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Postoperative analgesia for laparotomic surgery provided by
bilateral single-shot Quadratus Lumborum Block

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Dear Editor,

We present a case of effective postoperative analgesia obtained by performing a bilateral single-shot Quadratus Lumborum Block (QLB) in a patient undergoing laparotomic procedure.

A 41 years old male, weight 78 Kg and height 180 cm, with a previous history of Peutz-Jeghers syndrome and hyperhomocysteinemia, was scheduled in our surgical department for a laparotomic ileal polypectomy, involving dermatomes from T8 to T12.

General anesthesia was induced with Fentanyl 200 mcg, Propofol 150 mg and Rocuronium 50 mg, then a bilateral US-guided QLB was performed with the patient in the supine position, using a pillow under the hip to facilitate the probe positioning.

We chose the posterior approach, (named QLB2 by Blanco et al.), because it seems to provide a more predictable spread of the local anesthetic into the paravertebral space (1), and because of the low incidence of quadriceps motor weakness reported with this approach (2).

We used a high-frequency linear probe (12 Mhz) to identify the posterior aspect of the thoracolumbar fascia, between the Quadratus Lumborum, the Latissimus Dorsi and the Erector Spinae muscle (QLB2) , where we injected 30 ml of 0.3% Ropivacaine and Dexamethasone 4 mg per side.

There is a lack of studies about the role of Dexamethasone as an adjuvant in compartment blocks, however, in a 2014 prospective, randomized and double blind study, Kumar et al. found that adding Dexamethasone to Bupivacaine for Fascia Iliac Compartment Block significantly prolonged the duration of block and decreased the requirement of rescue analgesics as compared to patients who received Bupivacaine alone.

So, as our patient was not at risk of dexamethasone-related adverse events, we decided to add it to the LA solution, in order to obtain a longer duration of the block (3).

Anesthesia was maintained with Sevoflurane (MAC 1), and further 100 mcg of fentanyl were administered 90 minutes after the induction.

Additional analgesia was provided intraoperatively with Paracetamol 1g and Ketoprofen 100 mg.

After recovery from anesthesia the patient was evaluated three times every 30 minutes, and NRS score was 0/10 in all these three evaluations.

The first analgesic drug (Paracetamol 1 g) was required by the patient 17 h after the block as NRS score was 4.

In the following 24 hours the patient received Paracetamol 1g every 8 h, and Ketoprofen 100 mg every 12 h. No further rescue analgesia was required by the patient, who always reported NRS scores lower than 3.

The QLB, described for the first time in 2007 by Blanco et al. (4), is an ultrasound-guided approach to the thoracolumbar fascia compartment which seems to provide a reliable spread of the local anesthetic to the thoracic paravertebral space.

On these premises the QLB aims to produce a unilateral multisegmental block involving T6-L2 dermatomes, and it has been proposed to provide somatic and visceral analgesia for a variety of surgical procedures (5).

In addition to this versatility, this block has the safety profile of a peripheral approach, so that further researches are needed to better characterize the role of QL block and to clarify if it could represent an effective and charming option when neuraxial techniques are not feasible.

Larger cadaver studies using both dye and MRI scanning are also needed to define which is the most opportune approach and the precise positioning of needle tip to produce the best and most constant spread of the local anesthetic into the paravertebral space.

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