Reply to "Level of thoracic epidural blockade decides the postoperative outcome"

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DEAR EDITOR,

First, as we have acknowledged in the section of limitation, we did not include opioid consumption for each patient in our analysis. Preclinical studies showed opioids may modify host immunity and therefore affect the invasion and proliferation of cancer cells.[1] However, clinical studies showed conflicting results regarding relation between perioperative opioid use and recurrence risk in miscellaneous types of cancer.[2–4] Until now, there is no adequate evidence confirming the tumor-promoting property of opioids in humans.[1] Besides, in our study, patients without epidurals were given morphine-based intravenous patient-controlled analgesia after liver resections. Presumably, patients using bupivacaine-based epidural analgesia consumed less opioids during and after liver resections when compared with their counterparts. Hence, we believe opioid use is unlikely to bias our results.[5] Second, as to the blockade level of epidurals, as we have described in the section of methods, patients undergoing hepatectomy and using epidurals had their epidural catheters placed at T10-T12 spine. In our practice, epidurals catheters were typically threaded 5 to 7 cm into the epidural space, followed by an infusion of 0.1% bupivacaine with or without 1 μg/mL of fentanyl with demand dose 2 to 2.5 mL and basal infusion rate 5 to 6 mL/h, as reported in our prior article.[6] Although we did not record blockade level of epidurals in this study,[7] we believe such a regimen could cover the hepatic innervations (T7-T12) in most patients.

REFERENCES

1. Boland JW, Pockley AG. Influence of opioids on immune function in patients with cancer pain: from bench to bedside. *Br J Pharmacol* 2018;**175**:2726–36.
2. Tai YH, Wu HL, Chang WK, Tsou MY, Chen HH, Chang KY. Intraoperative fentanyl consumption does not impact cancer recurrence or overall survival after curative colorectal cancer resection. *Sci Rep* 2017;**7**:10816.
3. Du KN, Feng L, Newhouse A, Mehta J, Lasala J, Mena GE, et al. Effects of intraoperative opioid use on recurrence-free and overall survival in patients with esophageal adenocarcinoma and squamous cell carcinoma. *Anesth Analg* 2018;**127**:210–6.
4. Zylla D, Kuskowski MA, Gupta K, Gupta P. Association of opioid requirement and cancer pain with survival in advanced non-small cell lung cancer. *Br J Anaesth* 2014;**113**(Suppl 1):i109–16.
5. Hsieh YJ, Hung CJ. Level of thoracic epidural blockade decides the postoperative outcome. *J Chin Med Assoc* 2019;**82**:802.
6. Wu HL, Tai YH, Chan MY, Tsou MY, Chen HH, Chang KY. Effects of epidural analgesia on cancer recurrence and long-term mortality in patients after non-small-cell lung cancer resection: a propensity score-matched study. *BMJ Open* 2019;**9**:e027618.
7. Chang WK, Lee MY, Tai YH, Kuo YM, Tsou MY, Chang KY. Does epidural analgesia improve the cancer outcome in hepatocellular carcinoma after resection surgery? A retrospective analysis. *J Chin Med Assoc* 2019;**82**:295–9.

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