

Assessment of Multimodal Non-Opioid Analgesia in Postoperative Pain Management for Gender-Affirming Mastectomy



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Background

- Multimodal analgesic postoperative pain regimens, including nerve blocks, have been well studied in prophylactic (oncologic) mastectomies
- The role of a multimodal non-opioid analgesic postoperative pain regimen has not been well studied in gender affirming mastectomy (GAM)
- Transgender and non-binary patients have an increased risk of possible opioid abuse and increased mental health disorders
- Efforts should be made to decrease opioid prescriptions for patient safety

Aims

- Evaluate the effectiveness of a multimodal non-opioid analgesic regimen (NOAR) in managing postoperative pain in GAM patients
- Compare effectiveness of the NOAR treatment to a historical cohort using an opioid-inclusive regimen (OIR)

Methods

- Prospective cohort study of patients undergoing GAM with a non-narcotic postoperative pain regimen (Acetaminophen 500mg and Gabapentin 100mg) was compared to a historical, double-blinded, randomized, opioid-inclusive cohort from our institution¹
- Prospective cohort inclusion criteria: >18, patient undergoing GAM
- Prospective cohort exclusion criteria: <18y, history of opioid use disorder, chronic pain disorder, neuropathy, previous chest surgery, or radiation
- Primary outcome measures: patient-reported postoperative pain scores in non-opioid group
- Secondary outcome measures: comparison of postoperative pain scores between cohorts, perioperative characteristics
- Patients completed a pain diary for one week postoperatively to record pain scores using an 11-point Likert scale and the number of non-narcotic pills taken per day

