

Continuous Erector Spinae Plane Block for Multimodal Analgesia After Wide Midline Laparotomy : A Case Report

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Introduction

The ultrasound-guided ESPB is an easily performed fascial plane technique that can provide sensory blockade from T2–4 to T12–L2. Moreover, the ESPB anesthetizes both the ventral rami of spinal nerves and the rami communicants, which contain sympathetic nerve fibers, through spread into the thoracic paravertebral space.

Patient information

- 35-year-old, female.
- 63 kg.
- Operation : laparotomy for excision of a large ovarian mass.
- A laparotomy was performed with a wide midline incision from the xiphoid process to the pubic tubercle (Fig. 1a).
- Size of the mass : 36 cm × 34.5 cm × 17 cm
- Weight of the mass : 14 kg (Fig. 1b).

Methods

- Ultrasound-guided ESPB after the surgery. (level of T8, both sides) (Fig. 1c).
- Injectate : 0.75% ropivacaine (10 ml) and saline (10 ml) with epinephrine 1:200,000 (Fig. 1d).
- Catheter insertion : 19-gauge epidural catheter.
- Postoperative multimodal analgesia was provided according to the acute pain service protocol of our hospital.
- Injectate : 1:1 mixture of 0.75% ropivacaine (20 ml) and saline (20 ml) with epinephrine (1: 200,000) was manually injected through the indwelling catheter every 12 h (20 ml per side).

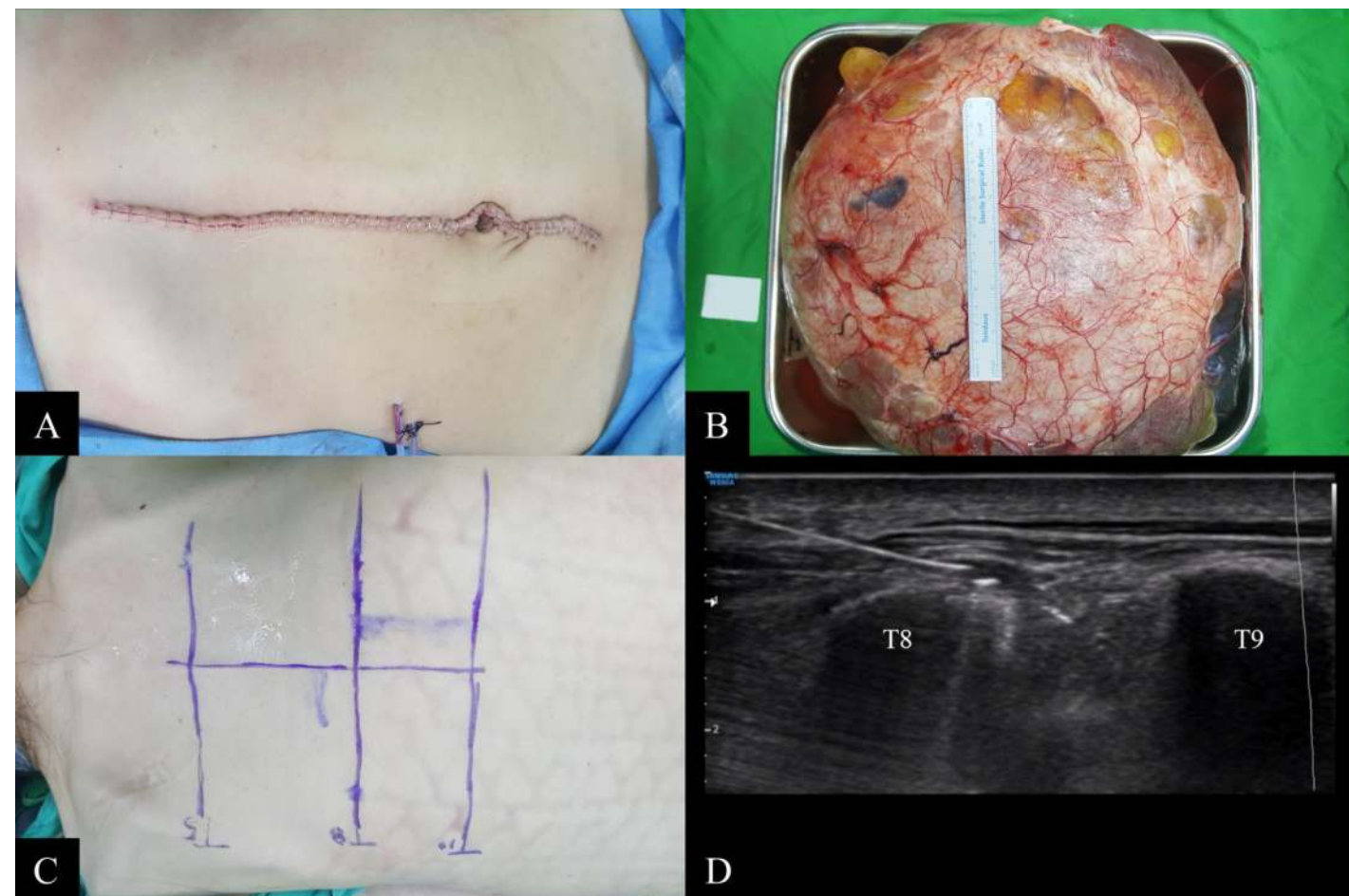


Figure 1. (a) An abdominal incision was made from the xiphoid process to the pubic tubercle. (b) The large ovarian mass was 36 cm × 34.5 cm × 17 cm (weight, 14 kg). (c) Prior to the block, landmarks were located and marked on the skin. (d) An ultrasound-guided erector spinae plane block was performed at the level of T8.

Results

The patient's resting and dynamic (coughing, deep breathing) pain scores after surgery were assessed using the visual analogue scale (VAS). In the postanesthesia care unit, the patient's resting and dynamic pain scores were 1 to 2 and 3 to 4, respectively. The patient received her first demand dose of 21 µg of fentanyl through the PCA at 9 h 39 min after the surgery. There were no reported resting or dynamic pain scores higher than 4, nor were any rescue analgesics needed during the first 5 postoperative days.

Conclusion

The ESPB is technically easy to perform and utilizes easily identifiable sonographic landmarks, which likely decreases the risk of complications. Therefore, we believe that the ESPB can be a safe and effective part of multimodal analgesia after laparotomy. Further case reports and prospective, randomized studies are needed to verify the efficacy of the ESPB for analgesia after laparotomy.



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