

LETTER TO THE EDITOR

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# Bilateral erector spinae plane block provides postoperative analgesia for laparoscopic distal esophagectomy surgery

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To the Editor,

The ultrasound-guided erector spinae plane block (ESPB) is a newly described interfascial plane block that provides both thoracic analgesia at T5 level and abdominal analgesia at T7–9 level (Restrepo-Garces et al. 2017). Thus, ESPB may be a good alternative to other invasive techniques such as epidural analgesia in the postoperative analgesia treatment following abdominal operations. In this case report, we would like to report our successful ESPB experience for postoperative pain management after distal esophagectomy and proximal gastrectomy surgery.

A 51-year-old, 55-kg American Society of Anesthesiologists (ASA) I classification female patient underwent laparoscopic surgery due to esophagus carcinoma. Written informed consent was obtained from the patient. Before induction of anesthesia, while the patient was awake in sitting position, ultrasound (US)-guided ESPB was performed under aseptic conditions. A linear US probe (12 MHz, GE Vivid Q® USG device) was placed in a sagittal paramedian orientation at the level of the T6 transverse process for bilateral ESPB (Fig. 1a). The muscles (trapezius, rhomboid major, and erector spinae) were seen from superficial to deep above the hyperechoic transverse process view (Fig. 1b). Then, a 22-gauge, 50-mm block needle was inserted in the interfascial plane below the erector spinae muscle in a caudal-to-cephalad way. After aspiration, the plane was injected with 2 ml saline solution for correction. A total of 20 mL block solution prepared with 0.25% bupivacaine was administered (Fig. 1c). The procedure was repeated for the other side. A total of 0.25% bupivacaine solution 40 mL was injected. We performed single shot blocks bilaterally and did not use a block catheter for continuous infusion. Then, induction of anesthesia

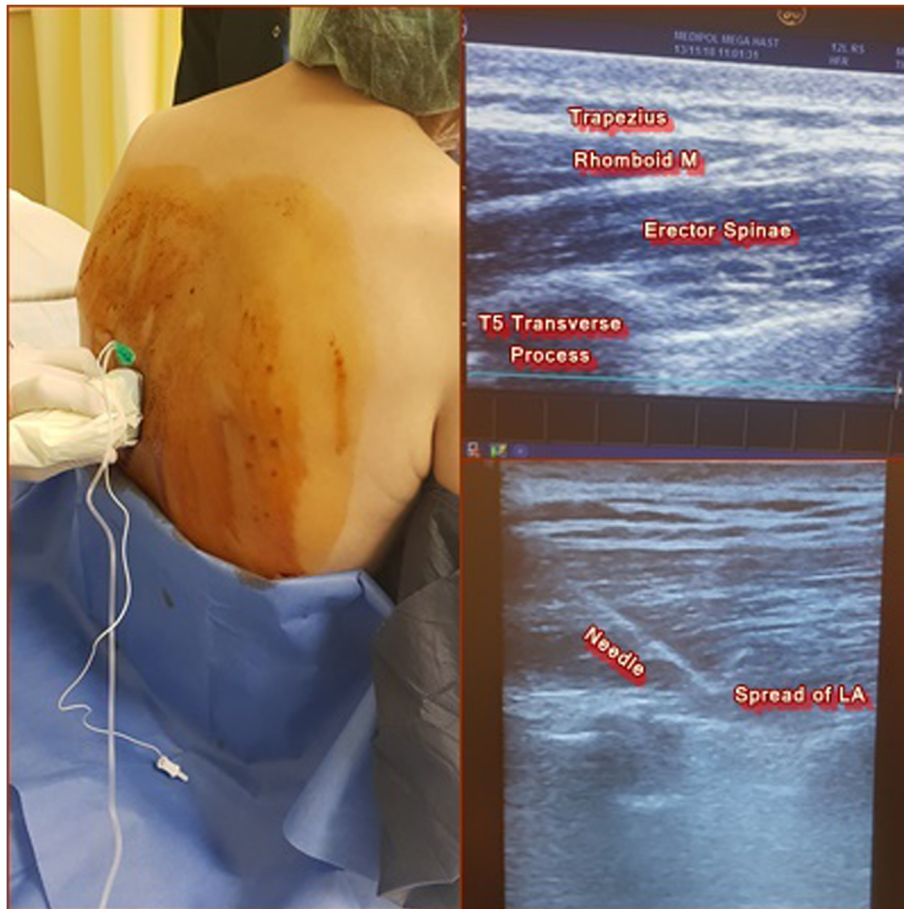
was performed classically. The operation lasted for 5 h. A total of 200 µg of fentanyl and 1 g of paracetamol intravenous were administered perioperatively. The patient was extubated successfully at the end of surgery and transferred to the intensive care unit. The patient was awake and comfortable at the postoperative period. The visual analog scale (VAS) was maximally 2 at rest and 3 at cough for 24 h period. Scheduled postoperative analgesia was with 1 g paracetamol every 8 h. An intravenous patient-controlled analgesia device prepared with 10 mcg/ml fentanyl was attached to the patient with a protocol included 20 mcg bolus without infusion dose and 20 min lockout time. During the postoperative period, the fentanyl dose given was 80 mcg, and no any other additional opioids were performed to her.

## Discussion

ESPB has been described firstly by Forero et al. 2016 for a neuropathic pain case (Forero et al. 2016). It has been reported that ESPB blocks both ventral and dorsal rami of spinal nerves in cadaveric studies and thus provides analgesia in several dermatomes (Forero et al. 2016). It has been a popular truncal block, and the use of it has been increased day by day since it is both safe and simple. A local anesthetic injection is performed for ESPB into the paraspinal tissues. This area is away from the important structures (pleural and neurological), so the risk of complications is lower due to injury (Forero et al. 2017). Anatomical guide points can be seen easily under US guidance, and the spread of local anesthetics can be visualized below the erector spinae muscle. In the literature, there have been several case reports about ESPB for thoracic and abdominal analgesia (Forero et al. 2017; Chin et al. 2017; Luis-Navarro et al. 2018). However, to the best of our knowledge, this patient is the first report administered ESPB for laparoscopic distal esophagectomy and proximal gastrectomy. We did not use a catheter for the postoperative period; we wanted to see the effectiveness of single shot block.

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**Fig. 1** a Block preparation. b Sonographic anatomy. c Spread of local anesthetic (below erector spinae muscle, above the transverse process)

Our patient was comfortable at postoperative period and did not require any more rescue analgesia. In conclusion, preemptive ESP block can be performed as a part of multimodal analgesia treatment for post-operative analgesia since it is easy to perform and provides effective analgesia.

#### Abbreviations

ASA: American Society of Anesthesiologists; ESPB: Erector spinae plane block; US: Ultrasound; VAS: Visual analog scale

#### Acknowledgements

Not applicable

#### Funding

Not applicable.

#### Availability of data and materials

Not applicable

#### Authors' contributions

BC and ME contributed to the writing, literature scanning, and block performing. Both authors read and approved the final manuscript.

#### Ethics approval and consent to participate

Not applicable

#### Consent for publication

Written informed consent was obtained for the publication of patient data and the accompanying image from the patient.

#### Competing interests

The authors declare that they have no competing interest.

#### Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 15 February 2019 Accepted: 25 April 2019

Published online: 14 May 2019

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