References

1. King MA, Garrison MM, Vavilala MS, Zimmerman JJ, Rivara FP. Complications associated with arterial catheterization in children. Pediatr Crit Care Med 2008;9:367–71.

2. Brzezinski M, Luisetti T, London MJ. Radial artery cannulation: a comprehensive review of recent anatomic and physiologic investigations. Anesth Analg 2009;109:1763–81.

3. Kemmochi M, Nawa Y, Ohno S, Sawashita Y, Terada H, Oba K. Analysis of the radial and ulnar arteries using ultrasound and a vascular visualization device in children. Paediatr Anaesth 2022;32:747–53.

4. Kahler AC, Mirza F. Alternative arterial catheterization site using the ulnar artery in critically ill pediatric patients. Pediatr Crit Care Med 2002;3:370–4.

5. Gleich SJ, Wong AV, Handlogten KS, Thum DE, Nemergut ME. Major Short-term Complications of Arterial Cannulation for Monitoring in Children. Anesthesiology 2021;134:26–34.

Conflicts of interest
The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

Authors' contributions
Khaled Sarhan helped in conception of the idea, analysis of the data, and drafting the manuscript. Reem Mohamed helped in data collection and analysis. Mohammed El Ghobashy helped in revision of the ultrasound measurements. Manar Elkholy is the senior author who helped in study design, drafting and supervised the whole research. Ramy Alkonaiesy and Nazmy Seif helped in study design, and performance of ultrasound guided arterial cannulation. Kareem Nawwar helped in study design, revision and drafting the manuscript. All authors read and approved the final version of the manuscript.

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Quadro-iliac plane block for lumbar multi-level instrumentation surgery: far away from the surgical area

We have read with great interest the article by Turan *et al.* entitled 'Efficacy of quadro-iliac plane block in single level lumbar discectomies: a case series for novel block'.[1] The QIPB is a novel interfascial plane block technique.[2] Turan and his colleagues performed quadro-iliac plane block (QIPB) in five patients who underwent single-level lumbar discectomy surgery. They reported that pain scores and opioid requirements were low during the postoperative period. According to their clinical experiences, QIPB may be an effective analgesic regional anesthesia technique for lumbar spinal surgeries. Lumbar multi-level instrumentation surgery is more painful than single-level discectomies. Since it is a more invasive surgery and the screws used in the surgery disrupt the anatomy of the muscles and bones, the distribution of local anesthetic during the block may be affected, and the transverse process may not be visualized in the lumbar erector spinae plane block.[3] Therefore, performing a block away from the surgical area may be a more effective option in instrumentation surgery. Therefore, we performed QIPB in two patients who underwent multi-level lumbar multi-level instrumentation surgery. Herein, we want to share our clinical experiences about QIPB for multi-level instrumentation surgery. Written informed consent was obtained from the patients for the publication of this report.

This case report included two patients who underwent lumbar multi-level instrumentation surgery under general anesthesia. Patient 1 was a 79-year-old female patient with ASA class II (regulated hypertension, diabetes). Patient 1 underwent screwing with 20 cc cement between L3-L5 levels and one drain. Patient 2 was a 48-year-old female patient with ASA class II (regulated diabetes). Patient 2 underwent four transpedicular screws between L2-L4 levels, two rods and interconnects, and one drain. We performed 1 g paracetamol and 100 mg tramadol intravenously 20 min before the end of the surgery. We performed QIPB under ultrasound guidance to the patients at the end of the surgery before extubation. While the patients were in the prone position, we placed a sterile convex probe at the point where the quadratus lumborum muscle (QLM) attaches to the crista iliaca (CI). At this point, the erector spinae muscle (ESM) and the QLM below it were visualized. The block location was confirmed by giving 5 mL of isotonic solution at the point where the QLM attaches to the CI. Then, 30 mL of 0.25% bupivacaine was injected. The spread of the local anesthtetic between the ESM and the QLM was observed. The block was performed bilaterally (total volume of 60 mL). For postoperative analgesia protocol, we ordered 1 gr parasetamol 3x1 IV and attached a fentanyl PCA device containing 10 µg/mL fentanyl, a 10 µg bolus without an infusion dose, and a 10-minute lock-time protocol. Since the numerical rating score did not exceed 4 in either patient, no extra analgesic was administered, and there was no need for fentanyl from the PCA. Surgical field images and QIPB application are shown in Figure 1.

Conventional interfascial plane blocks are known as injections between two muscles. However, recently, with QIPB, a new perspective has come to plane blocks. Injections performed where the muscle attaches to the bone can also cause a wide spread and effective block. The most important advantage of QIPB for lumbar sur-

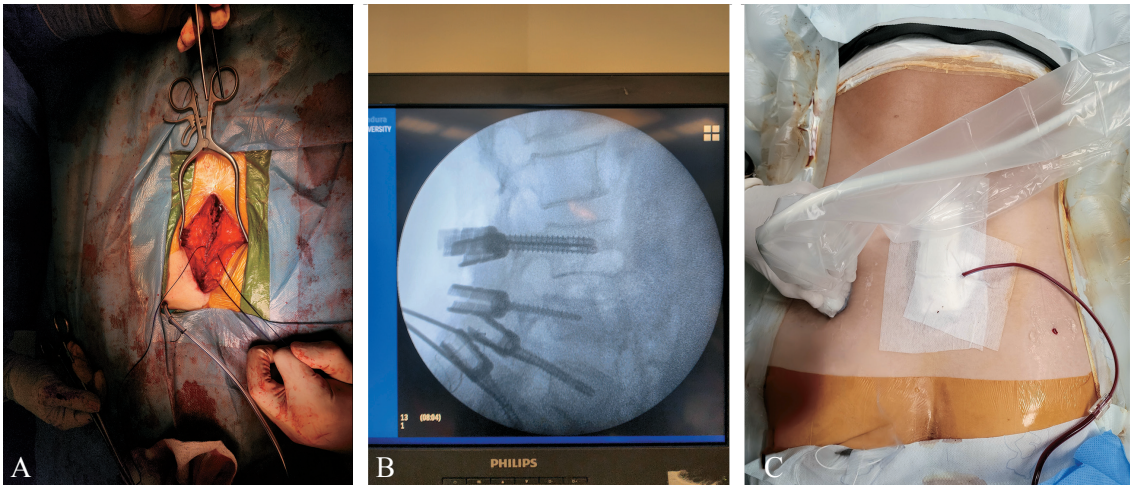

Figure 1.—Surgical field and QIPB application figures: A) surgical incision and retractors; B) scope image of instrumentation; C) patient and probe position during QIPB.

geries is that the application area is away from the surgical region and local anesthetic distribution is not affected by surgical trauma. According to our experiences, QIPB may be a new effective alternative analgesic method for multi-level lumbar surgeries.

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References

1. Turan EI, Aslan C, Berber K, Sarban O, Şahin AS. Efficacy of quadro-iliac plane block in single level lumbar discectomies: a case series for novel block. Minerva Anestesiol 2024;90:1159–60.

2. Tulgar S, Ciftci B, Ahiskalioglu A, Bilal B, Sakul BU, Girit M, *et al.* Ultrasound guided quadro-iliac plane block: another novel fascial plane block. Pain Med 2024;25:370–3.

3. Ciftci B, Alver S, Omur B, Ahiskalioglu A. Novel alternative block for scoliosis surgery: serratus posterior superior plane block, does not need to visualize the transverse process. Eurasian J Med 2024;56:216–7.

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An alternative sonographic approach to infraspinatus-teres minor interfascial plane block: make it easy

Regional anesthesia techniques have improved greatly thanks to the use of ultrasound and new inspirational