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Comparison of transversus abdominis plane block and epidural analgesia for pain relief after surgery

Editor—Epidural analgesia, considered as the 'gold standard' for postoperative analgesia, has recently been used less because of a high risk–benefit ratio. Moreover, there are a number of clinical situations where epidural analgesia is contraindicated. Transversus abdominis plane (TAP) block, which has shown effective pain relief compared with no intervention or placebo after abdominal surgery in a previously published meta-analysis, may be an effective alternative analgesic approach.[1] However, the efficacy of TAP block *vs* epidural analgesia for postoperative analgesia remains controversial.

We searched the PUBMED, EMBASE, and CENTRAL databases for randomized controlled trials that assessed the analgesic efficacy of TAP block and epidural analgesia after any type of surgery, with patients of any age or sex, from database inception to 6 April 2014. The primary outcomes were pain scores at rest and on movement at 24, 48, and 72 h. The secondary outcomes were 72 h overall morphine requirement and adverse events. The risk of bias of included studies was assessed using the Cochrane risk of bias tool. A random-effects model was used when heterogeneity was significant ($I^2>50\%$).

Four studies with a total of 216 patients were included.[2–5] There was no significant difference in pain scores at rest at any end-point [for 24 h,[2–5] mean difference (MD)=0.20, 95% confidence interval (CI; −0.62, 1.02), $I^2=79\%$; for 48 h,[2–5] MD=0.28, 95% CI (−0.06, 0.62), $I^2=27\%$; and for 72 h,[2–4] MD=0.22, 95% CI (−0.25, 0.69), $I^2=67\%$] and in dynamic pain scores at any end-point [for 24 h,[2–5] MD=0.30, 95% CI (−0.22, 0.81), $I^2=29\%$; for 48 h,[2–5] MD=0.17, 95% CI (−0.53, 0.87), $I^2=65\%$; and for 72 h,[2–4] MD=0.39, 95% CI (−0.58, 1.35), $I^2=78\%$]. However, there was significant heterogeneity, except for pain scores at rest at 48 h and dynamic pain scores at 24 h. The TAP block showed a non-significant increase trend in 72 h overall morphine requirement by 8.93 mg compared with epidural analgesia [95% CI (−0.22, 18.08), $I^2=74\%$];[2–5] however, there was also significant heterogeneity in this analysis. Transversus abdominis plane block and epidural analgesia showed equivalent postoperative nausea scores in two studies.[4 5] In one study, the incidence of nausea and sedation were 19 and 44%, respectively, for TAP block, and 21 and 24%, respectively, for epidural analgesia; no significant difference ($P=0.84$ and $P=0.11$) was seen between the two groups.[3] The TAP block was associated with a significant lower incidence of hypotension than epidural analgesia [relative risk=0.09, 95% CI (0.01, 0.68), $I^2=0\%$].[2 3]

In summary, the equivalent rest and dynamic pain scores at 24, 48, and 72 h and the 72 h overall morphine requirement indicated that TAP block, with a lower incidence of hypotension, seems not to be inferior to epidural analgesia for postoperative analgesia. However, given the low number of studies and participants and the large heterogeneity among studies, the conclusion about the efficacy of TAP block and epidural analgesia for postoperative analgesia is inconclusive. A definite conclusion needs to be reached in future studies.

Declaration of interest

None declared.

P. Zhang
X.-Q. Deng
R. Zhang
T. Zhu*
Chengdu, Sichuan, China
**E-mail: xwtao_zhu@163.com*

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High-dose tranexamic acid for treating postpartum haemorrhage after vaginal delivery

Editor—Evidence is limited for the effectiveness of tranexamic acid (TA) in postpartum haemorrhage (PPH).[1] We evaluated whether administration of high-dose TA in women with PPH≥800 ml reduces blood loss after vaginal birth.

This controlled single-center before-and-after study of all women with PPH≥800 ml after vaginal birth took place from January 2011 through March 2012; the control group included those seen from January 2011 through August 2011, and the case patients (TA group) those from September 2011 through