

INTRODUCTION

- Spine surgery is associated with significant postoperative pain, warranting a robust multimodal approach to analgesia.
- Multiple studies support the use of Erector Spinae Plane Blocks (ESPBs) in lumbar spine surgery to decrease opiate consumption and improve recovery¹.
- To date, no clinical studies have evaluated the efficacy of cervical ESPBs for cervical spine surgery.

METHODS

- This was a single-center retrospective cohort study of ASA 2-3 patients undergoing elective PCDF for cervical myelopathy from July 2022 until October 2024
- Eight (8) patients underwent pre-incisional cervical ESP block with either Ropivacaine or Liposomal Bupivacaine and were compared to a match-paired institutional-specific cohort.
- Primary outcome was opiate consumption in oral morphine equivalents for the first 72 hours.
- Secondary outcomes included total inpatient average opiate consumption, PACU and hospital LOS, time to clearance by PT, cardiopulmonary adverse events, and unplanned ICU admission.

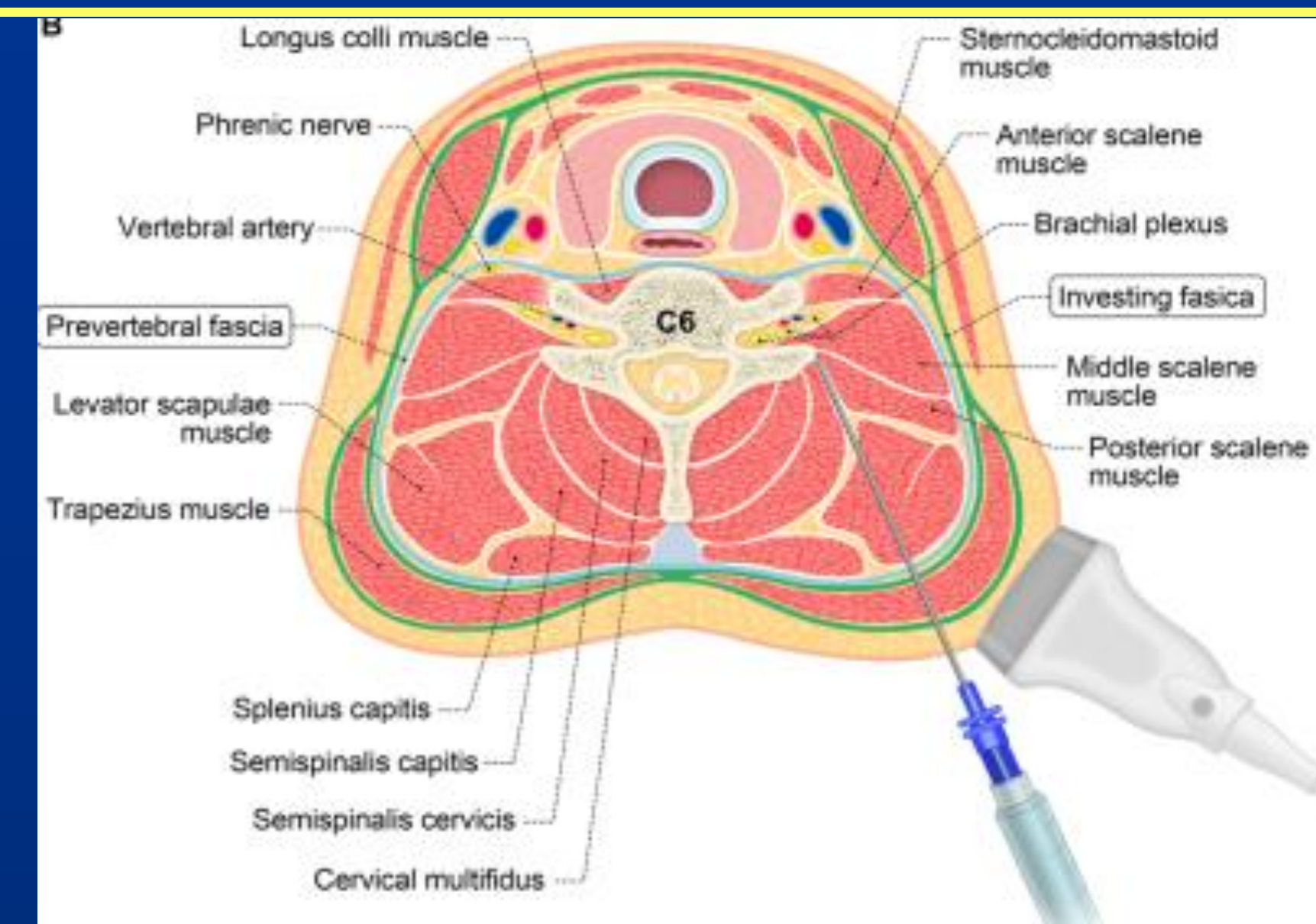


Figure 1. Cervical anatomy of ESP Block

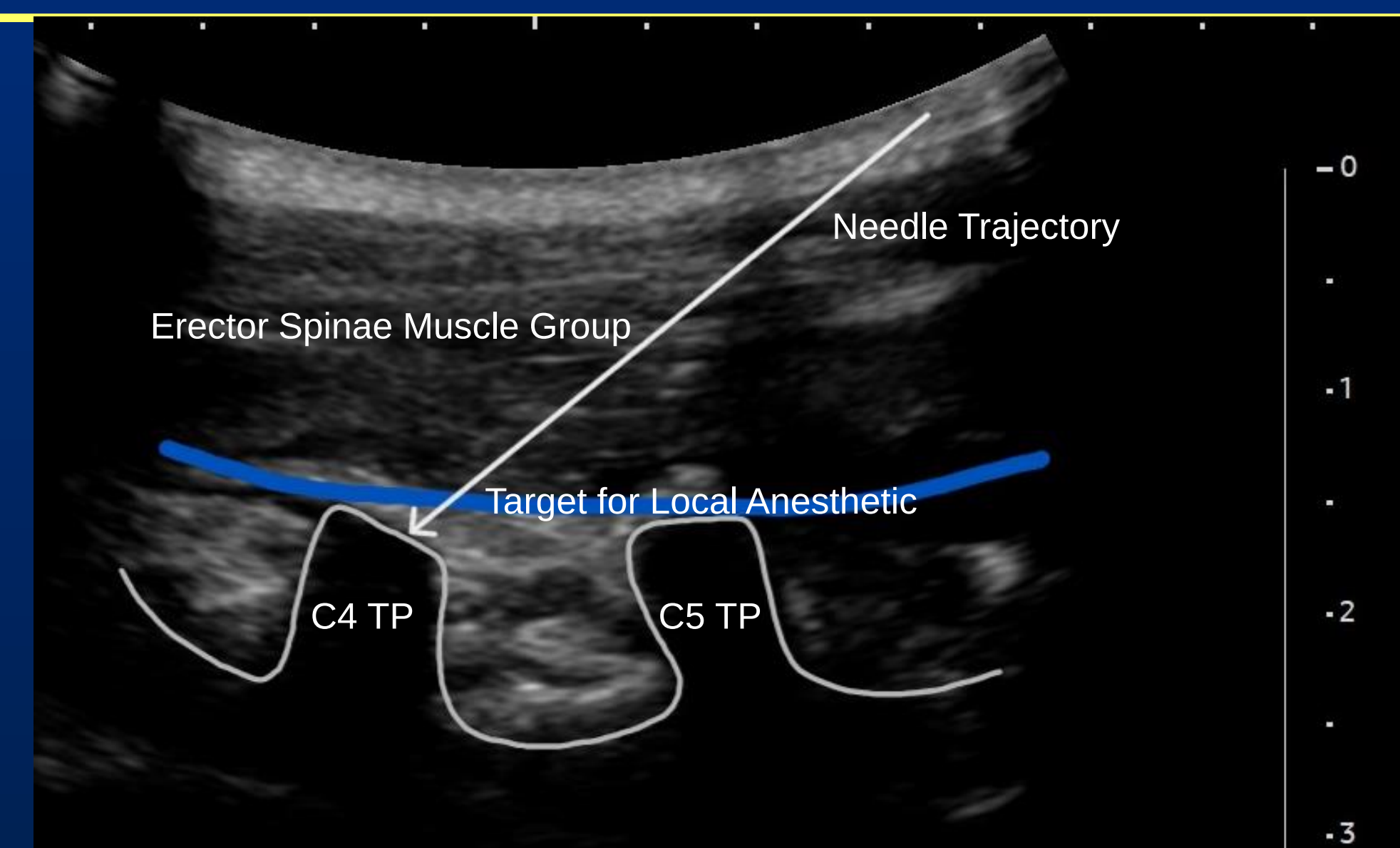


Figure 2. Sonoanatomy of posterior cervical spine

RESULTS

- Statistically significant reduction in average daily opiate consumption in block group (35 vs 69, $p = 0.03$)
- Statistically significant reduction in median pain scores (NRS 11 point scale) in block group through 48 hours post-op (4 vs 7, $p = <0.001$)
- No significant difference in PACU LOS, hospital LOS, or time to clearance by physical therapy
- No adverse cardiopulmonary complications or unplanned ICU admissions in block group

