

Continuous bilateral transversus abdominis plane block after abdominal surgery

Bloqueio do plano transverso abdominal contínuo bilateral após cirurgia abdominal

Dear Editor,

I read with great interest the article of Lima et al.¹ concerning the use of continuous local anesthetic infusion via catheters placed bilaterally in the transversus abdominis plane (TAP) for postoperative analgesia after exploratory laparotomy. I congratulate them on the presentation of the case. However, I would like to add some comments.

TAP block has become an important method of postoperative pain management for patients undergoing lower abdominal surgery as a result of its effectiveness, relative ease of establishment and low rate of complications.² We agree with the authors that it is important to assess the ideal concentration and volume for bolus and infusion and proper placement of the catheter within TAP. But in this sense, besides the efficacy, the safety issue should not be forgotten. Thus, the instillation of large volumes into the TAP bilaterally can lead to significant intravascular concentrations of local anesthetic, even exceeding the threshold of toxicity.³ Thus, Hessian et al. in a recent investigation determined relatively high cumulative doses of ropivacaine, assessing ropivacaine plasma concentrations during a similar continuous infusion into the TAP as proposed by the authors.⁴ Thereby, despite marked individual variability, careful risk benefit assessment should be performed before continuous TAP blocks, especially in elderly patients, renal or hepatic dysfunction and gestation.⁵ The main objective of a continuous technique should be administering the lowest total dose of a local anesthetic effective to prevent undesirable effects due to toxicity because otherwise I consider that it does not provide additional benefit with respect to a technique based on bolus administration into the TAP.⁶ Thus, in our institution, we use bilateral TAP catheters inserted by ultrasound imaging in the Triangle of Petit or in a postero-subcostal level according to the type of surgical incision, based on bilateral continuous infusion of 0.2% ropivacaine 2 mL/h for up to 50 h with previous administration of bolus of 5 mL of 0.2% ropivacaine and 10 mL through both catheters before removing them, with excellent results.

Likewise, the authors assert that “although toxic plasma concentrations of local anesthetic have been detected, there are no reports of clinical signs of systemic toxicity associated with local anesthetic”; however, the previous

studies reported several cases of symptomatic local anesthetic toxicity.^{4,7}

Moreover, the authors claim that “although TAP provides superior analgesia compared to placebo, the visceral pain, etc., remains, which requires the addition of IV opioids in the blockade”. It should be remembered that posterior approach to the TAP permits spread of local anesthetic solution to the paravertebral space and part of this also results in some degree of epidural spread of local anesthetic. This extension to the central nervous system might explain patients requiring minimal extra analgesia postoperatively.⁸

The optimal site of insertion of TAP catheters, the ideal local anesthetic solution, volume and optimal infusion rate are yet to be determined. This requires more rigorous scientific investigation.

References

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