Correspondence

Erector spinae plane block for acute postoperative pain management after anterior thoracolumbar spine surgery

To the Editor:

The anterior approach is preferred in surgically treating pathologic conditions of the thoracic and lumbar spine because it allows direct visualization and access to the vertebral column. This type of approach is most often performed in patients with intervertebral disk disease, fracture, tumor, or infection that causes compression of neural elements and requires spinal fusion. The anterior approach often requires a thoracotomy and postoperative pain can be severe and difficult to manage [1]. The erector spinae plane block was recently described as a safe and simple technique for managing both neuropathic and acute postsurgical pain; this block targets the dorsal rami of the spinal nerves and has shown promising results [2].

Here, we report a case of a 50-year-old woman who presented with a vertebral body fracture at L1 following a domestic accident. The patient received a bilateral, ultrasound-guided erector spinae plane block prior to undergoing minimally invasive vertebral body corpectomy and cage placement via a mini-open anterior approach (Fig. 1). These patients generally have significant postoperative pain resulting from both the arthrodesis and the thoracotomy, and they typically require a substantial amount of postoperative opioids.

The block was administered after placing the patient in the right lateral decubitus position. A linear ultrasound probe (Mindray, Shenzhen, China) was placed 3 cm lateral to the T10 spinous process in a longitudinal orientation, then a 85-mm, 21-gauge block needle (Vygon, Ecouen, France) was inserted in-plane, in a cephalad-to-caudal direction, through the trapezius and erector spinae muscles until it reached the tip of the T10 transverse process. A total of 40 mL of 0.25% levobupivacaine and 2 mL (8 mg) of dexamethasone was injected deep to the erector spinae muscles bilaterally [3]. The patient received a general anesthetic for the 3-hour surgery, during which 300 μg of fentanyl and 50 mg of ketamine were administered intravenously.

The patient’s pain in the postoperative recovery room immediately after extubation was 1/10 using the numeric rating scale (NRS), and she required no further opioids. A standard multimodal analgesia regimen was ordered, which included intravenous ketorolac 30 mg three times daily, intravenous paracetamol 1000 mg every 8 h, as well as intravenous tramadol 100 mg every 6 h as needed. The patient was transferred to the ward 3 h after arrival to the postoperative recovery room. The patient reported no pain when she was examined at 12 h after the surgery. During the first 24 h after surgery, the patient’s hourly NRS pain scores were all less than 3/10 and she required no additional opioids other than tramadol. Multimodal analgesia was continued, and no complications related to the block were observed [4].

This case suggests that the erector spinae plane block, as part of a multimodal analgesia strategy, can provide effective postoperative pain management after anterior thoracolumbar spine surgery. Further stu-

Fig. 1. Postoperative chest radiograph showing expandable cage, arthrodesis, chest tube, and staples from the left-sided mini-thoracotomy.
dies to validate our observations are warranted. The authors received no funding for this work and have no conflicts of interest to declare. The patient consented to the publication of this report.

**Conflicts of interest**

The authors declare no conflicts of interest.

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**References**


Francesco Calandese, MD*, Angelina Adduci, MD
*Corresponding author at: Department of Emergency, “C. A. Pizzardi” Maggiore Hospital, Unit of Anesthesiology and Intensive Care, Largo Bartolo Nigrisoli 2, 40133 Bologna, Italy.

E-mail address: calandese@alice.it (F. Calandese)