

Impact of ultrasound-guided erector spinae plane block on outcomes after lumbar spinal fusion: a retrospective propensity score-matched study of 242 patients—an infographic

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Erector spinae plane (ESP) blocks have been described as useful for multiple types of operations in recent years. Soffin *et al* explore the value of bilateral ultrasound-guided ESP blocks on pain and opioid-related outcomes when they are utilized in combination with a standardized multimodal analgesia care pathway for lumbar fusion.¹ The authors used a retrospective propensity score-matched cohort study design to compare patients who did or did not receive ESP blocks. After matching, 242 patients were matched and compared. They did discover a significantly lower 24-hour opioid consumption in the ESP group (30 mg (0.144) vs 45 mg (0.225)). They did not note a significant difference in pain scores in the Post Anesthesia Care Unit (PACU) or on the floor. Length of stay was noted to be about 5 hours shorter in the block group, and fewer patients in the block group required postoperative antiemetics. However, the authors question whether the small reduction in morphine equivalent dose of opioids, the small change in length of stay and the small reduction in postoperative antiemetic use is clinically relevant enough to justify the added effort and risk of erector spinae blocks for lumbar spine surgery when a standard care pathway is employed.

Adding Erector Spinae Plane Blocks to an Enhanced Recovery Pathway for Lumbar Spine Fusion: Statistically Significant but Clinically Debatable

A retrospective, propensity-score matched cohort study of 242 patients. All patients received comprehensive multimodal analgesia within an enhanced recovery care pathway.

ESP block group had statistically significant reductions in 24-hour opioid consumption (p=0.03)

ESP Block Group
30 mg
Morphine Equivalent Dose (0, 144)

No ESP Block Group
45 mg
Morphine Equivalent Dose (0, 225)

ESP block group had shorter hospital stays (p=0.001)

ESP Block Group
76 hours
(21,411)

No ESP Block Group
81 hours
(25,268)

No differences observed in numeric rating scale (1-10) pain scores in PACU or at 24 hours

ESP Block Group
4

No ESP Block Group
4

ESP block group had lower antiemetic administration (p=0.006)

ESP Block Group
n=77 (64%)

No ESP Block Group
n=97 (80%)

CONCLUSION: Do these differences warrant the routine addition of ESP blocks to a clinical pathway for lumbar spine fusion?

Soffin E, Okano I, Arzani A, et al. Impact of ultrasound-guided erector spinae plane block on outcomes after lumbar spinal fusion: a retrospective propensity score matched study of 242 patients. Reg Anesth Pain Med 2021. Illustration by Jim Snively.

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