
Utility of erector spinae plane block in a complex scapular resection

Sir,

Recent literature highlights the growing role of ultrasound-guided erector spinae plane (ESP) block in the peri-operative period in the paediatric age group.^[1] We hereby, describe its utility for providing excellent perioperative analgesia in a child posted for scapular surgery.

A 10-year-old female child, weighted 29 kg was scheduled for wide resection of the right scapula due to Ewing's sarcoma. In the operative room, general anaesthesia was given as per the institutional protocol. The patient was then turned in the prone position which was appropriate for both surgery as well as for placement of ESP block. A right-sided ultrasound-guided ESP block was given at the T2 level with a high frequency (8-15 MHz) linear probe. A 50mm long block needle was inserted in-plane until the tip of the needle hit the transverse process of the vertebra [Figure 1]. A total of 8 ml of 0.25% ropivacaine was injected. Spread of local anaesthetic (LA) from C4 to T4 transverse process was seen on ultrasonography followed by

the insertion of the catheter through the needle. Continuous infusion of 0.2% ropivacaine at the rate of 2.5ml/hr through the catheter was started for analgesia. Approximately 7–8 cm of the wedge of bone was dissected from the superior-medial aspect of the scapula [Figure 2] and total surgical duration was 240 min. The intraoperative haemodynamics remained stable without any additional opioid requirement and recovery from anaesthesia was smooth. Approximately one hour after extubation, when the patient regained full consciousness, sensory blockade assessment was done with the pinprick, which revealed reduced sensation from C4-C5 to T4 dermatomes on the side of the block. LA infusion was continued for 72 h along with injection acetaminophen 400 gm IV 8 h as a part of multimodal analgesia. The catheter was removed uneventfully on the third postoperative day and the next day, the patient was discharged home pain-free.

ESP block is a simple and safe block as the target musculofascial plane is superficial to the transverse process, and the structures such as pleura, major vessels, and nerves are far from the needle tip. LA injected in this plane diffuses anteriorly to ventral and dorsal rami of spinal nerves, as well as to the paravertebral and epidural space. Continuous infusion through the catheter ensures adequate analgesia for prolonged periods.^[2] In our patient, drug spread was appreciable on the ultrasound up to C4,5 level due to which suprascapular nerve might

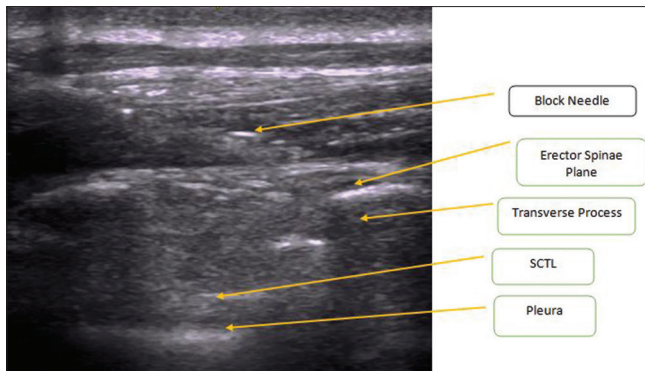


Figure 1: Shows an ultrasound image of erector spinae plane block at T2 level

have been blocked resulting in good perioperative analgesia. Forero *et al.* also chose a similar level for patients with chronic shoulder pain and demonstrated through CT images the diffusion of drug through the plane, reaching up to their insertion on the transverse processes of C2-C6 vertebrae and acting on the exiting nerve roots.^[3] Kilicaslan A *et al.* have reported successful perioperative anaesthesia by supporting the interscalene and ESP blocks with sedation in a trauma patient who developed a glenoid fracture in the scapula.^[4] Elsharkawy *et al.* supplemented interscalene block with another interfascial plane block—rhomboid intercostal (RI) block, which blocks T2-T6 intercostal nerves in the scapula fracture.^[5] Most of the case reports published have combined interfascial block with interscalene block for scapula surgeries. As the drug spread seen through ultrasonography was satisfactory, we decided not to add another block and if needed would supplement with intravenous analgesia. Uneventful intraoperative, as well as the postoperative course with a satisfied patient, speaks for the versatility of this block.

To conclude, ESP block performed at the T2 level is effective in managing moderate to severe pain associated with scapular surgery in the perioperative period. While early results are promising, more work is needed to identify anatomical dispersion, appropriate dosing, and precise indications.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the

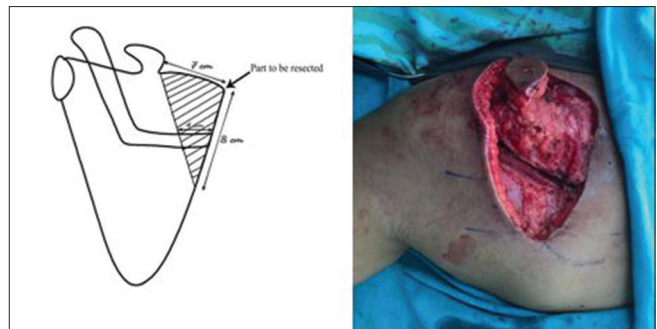


Figure 2: Shows a lesion in the scapular region

patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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