Methods Continued

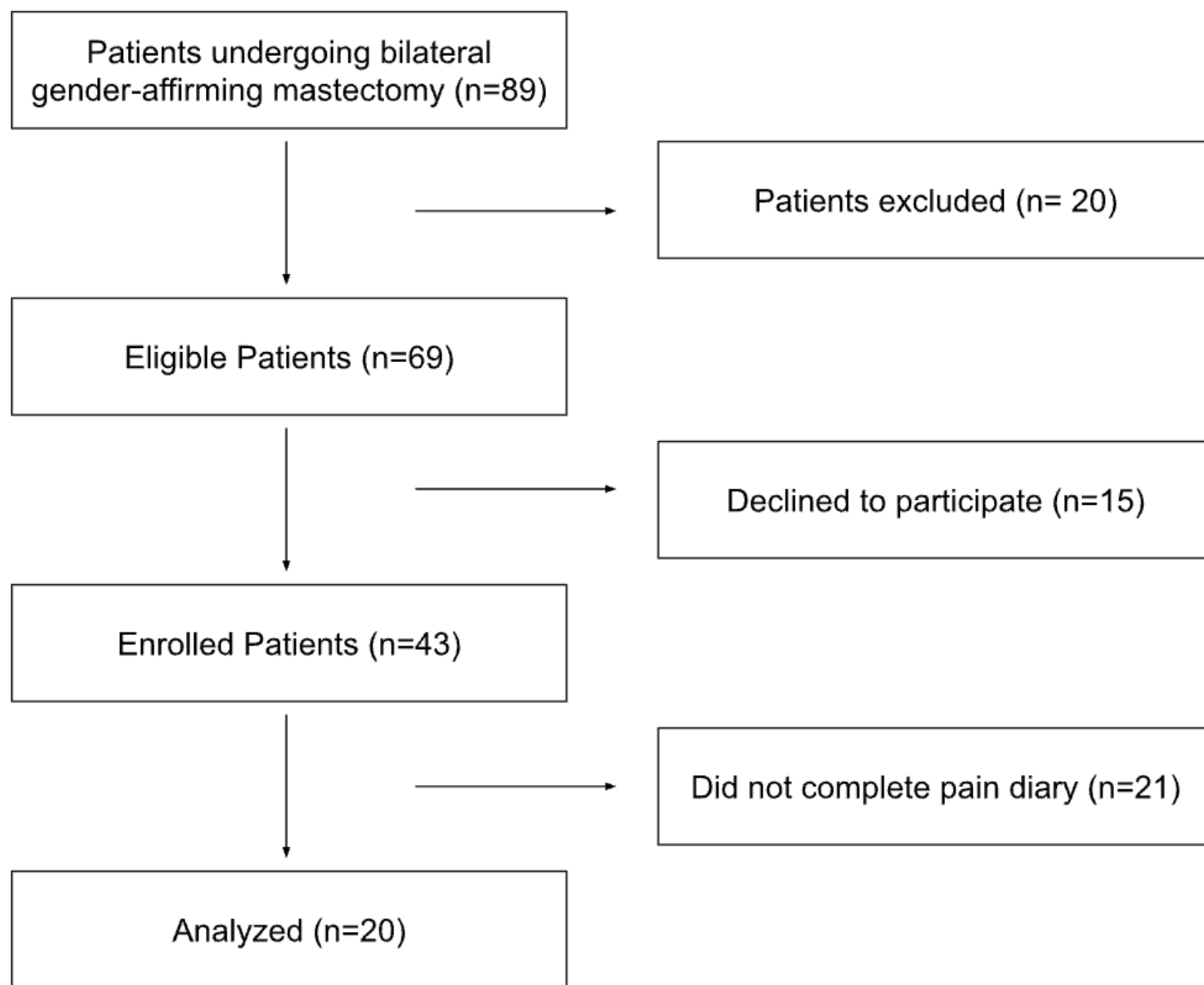


Figure 1: Overview of enrollment process

Date of Surgery:_____			
Date of follow up visit:_____			
Day of Surgery (Hours After Discharged)	Pain (0-10) Circle choice	Number of Acetaminophen Pills Taken Circle choice or write amount if >2 pills are taken	Number of Gabapentin Pills Taken
Include time of day			
1 hr ____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
2 hr ____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
4 hr ____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
6 hr ____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
12 hr ____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
Daily Total (number of pills)		_____	_____

1 Day after Surgery (24 hours after discharge)	Pain (0-10) Circle choice	Number of Acetaminophen Pills Taken Circle choice or write amount if >2 pills are taken	Number of Gabapentin Pills Taken
Date: _____			
Include time of day			
____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
____am/pm	0 1 2 3 4 5 6 7 8 9 10	0 1 2 ____	0 1 2 ____
Daily Total (number of pills)		_____	_____

Figure 2: Pain Diary

Results

Characteristic	NOAR	OIR	P-value ^a
Number of subjects	20	19	
Age (years)	27.75 +/- 8.3	27.21 +/- 8.3	0.9944
Case duration (mins)	141.75	155.15	0.1473
Time to discharge (mins)	176.1	126.05	0.0229*

^aMann-Whitney test

Table 1: Comparison of the Perioperative Details between the Multimodal Non-opioid Analgesic Regimen Group (NOAR) and Opioid-Inclusive Regimen (OIR) Group

