SUPPLEMENTARY MATERIAL

Supplementary material is available at ICVTS online.

Conflict of interest: none declared.

REFERENCES


eComment. Epidural analgesia versus paravertebral analgesia technique

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I read with great interest the systematic review and meta-analysis by Baidya et al. in which they compared efficacy of two different strategies for pain control in patients undergoing thoracotomy [1]. After including 12 clinical trials in their analysis, they concluded that there is an equivalent analgesic efficacy of epidural anaesthesia and paravertebral anaesthesia. Recently, the results of an additional randomized study
have been published [2]. In order to be exhaustive, we will summarize the relevant outcomes of the above-mentioned study.

Ravegila et al. randomized 52 patients (aged 51-92 years) into two groups. Epidural anaesthesia (EA) group received an infusion of 0.001% fentanyl plus 0.1% bupivacaine through a catheter placed into the T5/6, T6/7 interspaces. Paravertebral anaesthesia (PA) group received an infusion of 0.3% naropine in the same interspace as the thoracotomy incision through a catheter inserted at the end of surgery using the ‘de visu’ technique [3]. Regarding pain management, a significant difference in favour of PA, both at rest and during coughing, in the early postoperative period was reiterated in this trial. Moreover data proved that PA is more effective than EA concerning respiratory outcomes both for spirometric lung function and ambient air saturation.

Paravertebral anaesthesia in patients undergoing thoracotomy is safe and as effective as EA. It has been used since the 1940s [4] but never gained impetus among thoracic surgeons. Although PA does not have contraindications regarding coagulopathy or anatomical anomalies it should be acknowledged that during treatment some adverse effects may occur, due to the contiguity between the paravertebral space and epidural space. Uncommon adverse effect can be seen such as hypotension, blurred vision and confusion [4].

Conflict of interest: none declared.

References

eResponse. Re: Epidural analgesia versus paravertebral analgesia technique

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We have read the comment by Hajj-Chahine [1] on our meta-analysis [2] with great interest. It is very encouraging that clinical research continues to focus on thoracic paravertebral block. The author discusses a recently published randomized control trial (RCT) [3] on the same issue addressed in our review. In that RCT, Ravegila et al. found a significant difference in favour of paravertebral analgesia, both at rest and during coughing, in the early postoperative period. They also found that paravertebral block is more effective than epidural analgesia in relation to respiratory outcomes, both for spirometric lung function and ambient air saturation. However, we think that these results should be interpreted cautiously. Several methodological limitations exist in the study. Firstly, the duration of surgery in the epidural analgesia group of patients is significantly higher; this finding seriously calls into question the quality of randomization used here. A longer duration surgery may be due to technical complexity and the degree of surgical dissection may be greater, which may give rise to increased pain and a poor respiratory performance. Secondly, the authors used 0.1% bupivacaine in the epidural and 0.3% ropivacaine in the paravertebral block: are they truly comparable? Thirdly, they inserted the epidural catheter at the T5-T6 or T6-T7 intervertebral space but the paravertebral catheter in the same interspace as the thoracotomy incision. It seems illogical to put the two catheters at different levels. They also mentioned that no patients in either of the two groups required additional analgesia. They did not mention the mean difference of the pain scores at different time points and arterial oxyhaemoglobin saturation. The actual clinical significance may be debatable here. We believe that further high quality RCTs are required in this issue to elucidate the optimum analgesic technique in thoracotomy.

Conflict of interest: none declared.

References