Reply to "Patient value of patient-controlled analgesia"

Ying-Hsuan Tai[a,b,c,d], Hsiang-Ling Wu[a,b], Shih-Pin Lin[a,b], Mei-Yung Tsou[a,b], Kuang-Yi Chang[a,b,*]

[a]Department of Anesthesiology, Taipei Veterans General Hospital, Taipei, Taiwan, ROC; [b]School of Medicine, National Yang-Ming University, Taipei, Taiwan, ROC; [c]Department of Anesthesiology, Shuang Ho Hospital, Taipei Medical University, New Taipei City, Taiwan, ROC; [d]Department of Anesthesiology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, ROC

Dear Editor,

We thank Lin and Hung[1] for their thoughtful comments and constructive queries on our study. As we have stated in Table 3 of our article, the use of intravenous patient-controlled analgesia (PCA) was associated with higher scores of quality of life in health domain (intravenous PCA vs no PCA: coefficient = 3.7 [95% CI = –0.5 to 8.0]; epidural PCA vs no PCA: –3.3 [–8.6 to 2.0]; p = 0.020).[2] We are grateful to the readers for the corrigendum on the abstract of our article. Although PCA is an established and widespread treatment modality for postoperative pain control,[3] few studies have investigated the relationship between uses of PCA and long-term quality of life after major surgery. Our analysis did not confirm the benefits of PCA in reducing the risk of chronic postsurgical pain, and therefore the better quality of life in physical health in patients using intravenous PCA should be explained by factors other than analgesic effectiveness.

From the perspective of patient value, the assessment of health care should be based on the health outcomes achieved per dollar spent.[4] Several studies of cost-effectiveness analysis have demonstrated that PCA is more costly and less effective for pain management in patients undergoing major abdominal surgery compared with non-PCA therapy.[5,6] However, these results can be hardly applicable to Taiwanese healthcare system due to the obvious difference in healthcare cost between Taiwan and western countries. Meta-analysis has showed PCA is more efficacious than non-PCA therapy in relieving postoperative acute pain and enhancing patient satisfaction.[7] Therefore, it is of importance to consider which aspects of health outcomes patients are concerned about most when talking about patient value. We expect more studies to explore the optimal pain control strategy in terms of value-based and patient-centered health care.

REFERENCES

1. Lin LF, Hung CJ. Patient value of patient-controlled analgesia. *J Chin Med Assoc* 2020;**83**:512.
2. Tai YH, Wu HL, Lin SP, Tsou MY, Chang KY. An investigation of the effect of patient-controlled analgesia on long-term quality of life after major surgery: A prospective cohort study. *J Chin Med Assoc* 2020;**83**:194–201.
3. Lin SP, Chang KY, Chen HH, Tsou MY. Predicting procedure-specific morphine consumption of intravenous patient-controlled analgesia with random-effect model approach. *Clin J Pain* 2019;**35**:43–9.
4. Gray M. Value based healthcare. *BMJ* 2017;**356**:j437.
5. Tilleul P, Aissou M, Bocquet F, Thiriat N, le Grelle O, Burke MJ, et al. Cost-effectiveness analysis comparing epidural, patient-controlled intravenous morphine, and continuous wound infiltration for postoperative pain management after open abdominal surgery. *Br J Anaesth* 2012;**108**:998–1005.
6. Choinière M, Rittenhouse BE, Perreault S, Chartrand D, Rousseau P, Smith B, et al. Efficacy and costs of patient-controlled analgesia versus regularly administered intramuscular opioid therapy. *Anesthesiology* 1998;**89**:1377–88.
7. McNicol ED, Ferguson MC, Hudcova J. Patient controlled opioid analgesia versus non-patient controlled opioid analgesia for postoperative pain. *Cochrane Database Syst Rev* 2015;**CD003348**.

*Address correspondence. Dr. Kuang-Yi Chang, Department of Anesthesiology, Taipei Veterans General Hospital, 201, Section 2, Shi-Pai Road, Taipei 112, Taiwan, ROC. E-mail address: kychang@vghtpe.gov.tw (K.-Y. Chang).

Conflicts of interest: The authors declare that they have no conflicts of interest related to the subject matter or materials discussed in this article.

Journal of Chinese Medical Association. (2020) 83: 513.

Received March 12, 2020; accepted March 12, 2020.

doi: 10.1097/JCMA.0000000000000304.