

External oblique intercostal catheters for liver transplantation surgery: case series of a novel technique in a complex population

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Introduction

- Proposed superior block for surgical incisions extending laterally in abdominal wall by blocking both the **anterior and lateral cutaneous intercostal nerves**.

- Evaluated utility of technique, including any potential complications.

Methods

- Exempt from review by the Research Ethics Board per University of British Columbia policy. No identifiable patient information hence individual consent not obtained.
- Retrospective analysis** of liver transplant recipients at VGH who had EOI catheter placed for postoperative analgesia from **February - August 2023**.
- For comparison, patients who underwent liver transplantation between November 2022 - February 2023, who had no regional technique (NRT) and extubated within first 48 postoperative hours.

- Bilateral catheter placement** immediately following surgical procedure, **6th or 7th rib**, between mid - anterior axillary line.

Results

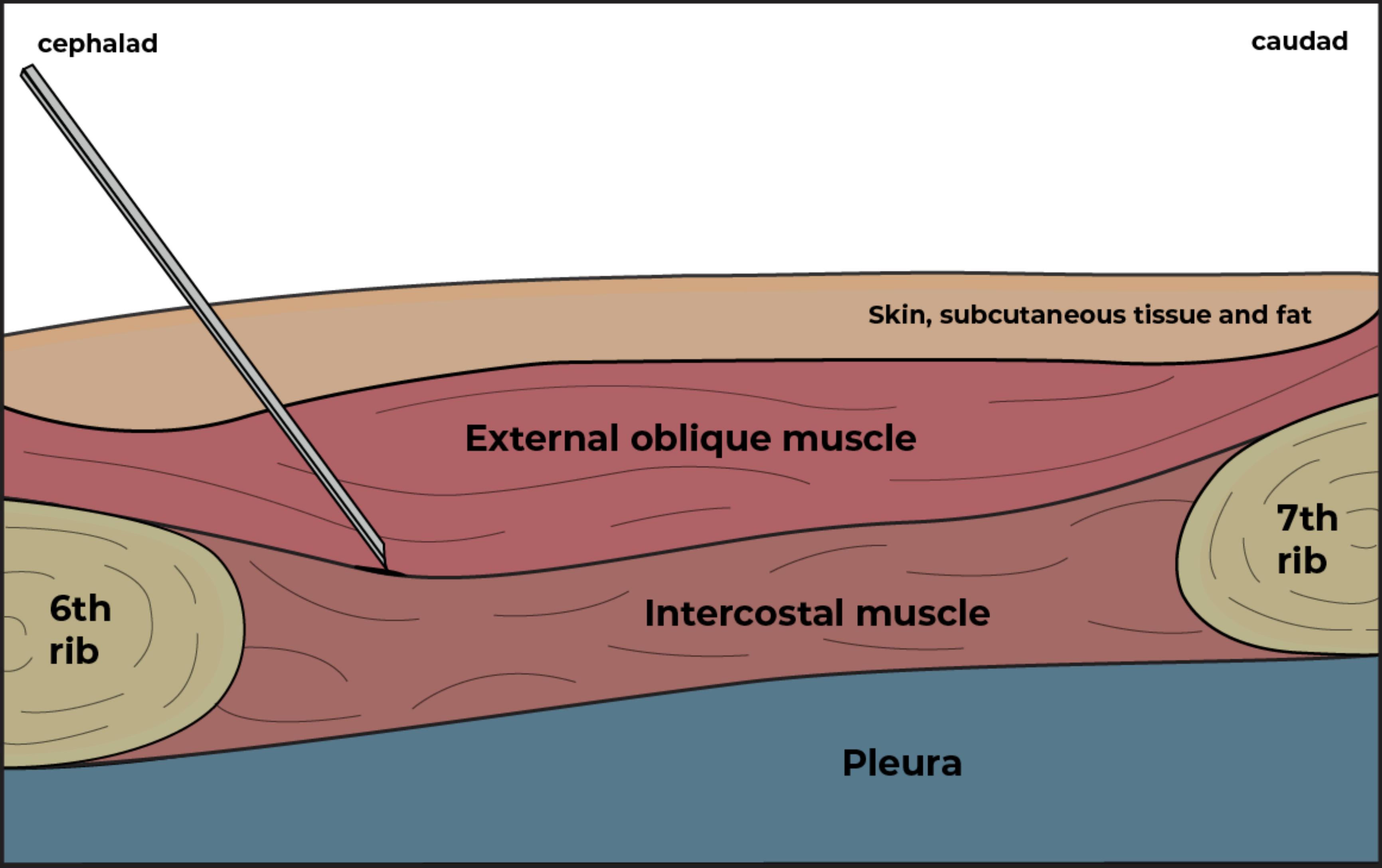
- More patients in EOI group extubated in the operating room.
- No complications** reported with placement or removal, and no noted symptoms suggestive of local anesthetic toxicity.
- Of patients extubated in the ICU, the EOI group had a **shorter mean time to extubation**, compared to NRT group.
- Higher mean opioid consumption in the NRT both parenterally and orally in the first 24 postoperative hours compared to EOI group.

