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Letter to the Editor

Malfunction of a catheter placed for continuous quadratus lumborum plane block: rent in the thoracolumbar fascia

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Abstract

Ultrasound-guided quadratus lumborum plane block is an effective measure of analgesia perioperatively in abdominal and retroperitoneal surgeries. There are limited reported complications related to the procedure. We report a nonperforming continuous quadratus lumborum plane block possibly due to a suspected rent in thoracolumbar fascia in a retroperitoneal surgery.

Keywords: Complications; Regional anaesthesia; Retroperitoneal surgery

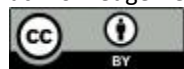
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Respected sir,

Ultrasound-guided quadratus lumborum plane block (QLB) is being employed in our setting for management of postoperative analgesia for major abdominal and retroperitoneal surgeries.¹ There are few reported complications related to the placement of a continuous catheter in QLB. We would like to report a failure of the continuous

catheter in QLB encountered during retroperitoneal surgery. A 35-year-old female, American Society of Anesthesiologist Physical Status I, diagnosed as the recurrent retroperitoneal cyst was scheduled for cystectomy. Ultrasound-guided (curvilinear probe 3-7 MHz) quadratus lumborum catheter was secured in the plane between quadratus lumborum and psoas major muscle under aseptic precaution preoperatively. Inadvertent catheter placement was confirmed by the spread of 5ml normal saline in the plane and negative aspiration. Surgery was allowed after induction of anaesthesia according to institutional protocol. After completion of the surgery, the intermittent bolus of 0.2% ropivacaine 20 ml via QLB catheter each side was advised for postoperative pain relief. The serosanguinous fluid was aspirated before injecting local anaesthetics via the Right QLB catheter. Thoracolumbar fascia (TLF) breach was assumed and the catheter was removed. Patient-controlled Analgesia (PCA) with morphine was initiated for pain management. The follow up of the patients was uneventful until she was discharged on postoperative day 10.

TLF lies between paraspinal muscles and muscles of the posterior abdominal wall and is continuous from sacrum to occiput creating a fascial plane system. The point of drug administration during QLB in the fascial plane spreads the injectate from the plane to paravertebral space.²

Dissection of thoracolumbar fascia is common during retroperitoneal surgeries. This may cause the failure of the analgesic plan via QLB catheter as the drug may leak from the breached fascia into the peritoneum⁽³⁾. In these cases, the catheter might be visualized in the surgical field. But in our case, the catheter was not visualized, however, the split was assumed as serosanguinous fluid was continuously aspirated. The other reported complications of QLB are local anesthetic systemic toxicity (LAST), Epidural spread, lumbar sympathectomy and QL hematoma. QL hematoma should be ruled out by its characteristics of the aspirated fluid i.e. fresh blood in active bleed and machinery oil-like fluid during the late presentation which would be evident in the following days of the block rather than immediately after the surgery. Skin bruises may be apparent within a few days in QL hematoma. However, radiological imaging would have confirmed the breach or QL hematoma which was not done in this case.

In conclusion, the breach in TLF during retroperitoneal surgeries may be the cause of QLB failure. It can be diagnosed by visualization of the catheter in the surgical field or positive serosanguinous fluid aspiration immediately after surgery before administration of the local anesthetic drug. The problem can be addressed by two modalities: Firstly, the catheter has to be removed and opted to the other analgesia regimen, secondly, if the catheter is visualized in the surgical field, the surgeon can fix it in TLF but it is questionable whether the inflammation or obstruction in the fascial plane system may hinder the spread of local anaesthetics.

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