Quality of Recovery in Parturients with Obesity: A Prospective Observational Cohort Study

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Background

- The incidence of obesity in pregnancy is increasing in North America. *(Driscoll A.K., NCHS Data Brief 2020)*
- In patients with obesity, the post-operative period is characterized by an increased and prolonged inflammatory response, making it an independent risk factor for acute pain. *(Mei W, Eur j Pain. 2010)*
- Providers tend to prescribe less opioids to these patients, which may inappropriately undertreat their pain. *(Bui AH, J Pharm Policy Pract. 2018)*
- While obesity is an independent risk factor for acute pain in the non-obstetric surgical population, the impact of obesity on overall quality of postpartum recovery remains under explored.

Methods

- Single-center prospective cohort study
- Two groups:
  - Control (BMI<30 kg/m^2) & High BMI (BMI>40 kg/m^2)
- Standardized intraoperative and postoperative care
- Primary Outcome:
  - Difference in the ObsQoR-10 scores at 24h post-CD
- Secondary outcomes:
  - Difference in pain scores, total opioid consumption, incidence of adverse events, time to first mobilization, length of hospital stay, breastfeeding at 24h and readmission rates

Hypothesis

We hypothesized that parturients with Class 3 obesity will demonstrate worse quality of inpatient postpartum recovery following elective cesarean delivery as measured by the ObsQoR-10 when compared to non-obese parturients.

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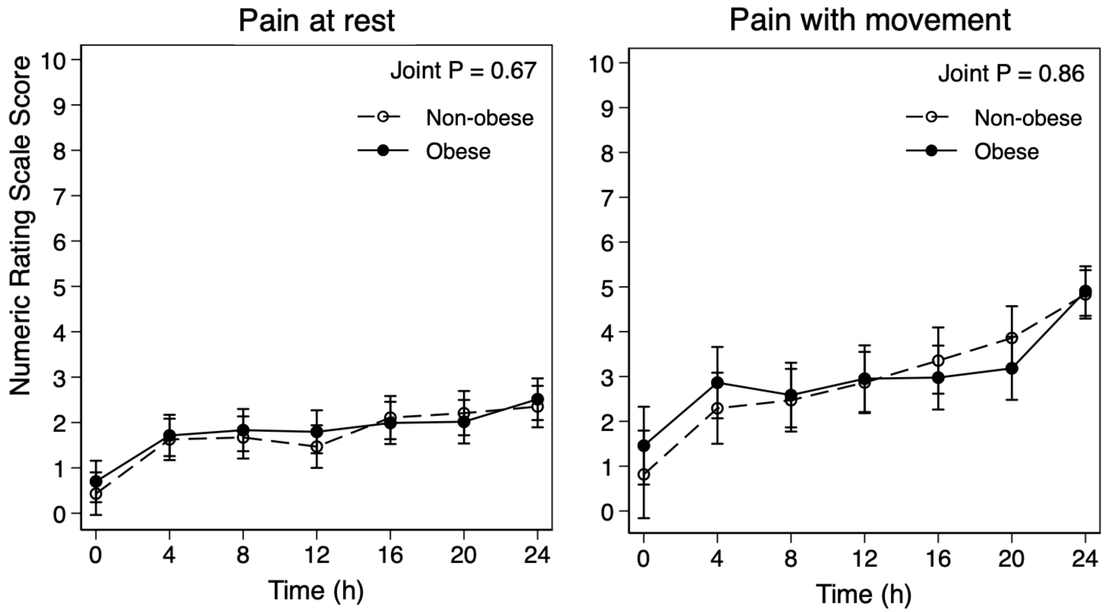
Results

	BMI < 30	BMI > 40	Difference (95% CI)	P
Mean (SD) QOR score at 24 hours	80.1 (12.1)	80.3 (13.1)	0.3 (-4.1 to 4.7)	0.90



Variable	BMI < 30	BMI > 40	RR or difference (95% CI)	P
Median [IQR] total inpatient opioid consumption	15 [0 – 30]	7.5 [0 – 35]	-7.5 (-18 to 12)	0.78
Time to first opioid request (h)	4.4 [3 – 11.5]	5 [2 – 15]	0.6 (-3 to 8)	0.97
Breastfeeding at 24h	56 (90%)	42 (70%)	0.78 (0.64 to 0.93)	0.006
Time to first mobilization(h)	10.3 [8 – 13.8]	8 [7.5 – 11.8]	-2.3 (-4 to -0.5)	0.03
Time to 1st intake of non-clear fluids (h)	3 [1 – 6.5]	2 [1 - 7]	-1 (-3 to 1)	0.20
Length of stay (h)	49.8 [46.0 – 52.2]	49.0 [47.3 – 52.8]	-0.8 (-2.1 to 1.7)	0.88
Readmission within 6-weeks (%)	5 (8%)	2 (4%)	0.47 (0.10 to 2.35)	0.45

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Conclusion

- There was **no significant differences in the ObsQOR-10 at 24 hours** between the two groups.
- There was **no significant differences in the NRS pain scores (rest or movement), or opioid consumption** between the two groups.
- Patients with obesity **ambulated sooner** after their surgery, however, were **less likely to breastfeed** at 24 hours.
- Future studies are needed to evaluate quality of outpatient recovery in patients with obesity, including domains such as sleep, fatigue and psychosocial distress.