Letter to the Editor

Complemental analysis about postoperative opioid consumption between video-assisted thoracic surgery (VATS) and robotic-assisted thoracic surgery (RATS) for early-stage lung cancer

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We would like to thank Dr. Bayman and Dr. Brennan for their interesting comments about our study.

We indeed performed a propensity score analysis to improve the quality of our observational study. This study compared morphine consumption after surgery for early stage of lung cancer using video-assisted or robotic-assisted technic (1).

Dr. Bayman and Dr. Brennan revealed an issue about the duration of surgery, which is unbalanced between groups. This difference could bias the analysis and modified morphine consumption. The propensity score was defined by Rosenbaum and Rubin as the probability of treatment assignment conditional on observed baseline covariates: ei = $Pr(Zi = 1|Xi)$. The surgical duration, which is not a baseline covariate but a post-baseline variable was therefore not included in the propensity score model (2).

Nevertheless, this hypothesis is interesting as time of exposition to surgical aggression could increase pain after surgery. Thus, we performed a supplementary analysis through a multivariable regression model including surgical duration as a confounding factor (added to paravertebral block and body mass index). Our results showed that time of surgery had no effect on morphine consumption with no significant difference of predicted β = –0.03 (95% CI: –0.09 to 0.04; P=0.42) after 48 hours of surgery.

In any case, we are delighted to join the opinion of Drs Bayman and Brennan on the need of further evaluation. Indeed, robotic-assisted thoracic surgery (RATS) for lung surgery, from what we know to date, does not significantly reduce morbi-mortality compared with video-assisted technic while increasing duration of surgery and having significant impact of hemodynamic and respiratory function (1). Due to the nature of our study, we agree that undetermined variables may have affected these findings.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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patients undergoing video-assisted or robotic-assisted lung resection: a prospective, propensity score-matched study. J Thorac Dis 2018;10:3558-67.

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