pouch creation (pars flaccida transection vs. perigastric dissection)
- Patients were excluded if they had a cholecystectomy prior to or at the time of bypass surgery were excluded or if they were lost to follow up before 1 year
- Patients who had a cholecystectomy of were placed on medications for cholelithiasis within 1 year of surgery were identified
- Welch's T-Tests and Chi square tests were conducted using Python Pandas Script Stats Package, alpha set at 0.05

FIGURE 1: SURGICAL IMAGES OF THE PERIGASTRIC DISSECTION

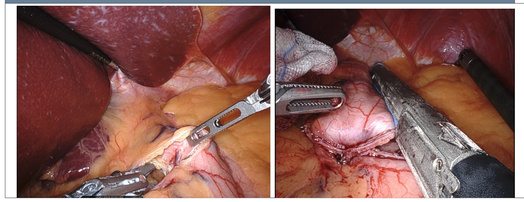


FIGURE 2: SURGICAL IMAGES OF THE PARS FLACCIDA TRANSECTION

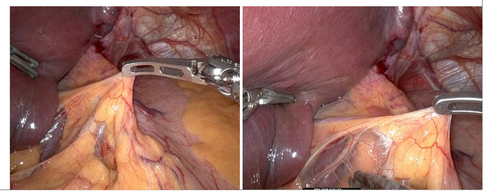


TABLE 1: ASSOCIATION BETWEEN RYGB METHOD AND INCIDENCE OF CHOLELITHIASIS (N = 267)

	Pars Flaccida (n=84)	**Perigastric Tunneling (n=183)**	
	Percent of patients (%)	Percent of patients (%)	P-values
Cholecystectomy	8.33	7.40	1.000
Cholestasis medications	8.33	8.46	1.000
Both	16.67	15.87	1.000

TABLE 2: ASSOCIATION BETWEEN BMIS AND RYGB METHOD (N = 267)

	Pars Flaccida (n=84)	**Perigastric Tunneling (n=183)**	
	Average	Average	P-value
BMI (lbs/in^2)	46.72	45.50	0.290
1 year post op BMI (lbs/in^2)	32.73	30.61	**0.013**
Change in BMI ((lbs/in^2))	13.97	14.89	0.249

RESULTS

- 267 patients met inclusion criteria
  - 84 underwent pars flaccida transection
  - 183 underwent perigastric dissection
- There was no significant difference in the incidence of cholelithiasis between groups (Table 1)
- There was a significant difference between the groups in BMI 1-year post-op, but not in baseline BMI or change in BMI (Table 2).

CONCLUSION

In patients who underwent RYGB surgery at NYU Langone Long Island Hospitals, **pars flaccida transection did not result in increased rate of cholecystectomy or cholelithiasis**, when compared to perigastric tunneling, making it an acceptable technique for creating the gastric pouch

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