South Shore University Hospital
Northwell Health

Retrospective Evaluation of Opioid Use in Post Bariatric Surgical Interventions

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BACKGROUND

The opioid epidemic continues to be a challenging issue that many providers experience. Short term postoperative opioid analgesics often increase the risk of developing chronic prescription opioid use in opioid-naïve patients. Bariatric patients are especially at risk for forming narcotic addictions as recent literature suggests a higher incidence of chronic pain and depression compared to the general population. The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) initiated a collaborative named Bariatric Surgery Targeting Opioid Prescriptions (BSTOP) to support bariatric centers in minimizing the amount of opioids prescribed to patients while improving post operative pain control.

PURPOSE

The objective of this quality improvement project was to identify the patterns of opioid use in patients undergoing bariatric surgery in order to determine methods of improvement for post operative pain at our institution.

METHODS

Study Design: A retrospective chart review was conducted between 12/1/2019 and 12/31/2020 in patients who underwent bariatric surgical intervention (gastric band, sleeve gastrectomy, or Roux-en-Y gastric bypass), at a new bariatric program. A total of 45 patient charts were reviewed for this study.

Standard (ERP) protocols were used including:

- Patient and surgical team education
- Long acting local anesthesia protocol including liposomal bupivacaine mixture
- Non-opioid medications for pain relief including acetaminophen and intravenous non-steroidal anti-inflammatory drugs (NSAIDs).

Exclusion criteria:

- Chronically treated with opioid analgesics prior to surgery for other chronic illnesses

Doses and classes of opioids were converted into Morphine Milligram Equivalents (MME) for each patient in the post anesthesia care unit (PACU) and on the surgical floor. Utilization of opioids were analyzed and compared in determining areas of major use.

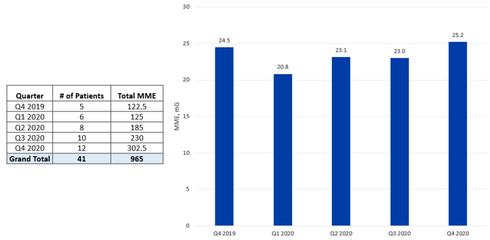
RESULTS

41 patients were included in this dataset review. 4 patients were excluded from this study as they were on long term opioids prior to bariatric procedure for a chronic illness. Majority of the patient population were female (n=29) and minority were male (n=12). Patient ages ranged from 19 to 68 years. 37 patients underwent gastric sleeve and 4 patients underwent gastric bypass.

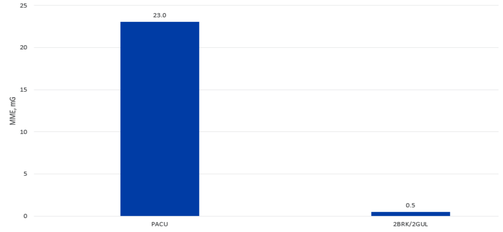
- 5/41 patients (12%) did not receive any received opioids postoperatively.
- 34/41 patients (83%) received opioids in PACU (range of 7.5 to 20 MME per dose)
- 2/41 patients (4.9%) received narcotics in PACU and on the surgical floor.
- No patients were discharged home with a prescription for narcotics and at the 30 day follow up period.
- The average MME for the inpatient setting was 23.5, however, the average MME on the surgical floor was 0.5. Our average quarterly MME remained consistent ranging between 20.8 to 25.2.

Mean Morphine Milligram Equivalent (MME, mG) by Quarter

Quarter	# of Patients	Total MME
Q4 2019	5	122.5
Q1 2020	6	125
Q2 2020	8	185
Q3 2020	10	230
Q4 2020	12	302.5
Grand Total	41	965



Mean Morphine Milligram Equivalent (MME, mG) by Area



DISCUSSION

The primary finding of this study was that majority of narcotic use was in PACU, data that is not captured by BSTOP. The two patients who did receive opioids on the surgical floor received two doses of hydromorphone 0.25 mg equivalent to 10 MME on post operative day zero. This concluded that our average opioid use on the surgical floor was only 0.5 morphine milligram equivalents. Our average opioid use remained consistent throughout the year with an average of 23.5 MME. We found no correlation of narcotic usage with patient's age. A limitation of this study was the sample size. The incidence of post-operative pain are lower than average and may need a larger sample size to distinguish a statistically significant difference. Postoperative pain management in PACU was not standardized which could introduce potential practice management differences as a source of bias.

CONCLUSION

With the use of our protocol, patients post bariatric surgery at our institution had minimal to no use of morphine milligram equivalents post discharge from PACU. Next steps for our program would be to further minimize opioid use post surgical intervention, utilize the lowest possible opioid dose in PACU, review opioid use with prescribers, and to standardize post-operative pain management education.

REFERENCES

1.CMS Opioid Conversions. https://www.cdc.gov/opioids/providers/prescribing/app.html.

2. Petrick, A. (2021, December 16). Bariatric Surgery Targeting Opioid Prescriptions (BSTOP) https://accreditation.facs.org/accreditationdocuments/MBSAQIP/BSTOP/BSTOP%20Response%20Summary%20Jan%20May%20Nov%20Audits%2012-22-20.pdf.

3. Weingarten, T.N., Sprung, J., Flores, A. et al. Opioid Requirements after Laparoscopic Bariatric Surgery. OBES SURG 21, 1407–1412 (2011). https://doi.org/10.1007/s11695-010-0217-9.

DISCLOSURES

All authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have had a direct or indirect interest in the subject matter of this presentation.