



## Letter to the Editor

### Ultrasound-guided bilateral erector spinae plane block could provide effective postoperative analgesia in laparoscopic cholecystectomy in paediatric patients



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Dear Editor,

We have recently read with great interest the article of Sevim et al. describing their experience about the erector spinae plane block (ESP) [1]. Ultrasound guided ESP opened a new era in the field of regional anaesthesia. From its first description by Forero et al. [2] until now, different uses of this technique were written and published in the literature. To the best of our knowledge, its use for paediatric cases were defined and limited to thoracic surgeries except for our previous manuscript about the use of ESP to provide postoperative analgesia in paediatric nephrectomy cases [3]. Here we would like to share our experience about bilateral ESP for providing efficient postoperative analgesia in laparoscopic cholecystectomy in three paediatric patients aged 8, 11 and 13 years old. Patients' weights were 28, 30 and 56 kg respectively. Approval and written informed consents were received from all of the parents.

All surgeries were performed under general anaesthesia. Anaesthesia was induced with fentanyl  $2 \text{ mcg/kg g}^{-1}$  and propofol

$2\text{--}3 \text{ mg/kg g}^{-1}$  iv. Rocuronium  $0.6 \text{ mg/kg}$  iv was used as a muscle relaxant for intubations. Anaesthesia maintenance was provided with sevoflurane  $2\text{--}3\%$  in combination with nitrous oxide in oxygen with a ratio of  $2:1$  in  $3 \text{ L}$  of fresh gas flow.

ESP was done following general anaesthesia induction at the level of T7 transverse process. Esaote My Lab 30 US machine (Florence, Italy) with large bandwidth, multifrequency linear probe ( $10\text{--}18 \text{ MHz}$ ) and a  $22 \text{ G}$ ,  $50 \text{ mm}$ , insulated facet type needle (BBraun Sonoplex, Melsungen, Germany) was used for all blocks. Patients were positioned to prone position for block performance. Following antiseptic preparation of block sites bilaterally, US probe was placed  $2\text{--}3 \text{ cm}$  lateral to spine at T7. After identifying the erector spinae muscle and transverse process  $0.5 \text{ ml/kg}$   $0.25\%$  bupivacaine (maximum dose was limited to  $20 \text{ ml/per side}$ ) was injected deep to the erector spinae muscle (Fig. 1). Same procedure was done for the contralateral side. LA spread was seen as both in cranial and caudal directions.

At the end of the surgery patients were administered  $15 \text{ mg/kg}$  iv paracetamol. Visual analogue score (VAS) was used for assessing pain of the patients and if above 3 rescue analgesic (tramadol  $1 \text{ mg/kg}$  iv) administration was planned. Highest VAS score recorded at the surgical ward was 2 and it was observed in the patient of 8 years old at the postoperative 6th hour. VAS scores were recorded as 1 and 0 at all times at all patients and no rescue analgesic was used. After the 48 h follow up in the ward, all patients were discharged to home without any complication.

All the patients and parents were questioned about their satisfaction about the analgesia method. Satisfaction levels were given verbally and recorded as a level from 1 to 10, with the lowest level of satisfaction at a value of 1 and the highest level at 10. All the answers were recorded as 10.

Visoiu et al. [4] compared blind conventional bilateral paravertebral block (PVB) with LA infiltration to the port sites

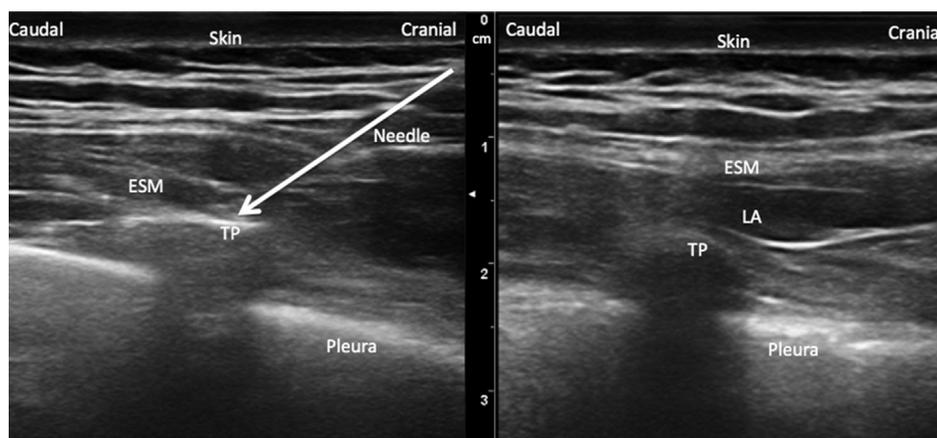


Fig. 1. Ultrasound image of the block area, before and after the block application. ESM: Erector Spinae Muscle; TP: Transverse process; LA: Local anaesthetic.

and found that PVB was not superior to LA infiltration. Postoperative analgesic effect of PVB had lasted 6–8 h. They reported shoulder pain as the main factor of postoperative discomfort.

In the literature, application of transversus abdominis plane (TAP) block was also reported for this purpose. As Ortiz et al. [5] showed TAP block was found to have no major analgesic effect. None of our patients needed any rescue analgesic nor did they complain about shoulder pain in postoperative 48 h. These results are pointing out a better and longer analgesia experience for patients. Despite the successful results and ease of this block technique, there is still a concern about the systemic absorption of the LA solution due to unknown spread of the LA. In fact, we also, still do not know the exact mechanism of this block technique.

Whilst we have been encouraged for prospective practice by these results and also having recommended the use of ESP for this purpose, we think that more controlled studies are required in order to reach a definite conclusion.

#### Disclosure of interest

The authors declare that they have no competing interest.

#### Acknowledgment

Written informed consents of the parents of the patients were provided before using the data in this report.

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