Discussion

- Addition of EOI catheters may influence healthcare providers to **consider earlier extubation**.
- The opioid use data suggests that the **EOI group may transition onto oral analgesia earlier** than the NRT group.
- Placement of EOI catheters **may contribute positively to multimodal analgesia** following liver transplantation.



External oblique intercostal catheters for liver transplantation surgery are safe and may promote earlier extubation.

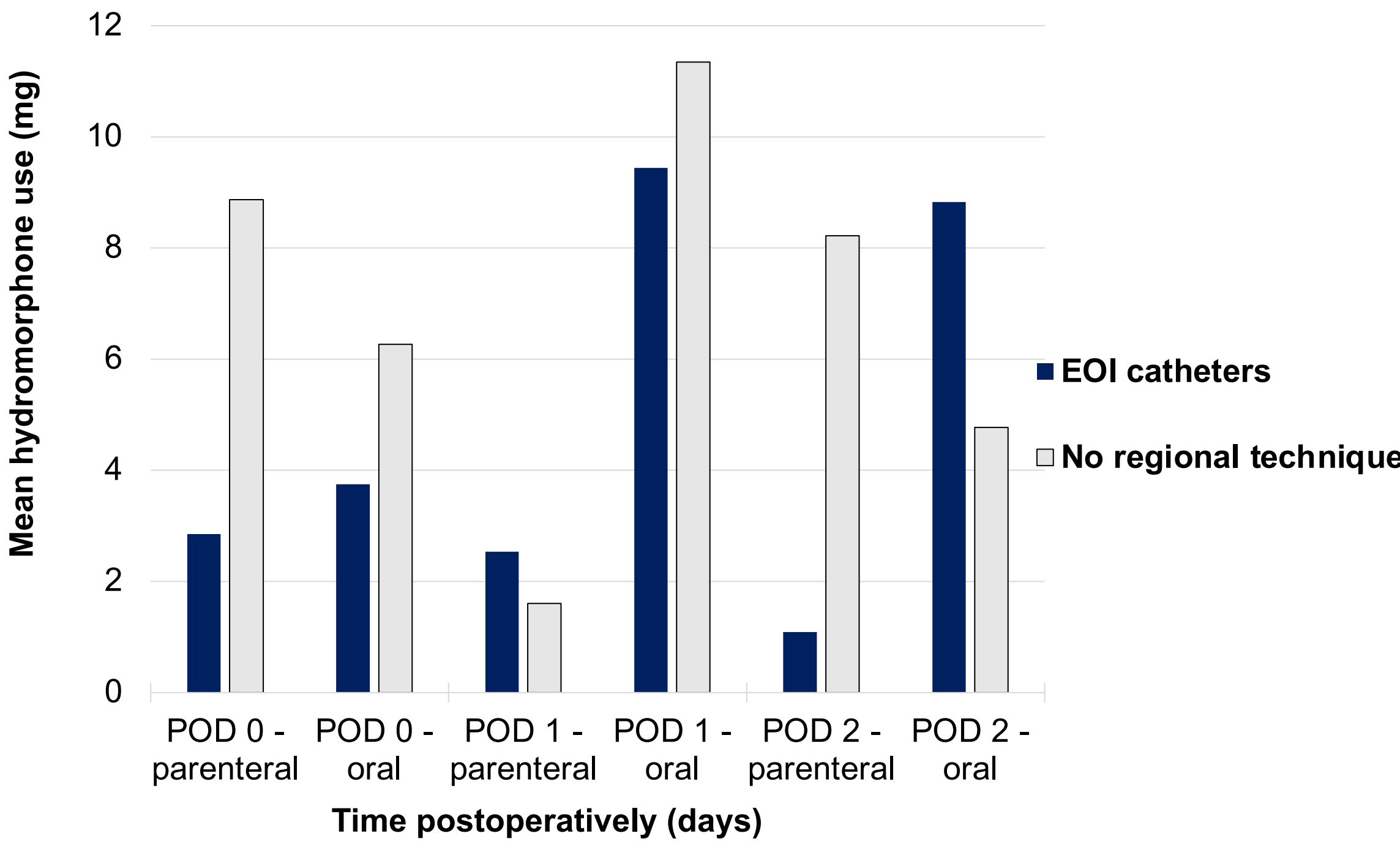


	EOI catheter	No regional technique	p value
N	16	13	
Sex, male	11 (69%)	8 (62%)	0.68
Age (years)	56.1 (9.8)	52.9 (11.9)	0.44
Model for End stage Liver Disease (MELD) Na score	16.0 (8.0)	21.4 (8.3)	0.09
BMI	25.8 (3.9)	26.0 (8.2)	0.96
Extubated in OR	12 (75%)	4 (31%)	0.03

Demographic data for liver transplant recipients. Values are mean (SD).

	EOI catheter	No regional technique
Time to extubation in ICU (hours)	9.6 (3.5, 17.0)	17.5 (38.4, 1.4)
Time in ICU post operatively (hours)	25.2 (46.2, 9.6)	40.8 (66.8, 12)
Duration of hospital admission post operatively (days)	8.8 (33.2, 3.6)	16.8 (51.7, 4.9)

Mean measures of time to extubation, discharge from ICU and hospital. Values are mean (max, min).



Mean hydromorphone use between groups over the first 3 postoperative days (POD).