Enhanced recovery after surgery facilitates next day discharge for laparoscopic Roux-en-Y gastric bypass: A single centre experience

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Background

Laparoscopic Roux-en-Y gastric bypass (LRYGB) remains one of the most performed bariatric procedures worldwide. Most patients experience an inpatient stay of two or more days following surgery (1). More recently however, enhanced recovery after surgery (ERAS) protocols have been implemented to facilitate earlier recovery and discharge after bariatric surgery (2). In the province of Manitoba, Canada, all bariatric care is provided through the Centre for Metabolic and Bariatric Surgery (CMBS) with most operations taking place at a single community hospital. A short-stay overnight unit with ERAS protocols was introduced in November 2017 with additional pathways to transfer patients with anticipated prolonged stay to a designated tertiary site.

Methods

A retrospective review was conducted on prospectively collected data for all LRYGB conducted November 2017- December 2020.

- Indications for surgery included BMI ≥ 35 with obesity related comorbidities or BMI 40 to 55 without comorbidities, age 18-65 and approval by a multidisciplinary bariatric team.
- Patients were reviewed by the surgeon or designate (Bariatric Surgical Fellow) at 16-21 hours postoperatively.
- Patients were educated regarding signs of potential complication and required to reside within one hour of a tertiary centre in Winnipeg, MB for seven days.
- Patient data was reviewed to report descriptive outcomes of postoperative length of stay (LOS), 30-day emergency room (ER) presentations, 7-day readmissions and 30-day readmissions at the tertiary site.

The first formal ERAS guideline for bariatric surgery was published in 2016 and the authors' protocols established in 2017 are in line with 2020 Canadian consensus guidelines (2,3). The LRYGB technique is standardized across all participating surgeons. Of note: gastrojejunostomy is formed with linear stapler and suture of common enterotomy, air-leak test is performed thereafter.

Results

439 patients underwent LRYGB from November 2017 to December 2020.

- The postoperative day (POD) 1 discharge rate was 94.8% and the POD 2 discharge rate was 1.8% (Figure 1).
- Anticipating prolonged LOS necessitated transfer of 2.7% (n=12) patients to the dedicated tertiary care hospital.
- Transfers were related to delayed intraabdominal hemorrhage in 66.7% (n=8) of cases and the majority required reoperation, while 16.7% (n=2) of transfers were precautionary due to technically challenging procedures.
    - There were two brief ICU admissions and no mortalities.

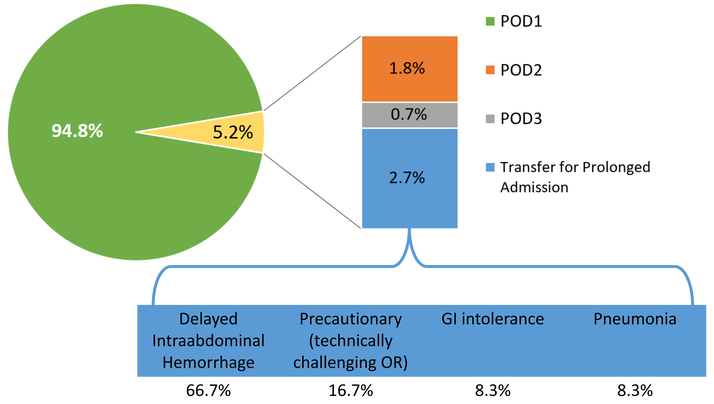


Figure 1. The percentage of LYRGB patients discharged on postoperative day or transferred to a designated tertiary care site for anticipated prolonged admission. Reasons for prolonged admission are subsequently displayed.

The 30-day ER presentation rate was 10.3% (n=45) in which the majority were managed by the emergency department (Figure 2).
7-day readmission rate was 2.7% (n=12) and the 30d readmission rate was 4.1% (n=18).

- The most common indication for readmission was gastrointestinal intolerance, which was resolved with supportive management
- 2/3rds of all readmissions were captured by postoperative day 7

Results

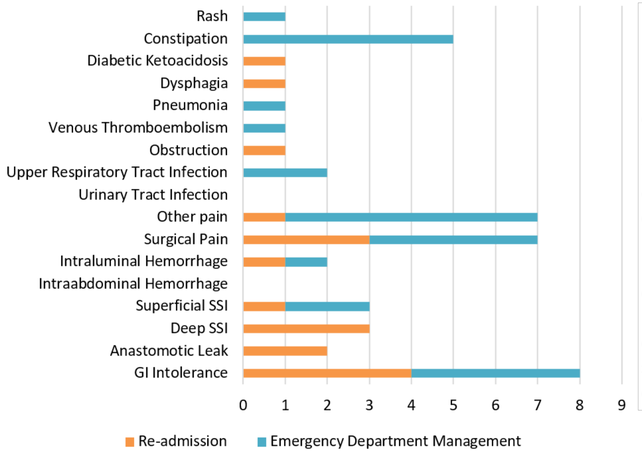


Figure 2. The number of patients presented ≤ 30 days postoperative from LRYGB for emergency department management or readmission organized by primary diagnosis in a stacked bar graph

Conclusion

An established ERAS protocol for LRYGB allowed 94.8% of patients to be safely discharged home the next day. The ER presentation, 7d and 30d readmission rates were comparable to existing literature (1). Postoperative patient education to remain in a one-hour proximity to the designated tertiary care centre for 7 days captured the majority of early complications. This study demonstrates that next day discharge is feasible for appropriately selected bariatric patients which does not increase early 30d rates of complication.

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