Continuous bilateral quadratus lumborum block after abdominal surgery

Sir,

I read with great interest the letter of Rao Kadam et al.\(^\text{[1]}\) concerning the use of continuous local anesthetic infusion via catheters placed bilaterally in the junction of transversus abdominis plane (TAP) and quadratus lumborum muscle for postoperative analgesia after open right hemicolectomy. I congratulate him on the presentation of the case. However, we have previously described this technique with excellent results in six cases including its pharmacokinetic profile.\(^\text{[2]}\) I would like to add some comments that could contribute to improve the technique.

We use bilateral TAP catheters inserted by ultrasound imaging using a Contiplex\(^\text{®}\) C needle (B. Braun, Melsungen, Germany). When the incision is predominantly subumbilical, a posterior TAP block in the triangle of Petit is performed. For surgical incisions that are supraumbilical or full abdominal length, a postero-subcostal approach is performed. After location of the neurofascial TAP, 0.25% levobupivacaine 5 ml is injected. After withdrawing the needle, bilateral continuous infusion of 0.125% levobupivacaine at 2 ml/h from elastomeric pumps (INFUSOR SV2, Baxter, France) is started and continued for 50 h. Before removal of the catheters, 0.25% levobupivacaine 10 ml is administered.

Our technique has several advantageous features. First, it involves placement of Contiplex\(^\text{®}\) C catheters, a novel system in which the catheter-over-the-needle design helps to simply and effectively overcome some challenges of insertion. Previously, all studies and case reports used epidural catheters inserted through a Tuohy needle as the author. Secondly, the technique decreases systemic exposure to the local anesthetic,\(^\text{[2]}\) by minimizing the volume required for an effective block. It is much lower than infusion employed by the author. Higher volumes of the local anesthetic have traditionally been used to ensure block across multiple dermatomes, but it is possible that this approach is only necessary for a single shot block. Previous catheter studies have used large volumes (and doses) of local anesthetic without evaluating smaller volumes.
Moeschler et al. [3] in a cadaveric study, determined that anterior-posterior and transverse spread of contrast did not correlate with an increasing volume of injected contrast, which differed from the relationship to cranial-caudal spread. The volume that we use is much lower than previously described. One possible explanation is that insertion of the catheter in an optimal position and the volume accumulation during the infusion compensated for a low initial volume. The instillation of large volumes into the TAP bilaterally can lead to significant intravascular concentrations of local anesthetic, even exceeding the threshold of toxicity. Careful risk-benefit assessment should be performed before continuous TAP blocks, especially in elderly patients, renal or hepatic dysfunction. [4] The main objective of a continuous technique should be given the lowest total dose of local anesthetic effective to prevent undesirable effects due to toxicity because otherwise we consider that it does not provide additional benefit with respect to a technique based on bolus administration. [5]

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Nil.

**Conflicts of interest**
There are no conflicts of interest.

**Manual Ángel Gómez-Ríos, David Gómez-Ríos**
Department of Anaesthesiology and Perioperative Medicine, Complejo Hospitalario Universitario de A Coruña, A Coruña, Spain

Address for correspondence: Dr. Manuel Ángel Gómez-Ríos, Departamento de Anestesiología, Complejo Hospitalario Universitario de A Coruña, Xubias de Arriba, 84, 15006 A Coruña, Spain. E-mail: magoris@hotmail.com

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