CORRESPONDENCE

Iliac crest bone graft donor site analgesia: a new indication for erector spinae plane block

Yavuz Gürkan, MD · Can Aksu, MD

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To the Editor,

Iliac crest bone graft harvesting (ICBGH) has long been used for different indications in multiple surgical subspecialties. Pain after this procedure can be severe and can delay mobilization of patients postoperatively. Various regional anesthesia techniques have been performed to alleviate pain after iliac crest donor site grafting, including local anesthetic infiltration.¹

We therefore read the report of Sondekoppam *et al.*² with great interest. They used ultrasound-guided lateral-medial transmuscular quadratus lumborum block (QLB-TM) as a postoperative analgesia method for this procedure. Transversalis fascia plane block and transversus abdominis plane block have also been used for the same purpose.^{3,4} All the above-mentioned techniques have proved to have some benefits and may have a place in clinical practice. Here, we would like to share our experience with yet another regional anesthesia technique for this indication.

Erector spinae plane block (ESPB) is an interfascial plane block with a simple superficial technique compared with QLB-TM. Serkan *et al.*⁵ reported adequate analgesia for total hip arthroplasty with ESPB. They used 30 mL of local anesthetic mixture (15 mL 0.5% bupivacaine, 5 mL 2% lidocaine, and 10 mL normal saline) and showed a sensory block between T12 and L4. As indicated in the reports of Sondekoppam *et al.*² and Chin *et al.*,³ the

principal component of pain after ICBGH is derived from the L1–L3 nerve roots. We hypothesized that ESPB performed at the L2 level with 30 mL of 0.25% bupivacaine could provide sufficient analgesia for the surgical area.

A 52-yr-old female patient with American Society of Anesthesiologists' physical status II (hypertension) and a body mass index of 27 kg·m⁻² was scheduled for surgery to correct a right talus osteochondral defect. ICBGH was used in this case. Popliteal block with 20 mL of 0.25% bupivacaine for the surgical site and ESPB at the L2 level with 30 mL of 0.25% bupivacaine were performed 30 min before the start of surgery. The surgery was done under general anesthesia. A morphine patient-controlled analgesia device (1 mg bolus; eight-minute lockout; 6 mg hourly limit) was provided postoperatively. Acetaminophen 1 g *iv* was administered every eight hours routinely. Non-steroidal anti-inflammatory drugs were planned as rescue analgesic. The numeric rating scale (NRS) for pain at discharge from the postoperative recovery room was 0. Numeric rating scale scores measured every two hours for the first 24 postoperative hours were all < 3. The total morphine consumption over 24 hr was 8 mg. No rescue analgesic was required. The patient expressed a high degree of satisfaction.

Pain is the most reported complication after ICBGH and chronic pain can be seen in some patients.^{2,3} Sondekoppam *et al.*² reported mean NRS scores of 5 and opioid consumption (oral morphine equivalents) of 66 mg in the first 24 hr postoperatively. Although we are presenting very limited data from only one patient, our NRS scores and morphine consumption were lower compared with this report. We therefore believe that randomized clinical trials are needed to determine the benefits of ESPB in this group of patients.

This letter is accompanied by a reply. Please see Can J Anesth 2019; 66: this issue.

Y. Gürkan, MD · C. Aksu, MD (✉)
Department of Anesthesiology and Reanimation, Faculty of
Medicine, Kocaeli University, Kocaeli, Turkey
e-mail: dr.aksu@gmail.com

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Conflicts of interest None declared.

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References

1. Gündeş H, Kiliçkan L, Gürkan Y, Sarlak A, Toker K. Short- and long-term effects of regional application of morphine and bupivacaine on the iliac crest donor site. *Acta Orthop Belg* 2000; 66: 341-4.
2. Sondekoppam RV, Ip V, Johnston DF, et al. Ultrasound-guided lateral-medial transmuscular quadratus lumborum block for analgesia following anterior iliac crest bone graft harvesting: a clinical and anatomical study. *Can J Anesth* 2018; 65: 178-87.
3. Chin KJ, Chan V, Hebbard P, Tan JS, Harris M, Factor D. Ultrasound-guided transversalis fascia plane block provides analgesia for anterior iliac crest bone graft harvesting. *Can J Anesth* 2012; 59: 122-3.
4. Punekar IR, Koltz PF, Smith DI, et al. The evolution of iliac bone graft donor site analgesia in cleft patients: transversus abdominis plane block is safe and efficacious. *Ann Plast Surg* 2018; 81: 441-3.
5. Tulgar S, Senturk O. Ultrasound guided erector spinae plane block at L-4 transverse process level provides effective postoperative analgesia for total hip arthroplasty. *J Clin Anesth* 2018; 44: 68.