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Letter to the Editor / Editöre Mektup

The Use of Quadro-Iliac Plane Block for Postoperative Pain Management in Laparoscopic Cholecystectomy

Laparoskopik Kolesistektomide Postoperatif Ağrı Yönetimi İçin Quadro-İliak Plan Bloğunun Kullanımı

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Dear Editor,

The quadro-iliac plane block (QIPB), recently described by Tulgar et al. (2024) is a novel fascial plane block targeting the quadro-iliac plane, located between the inner iliac crest and the posterior surface of the quadratus lumborum (QL) muscle. In their anatomical study, 40 mL of methylene blue injected bilaterally into the quadro-iliac plane showed extensive spread, covering the posterior and anterior surfaces of the QL muscle, the transversalis fascia, the ilioinguinal, iliohypogastric, subcostal, and genitofemoral nerves, as well as the lumbar plexus. These findings suggest that QIPB may be beneficial in the management of acute or chronic pain in the lumbosacral, abdominal, and hip regions (Tulgar et al., 2024). While limited case reports have demonstrated its potential in lumbar spine surgery, proximal femur surgery, and renal transplantation clinical applications remain underexplored (Turan and Şahin, 2024; Turan et al., 2024; Güngör et al., 2024).

We evaluated the efficacy of QIPB in a patient undergoing laparoscopic cholecystectomy under general anaesthesia. Postoperatively, while the patient was positioned in the lateral decubitus position, bilateral QIPB was performed with 20 mL of 0.25% bupivacaine on each side. Pain scores were assessed using the Numerical Rating Scale (NRS) at 0, 4, 8, 12, 16, and 24 hours postoperatively. Analgesia followed a standardized protocol consisting of intravenous (IV) morphine (3 mg), paracetamol (1 g), and tenoxicam (20 mg), with an additional 1 g of IV paracetamol administered three times daily. Rescue analgesia was given with 100 mg of IV tramadol if the NRS scores was 4 or higher. The patient reported NRS scores of 1, 2, 2, 5, 3, and 1 at 0, 4, 8, 12, 16, and 24 hours, respectively. Rescue analgesia was required at 16 hours due to an NRS score of 5. Importantly, no adverse events, including nausea, vomiting, or motor block, were observed.

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Compared to traditional abdominal wall blocks, the QIPB provides broader sensory coverage, potentially improving pain management in procedures such as laparoscopic cholecystectomy. Its anatomical targeting of the lumbar plexus and associated nerves may explain its efficacy in reducing pain from both somatic and visceral sources. In addition, the absence of significant adverse effects highlights its safety profile.

The QIPB represents a novel and effective regional anaesthetic technique for the management of postoperative pain in laparoscopic cholecystectomy. It is important to note that the effectiveness of QIPB is difficult to isolate due to the concurrent use of intravenous analgesics. However, as a component of multimodal analgesia, QIPB can provide significant benefits by addressing both somatic and visceral pain sources. To highlight its potential as part of multimodal strategies, randomized controlled trials are necessary to determine its standalone efficacy and feasibility. We believe this report provides valuable insights into the expanding applications of QIPB and hope it will contribute to the development of future evidence-based practice in postoperative pain management.

Conflicts of interest

None declared by the author. The author certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

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