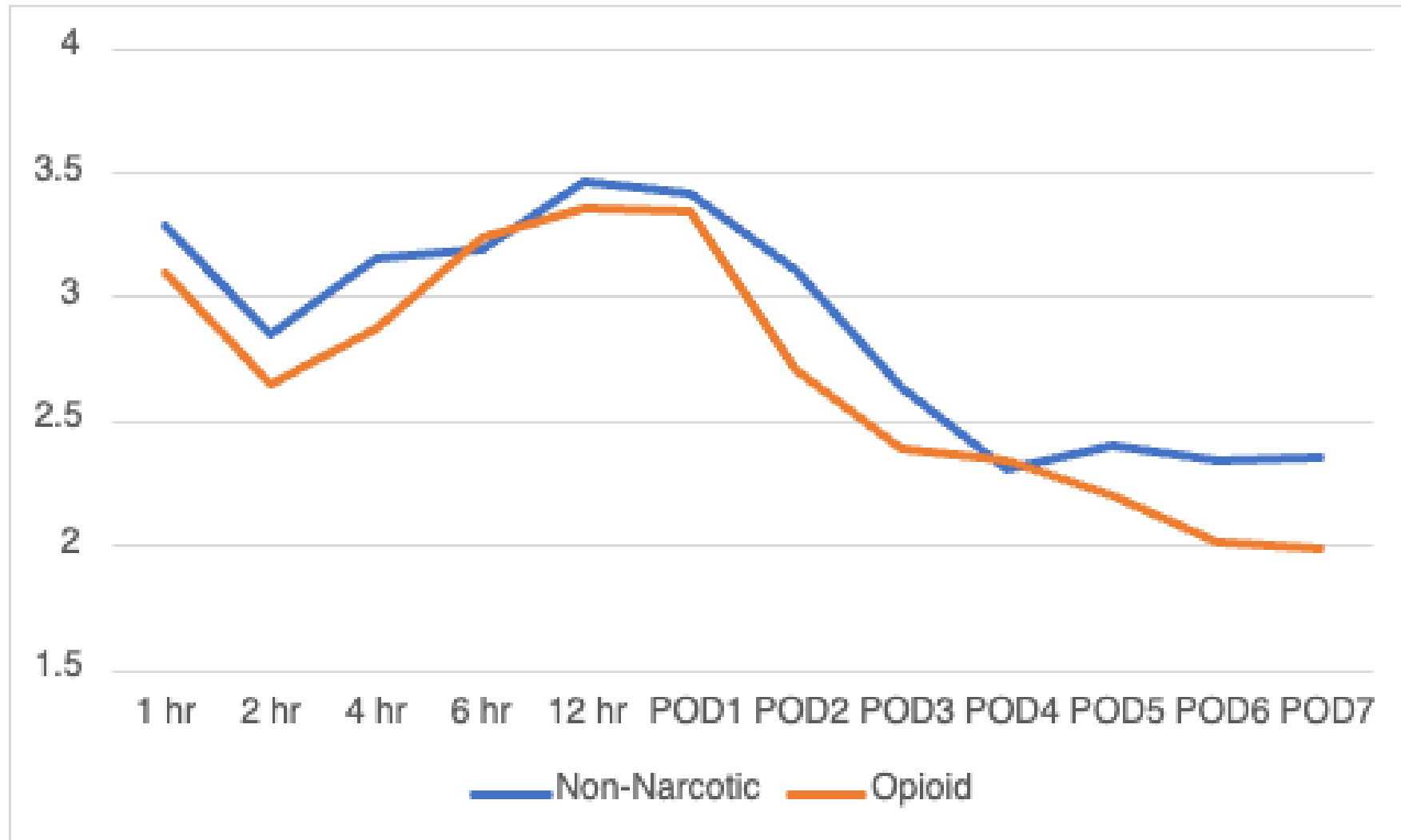


Figure 3: Graphic representation of pain levels by the intervention group and control group

