
Continuous bilateral transversus thoracis muscle plane block in median sternotomy

The transversus thoracis muscle plane block (TTP) is a new regional anesthetic method to provide analgesia to the anterior chest wall. TTP was first described by Ueshima H and Kitamura A.^[1] We describe a case of elective median sternotomy for teratoma in anterior mediastinum which was carried out under general anesthesia with TTP block. A 38-year-old male ASA grade I weighing 60 kg. Written and informed consent was taken for publication. After general anesthesia, median sternotomy was done and excise the teratoma. After closer continuous bilateral TTP block was given. Blocks were performed using real-time ultrasonography (US) with a high-frequency linear transducer (M-Turbo, Fujifilm Sonosite, Inc, Bothell, WA, USA). Patient was supine in position. After determining the anterior T4–T5 interspace, the US probe was placed in

the longitudinal plane 1 cm lateral to the sternal border. A parasternal sagittal view of the internal intercostal muscle and the transversus thoracis muscle between the fourth and fifth rib was visualized above the pleura [Figure 1]. An 18 G Tuohy needle was inserted inplane to the transducer with the tip of the needle located in the TTP between the internal intercostal and transversus thoracis muscles [Figure 1]. Bilateral TTP block with 25 mL of 0.25% Bupivacaine was given after that a 19-gauge epidural catheter was inserted. Catheter was fixed by double tunneling method [Figure 1]. In this method, catheter to circle the bridge of skin created between two loops of catheter. Catheter dislodgement is prevented due to the tightening of the bridge of skin in case any untoward force pulls it. Postoperative multimodal analgesia consisted of intravenous paracetamol 10 mg/kg

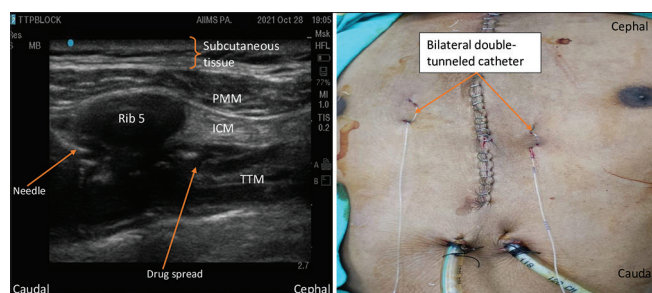


Figure 1: Ultrasound-guided continuous transversus thoracic plane block. PMM: Pectoralis major muscle, ICM: Intercostal muscle, TTM: Transverses thoracic muscle

every 6 hours combined with intermittent bolus dose of bupivacaine 0.25% 25 mL was injected via indwelling catheter every 8 hours for 3 days. Numerical Rating Scale (NRS) at 24-hour pain scores at rest was 2. With deep breathing, the pain score was 3. Rescue analgesia was not required. The intraoperative and postoperative period was uneventful and he was discharged without the need for analgesics.

The transversus thoracic plane block (TTP block) is a new technique for pain management is also known as the parasternal plane block. A transverses thoracic muscle plane (TTP) block has been reported to be able to block anterior branches of intercostal nerves (Th2-6).^[2] In cardiac surgery, patients mostly complained about major postoperative pain at the surgical site (median sternotomy). The TTP block has also been found to provide adequate surgical analgesia for patients requiring breast resection when combined with the Pecs II block in three cases.^[1] Ueshima H and Otake H^[3] reported a TTP block catheter strategy employing intermittent boluses of 10 mL levobupivacaine 0.1% on each side every hour in addition to demand doses of 3 mL levobupivacaine 0.1% every 30 min for two postoperative days. Fujii *et al.*^[4] describe a continuous infusion of 0.1% levobupivacaine at 10 mL per hour per side given via catheters inserted at each injection site. Additional demand doses of 3 mL of 0.1% levobupivacaine were available every 30 minutes. We concluded that the continuous TTP block is a novel pain management strategy in poststernotomy.

Declaration of patient consent

Taken from the patient.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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