

Rhomboid Intercostal Plane Block After Thoracoscopic Pleurectomy

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Please cite this article as: "Manici M. Rhomboid Intercostal Plane Block After Thoracoscopic Pleurectomy. GKDA Derg 2023;29(4):222-223".

Dear Editor,

Recurrent pleural effusion can occur during the course of numerous diseases. Various surgical procedures, such as pleural aspiration thoracoscopy, pleurodesis, and decortication, can be performed to treat recurrent pleural effusion. Along with surgical interventions, perioperative analgesia methods have also gained importance. With the increasing use of ultrasound, interfacial plane blocks are being more commonly used in thoracic surgery.^[1] These plane blocks are now preferred over epidural anesthesia as they are easier to apply and have less risk of complications. Rhomboid intercostal block (RIB) is one of the most commonly used thoracic wall plane blocks.^[2,3] In this report, we will discuss our experience with rhomboid intercostal plane block for perioperative analgesia in a pleurectomy with VATS to treat postoperative recurrent pleural effusion in a patient who underwent surgery for tricuspid atresia. We have obtained approval for this case report from the patient's parents.

Our case involved a 3-year-old boy with ASA III classification (99 cm, 10.3 kg) who underwent surgery for tricuspid atresia. After the surgery, he developed recurrent pleural effusion and underwent pleurectomy and decortication 40 days later. Considering the patient's comorbidities, we chose RIB block with paracetamol and rescue fentanyl as the postoperative analgesia modality. We followed the technique described by Elsharkawy et al.^[2] and performed a right-sided RIB with the patient in left lateral position. We used a hockey stick linear ultrasound transducer (6.7–18.0 MHz) placed on the level of the 5th rib, and using an in-plane method, advanced a 22-gauge, 50-mm needle through the trapezius and rhomboid major muscles (Fig. 1). We injected 7 mL of 0.25% bupivacaine into the fascial plane between the rhomboid

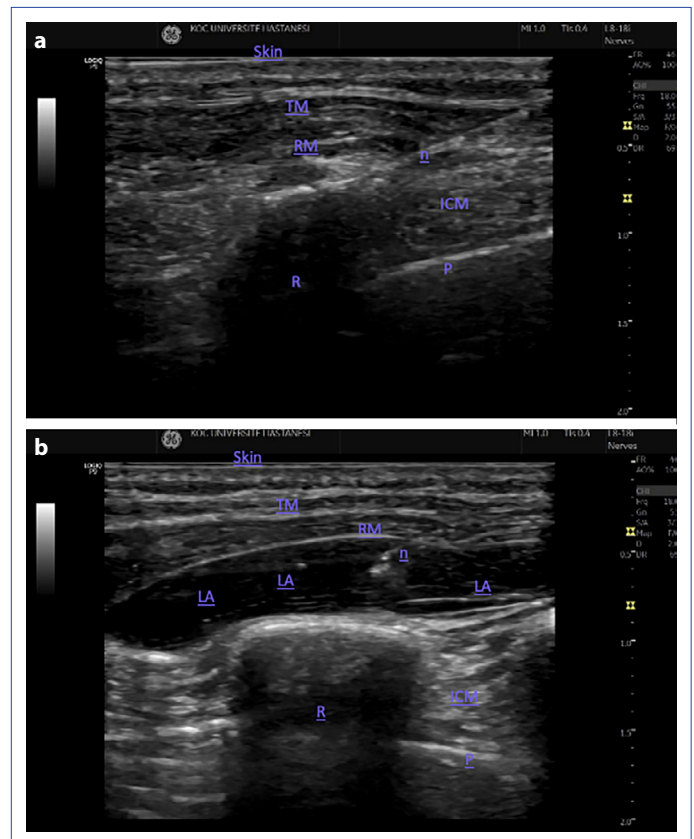


Figure 1. Ultrasound image of rhomboid intercostal plane block. (a) Prelocal anesthesia ultrasound image. (b) Postlocal anesthesia ultrasound image.

TM: Trapezius muscle; RM: Rhomboid muscle; ICM: Intercostal muscle; R: 5th Rib; LA: Local anesthetic solution; P: Pleura; n: Needle trajectory.

major and intercostal muscles. During anesthesia induction, patient received intraoperative fentanyl and paracetamol was administered for postoperative pain. We monitored

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Submitted: October 25, 2023 **Revised:** November 21, 2023 **Accepted:** November 23, 2023 **Available Online:** December 14, 2023

The Cardiovascular Thoracic Anaesthesia and Intensive Care - Available online at www.gkdaybd.org

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the patient for 24 hours after the surgery, assessing postoperative pain using CHEOPS scale, with scores above 4 indicating pain. The patient received paracetamol routinely and fentanyl as a rescue analgesic. We are pleased to note that the patient did not require opioid analgesics for the first 12 hours after surgery.

Treating postoperative pain after thoracic surgery is challenging and can adversely affect patient comfort, specifically in pediatric patients. Effectiveness of RIB in VATS procedures has been studied in adults, and it is recommended to reduce opioid use.^[4] However, its use in pediatric patients is less common. Literature review found that our case was the youngest known pediatric patient to receive RIB for postoperative pain management after thoracic surgery.

This case demonstrates that RIB can be a successful plane block in pediatric population undergoing thoracic surgery. Incorporating RIB as part of multimodal analgesia may help decrease opioid consumption and potential side effects while improving patient comfort. However, further randomized controlled trials are required to investigate the effects of RIB after thoracic surgery in pediatric population.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

Financial Disclosure: The authors declared that this study has received no financial support.

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