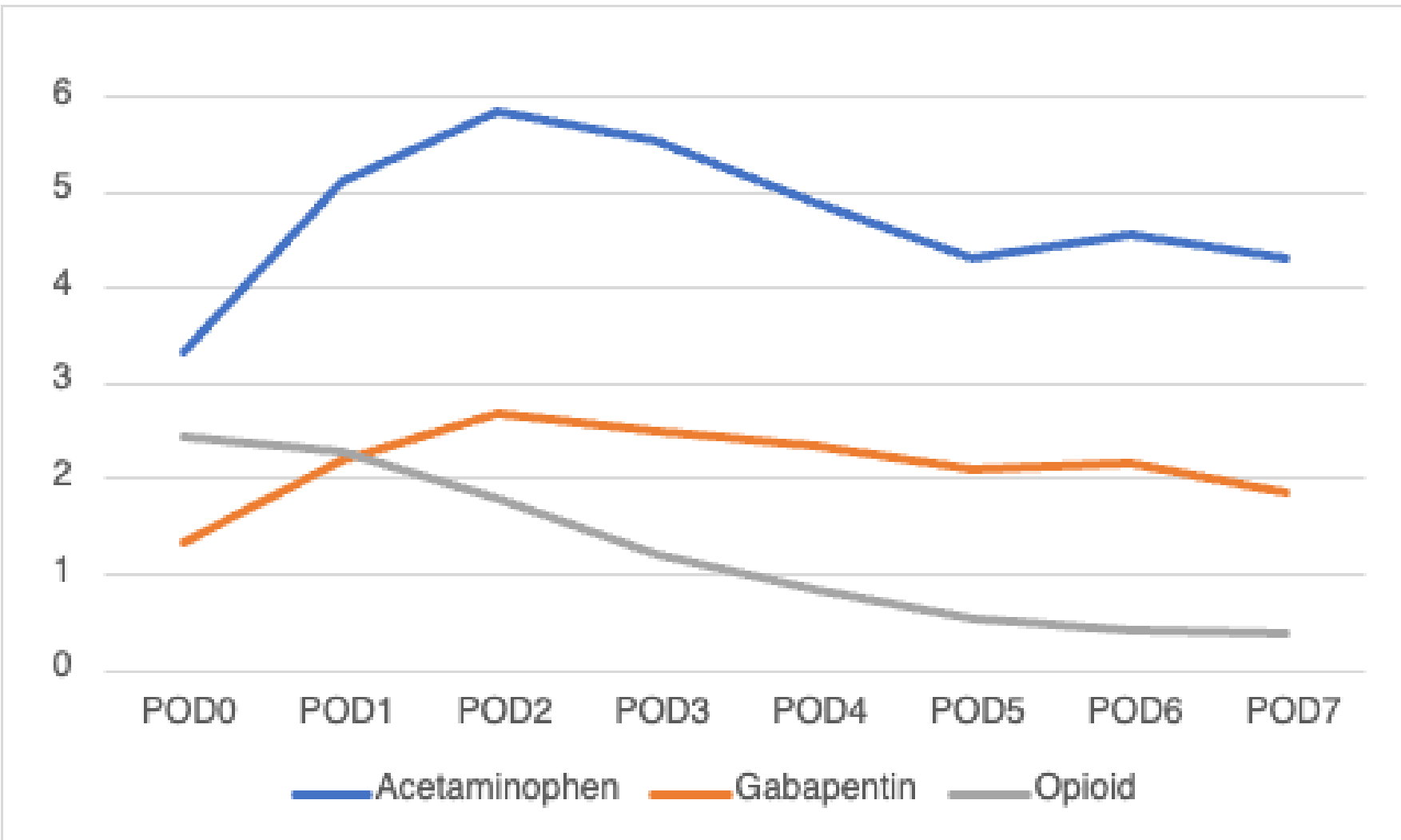


Figure 4: Graphic representation of the number of non-narcotic pills taken by the intervention group

Results Continued

	Intervention	Control	P-Value*
POD4 to POD1	-1.1	-1	0.4622
POD7 to POD4	0.04	-0.67	0.7761
POD7 to POD1	-1.06	-1.67	0.1855

*t test

Table 2. Comparison of the Absolute Change in Postoperative Pain Scores Reported by the Multimodal Non-narcotic Analgesic Regimen Group (NOAR) and Opioid Inclusive Regimen Group (OIR)

Discussion

- Peri- and postoperative pain in patients following GAM is well controlled by a multimodal non-narcotic analgesic regimen (NOAR) of Acetaminophen (500mg) and Gabapentin (100mg) compared to postoperative pain in opioid-inclusive regimens (OIR)
- Differences between medication consumption and pain levels were negligible between the NOAR and OIR groups
- We support the sole use of non-narcotics for peri- and postoperative pain management for GAM

Limitations/Future Directions

- Single-institution, single-surgeon study, limited generalizability
- Small cohort
- Compared to a double-blinded, randomized cohort from a previous study, introducing possible bias
- Diary did not consider other OTC pain relieving agents such as THC or CBD
- Future studies should include larger cohorts with more diverse patient populations to further support our preliminary data

References

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