30 cm length subcostal incision: Continuous erector spinae plane block was truly effective

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Backgroud and Aims

Ultrasound-guided erector spinae plane (ESP) block is a regional anesthetic procedure originally described for thoracic analgesia when performed at the T5 transverse process[1].

However, if performed at lower thoracic levels, the ESP block can provide abdominal analgesia. A catheter inserted into this plane can extend analgesic duration and can be an alternative to epidural analgesia.[2]

We aim to present the result of the analgesic efficacy of continuous ultrasound-guided ESP block at T8 level for a sub-costal incision for an open nephrectomy.

Case Report:

65-year-old woman, presented for laparoscopic radical nephrectomy (giant tumor:17x12cm) – Picture 1. A balanced general anesthesia was done. Due to laparoscopic technical difficulties, surgery was converted,requiring an antero-posterior subcostal incision (30cm length) – Picture 2. Just before the awakening,an ultrasound-guided unilateral left continuous ESP block was performed at the level of T8. 25 millilitres of ropivacaine 0,375% were administered.

The multimodal approach for postoperative analgesia was:programmed intermittent mandatory boluses through the ESP catheter of ropivacaine 0,2% 8 ml/h + paracetamol 1g 8/8h + ketorolac 30mg 12/12h. Rescue analgesia with tramadol 100mg.

During the 4 days of follow-up by the acute pain unit, there was no need for rescue analgesia. The maximum pain reported was 2 (Numeric scale). The ESP catheter was removed on the fourth day.

Picture 1: anatomical piece

Picture 2: Surgical incision

Pain – Numeric Scale

	Day 0	Day 1	Day 2	Day 3	Day 4
07 h	0	1	1	0	0
17 h	1	0	0	0	2
21 h	1	0	0	0	1

Conclusion

Pain after subcostal incision presents a great challenge and was traditionally managed by placement of a thoracic epidural catheter. However, recently the ESP block has gained “popularity”, even to abdominal analgesia.With this case,the authors showed that a lower continuous ESP block provides effective post-operative analgesia for sub-costal incision, and can be a valid option to integrate multimodal analgesia schemes.

1- Forero M, Adhikary SD, Lopez H, et al. The Erector Spinae Plane Block: A novel analgesic technique in thoracic neuropatic pain. Regional Anesthesia and Pain Medicine. 2016 Sep – Oct 41; 5: 621-27.

2- Restrepo-Garces CE, Chin KJ, Suarez P, Diaz A. Bilateral continuous erector spinae plane block contributes to effective postoperative analgesia after major open abdominal surgery: A case report. A & A case reports. 2017 Dec 1;9(11):319-21.