GOING NARCOTIC FREE: PERI-OPERATIVE PAIN MANAGEMENT AFTER ROBOT-ASSISTED VERSUS LAPAROSCOPIC BARIATRIC SURGERY

Maryam Hassanesfahani, MD1; Luke Keating2; Shubham Bhatia, MD1; Bilal Mirza3; Arpana Singh3; Catherine Olang3; Patrick Kiarie3; Noman Khan, DO1; Martine A Louis, MD1; Darshak Shah, MD1; 1Flushing Hospital Medical Center; 2Department of Research Education and Innovation, Medisys Health Network; 3St. George's University, St. George's, Grenada

INTRODUCTION

Inpatient opioid utilization in patients undergoing surgery has received increased attention, as the opioid epidemic is among the most concerning public health crises in history. Many protocols for pain management include non-opioid analgesics, but occasional opioid treatment may be needed. Minimally invasive surgery leads to improved recovery profiles and decreased opioid requirements in the perioperative period.1 This study explores differences in rescue opioid use in patients undergoing robotic versus laparoscopic bariatric surgery within the first 48 hours of the surgery and risk factors associated with increased narcotic requirements.

METHOD

This study is a retrospective chart review of minimally invasive bariatric surgeries from March 2021 to December 2022. The patients were divided into 2 groups: robotic surgery and laparoscopic surgery. Opioid use was expressed as morphine milligram equivalents (MME) per CDC guidelines for computation.2 The BSTOP protocol was implemented for all patients.

DISCUSSION

- No difference in post op narcotic requirement between robotic and laparoscopic approach (consistent with current evidence)
- History of previous bariatric surgery was correlated with lower narcotic use post operatively. Likely related to prior education and patient's expectations.
- Despite gastric bypass is a more complex and lengthier procedure there was no different in narcotic use in subgroup analysis

RESULTS

Table 1
Sample Characteristics

Variables:	Full Sample (*n=443*)	Laparoscopic Procedures (*n=214*)	Robotic Procedures (*n=228*)
Age			
[M (SD) Range]	42.11 (12.01) Range: 18-76	43.43 (11.73) Range:18-73	41.82 (12.28) Range: 18-76
BMI			
[M (SD) Range]	43.30 (7.36) Range: 24-94	42.90 (6.21) Range: 32-74	43.67 (8.27) Range: 24-94
Gender			
Female	*n* = 377; 85.29%	*n* = 181; 84.58%	*n* = 196; 85.96%
Male	*n* = 65; 14.71%	*n* = 33; 15.42%	*n* = 32; 14.04%
History of Bariatric Surgery			
No	*n* = 384; 86.88%	*n* = 191; 89.25%	*n* = 193; 84.65%
Yes	*n* = 58; 13.12%	*n* = 23; 10.75%	*n* = 35; 15.35%
Concomitant Surgical Procedure(s)			
No	*n* = 326; 73.76%	*n* = 170; 79.44%	*n* = 156; 68.42%
Yes	*n* = 116; 26.24%	*n* = 44; 20.66%	*n* = 72; 31.58%
Procedure Type			
Sleeve	*n* = 347; 78.68%	*n* = 184; 86.38%	*n* = 163; 71.49%
Bypass	*n* = 72; 16.33%	*n* = 12; 5.63%	*n* = 60; 26.32%
Other	*n* = 22; 4.99%	*n* = 17; 7.98%	*n* = 5; 2.19%

Note: N's may not always add up to total sample N due to missing data.

Table 2
MME by Platform and Procedure Type

Variables	MME: Overall	MME: Sleeve	MME: Bypass
Platform			
Laparoscopic	*M* = 9.35; *SD* = 10.75	*M* = 8.77; *SD* = 9.42	*M* = 8.25; *SD* = 9..89
Robotic	*M* = 10.45; *SD* = 11.78	*M* = 10.61; *SD* = 11.55	*M* = 9.80; *SD* = 11.96

Note: MME = Milligrams of Morphine Equivalent

The final analytic sample consisted of 443 patients who underwent bariatric procedures. Patients ranged in age from 18 to 76 (M=42.11) and the majority of patients were women (n=376, 85.26%). 57 patients (12.93%) had a history of bariatric surgery, and 116 patients (26.30%) underwent a concomitant procedure (e.g., hiatal hernia repair).

The sample included 213 laparoscopic procedures (48.30%) and 228 robotic procedures (51.70%). Among laparoscopic procedures, the majority were Laparoscopic Sleeve Gastrectomy (LSG) (n=184, 86.38%) and Laparoscopic Gastric Bypass (LGB) (n=12, 5.63%). Among robotic procedures, the majority were Robotic Sleeve Gastrectomy (RSG) (n=163, 71.49% and Robotic Gastric Bypass (RGB) (n=60, 26.32%). The average BMI was 43.30. Patients undergoing laparoscopic and robotic procedures did not differ in BMI, nor in age.

There were no significant differences in opioid use between laparoscopic and robotic procedures in unadjusted analyses nor when controlling for psychiatric and surgical history. There was, however, significantly lower opioid use among patients with a history of bariatric surgery (p = .035). There were no significant differences in opioid use between sleeve and bypass procedures.

REFERENCES

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