Table 1. Demographics

Characteristic	ESP Block (n = 8)	Control (n = 8)
Age (years), median (IQR)	69 (59, 78)	63 (57, 69)
Sex, n (%)		
Female	3 (38)	5 (38)
Male	5 (62)	3 (62)
Operative Levels, median (IQR)	3 (3, 6)	3 (3, 4)
ASA classification, n (%)		
III	7 (88)	8 (100)
IV	1 (12)	0 (0)

Table 2. Clinical Outcomes

Outcome	ESP Block (n = 8)	Control (n = 8)	P
Average inpatient daily opiate consumption, OMEs	35	69	0.03
Average Opiate Consumption, POD 1-3; OMEs			
POD 1	78	104	0.32
POD 2	43	66	0.16
POD 3	27	62	0.04
Average PACU Opiate Consumption, OMEs	22	45	0.07
0-48 hours Pain Scores, median (IQR)	4 (2, 7)	7 (5, 8)	<0.001
Hospital LOS (days)	4.7	7.2	0.52

DISCUSSION

- Patients who underwent pre-incisional cervical ESP Blocks had statistically significant lower opiate consumption throughout their entire inpatient post-operative period as well as significant reduction in median pain scores
- While prior studies raised concern for phrenic blockade, we did not experience any cases of clinically significant cardiorespiratory compromise in the block group
- This case series provides a promising foundation for further studies to assess the efficacy of regional anesthesia for cervical spine surgery

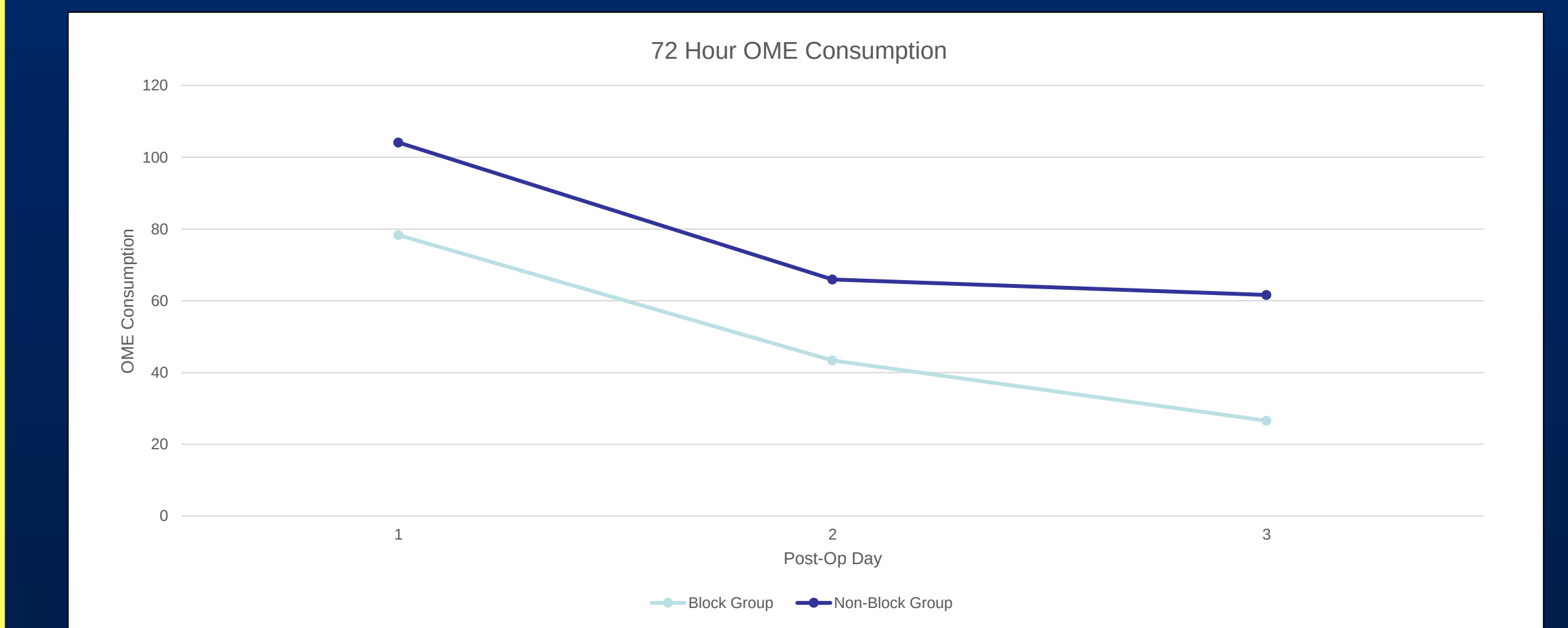


Figure 2. Trend in OME Consumption over POD 1-3

REFERENCES

- Sachdev D, Mamikunian G, Kia C, Zhou H. Narrative review: erector spinae block in spine surgery. Journal of Spine Surgery. 2023;9(4):454-62.