



Enhanced pain management improves CPTS outcomes

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To the Editor:

We would like to express our sincere gratitude to Dr. Nachira et al. for their insightful comments on our recent study titled “Uniportal Video-Assisted Thoracic Surgery Versus Open Thoracotomy for Chronic Pain After Surgery: A Prospective Cohort Study” [1]. We appreciate their acknowledgment of the value of our findings, their contributions to the field of pain management in thoracic surgery and their discussions in the letter.

Peripheral nerve blocks and acute pain after thoracic surgery

Dr. Nachira et al. highlighted the potential benefits of peripheral nerve blocks, such as intercostal nerve blocks performed by surgeons, in managing acute pain after thoracic surgery [2]. Although our study did not routinely employ nerve blocks, we recognize their value in enhancing pain management. Their research noted significantly lower pain levels in the Uniportal-VATS (U-VATS) group compared to the OT group ($p < 0.001$) [2]. However, the overall advantage of intercostal nerve blocks was not clearly demonstrated, as all patients received them. Consistent with our findings [1],

their study indicated that the surgical approach significantly impacts pain management. Different techniques and combinations of nerve blocks can produce varying outcomes. In the case of continuous peripheral nerve blocks, such as the continuous erector spinae plane block (c-ESPB) used in thoracic surgeries, these techniques can reduce opioid requirements and enhance analgesic effects when properly applied [3]. However, several factors must be carefully managed, including catheter fixation, patient tolerability, and the monitoring of vital signs and motor functions.

Chronic pain after thoracic surgery (CPTS)

We are encouraged by the zero case of what appeared to be CPTS in the U-VATS group reported by Dr Nachira et al. following the implementation of their advanced analgesic protocols, including intercostal nerve blocks [4]. It underscores the importance of acute pain management in preventing chronic pain development. Our study also supports this view, indicating that the optimization of post-operative pain control is crucial in reducing chronic pain [1]. The effectiveness of multiportal-VATS in reducing the incidence of CPTS incidence compared to OT remains a topic of debate in the literatures [1]. It's important to note that in 2019, a consensus was reached on the time definition of CPTS: it must persist or recur for at least three months to be classified as chronic [5], whereas pain occurring within seven days post-surgery [4] is considered acute pain after thoracic surgery. Nonetheless, your significant studies continue to inspire advancements in the field of pain management after thoracic surgeries.

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Future research directions

We concur with Dr. Nachira et al. on the need for ongoing research to refine pain management strategies in U-VATS. Specifically, well-designed comparative studies assessing various nerve block techniques could be instrumental in identifying the most effective approaches for different patient populations or different primary diseases. Additionally, exploring the long-term outcomes of these interventions, particularly in terms of CPTS and quality of life, would be valuable.

Conclusion

We greatly appreciate the constructive feedback from Dr. Nachira et al. Their insights significantly enrich the discourse on optimizing pain management in thoracic surgery. While comprehensive clinical studies on the use of nerve blocks to prevent CPTS are still lacking, we believe that aggressive perioperative pain management strategies, including nerve blocks, have the potential to improve CPTS outcomes. We look forward to continued collaborative efforts in this field to enhance patient care and outcomes.

Data availability The datasets generated and analyzed during this letter are available from the authors on reasonable request.

References

1. Gu Y, Li X, Zhou Q, Deng H, Zhang F, Wei J, Lv X. Uniportal video-assisted thoracic surgery versus open thoracotomy for chronic pain after surgery: a prospective cohort study. *J Anesth.* 2024;38(4):525–36.
2. Nachira D, Congedo MT, Calabrese G, Tabacco D, Petracca Ciavarella L, Meacci E, Vita ML, Punzo G, Lococo F, Raveglia F, Chiappetta M, Porziella V, Guttadauro A, Cioffi U, Margaritora S. Uniportal-VATS vs. open McKeown esophagectomy: surgical and long-term oncological outcomes. *Front Surg.* 2023;10:1103101.
3. Nachira D, Punzo G, Calabrese G, Sessa F, Congedo MT, Baccia G, Aceto P, Kuzmych K, Cambise C, Sassorossi C, Nocera A, Senatore A, Vita ML, Meacci E, Sollazzi L, Margaritora S. The efficacy of continuous serratus anterior and erector spinae plane blocks vs intercostal nerve block in uniportal-vats surgery: a propensity-matched prospective trial. *J Clin Med.* 2024;13(2):606.
4. Nachira D, Ismail M, Meacci E, Zanfrini E, Iaffaldano A, Swierzy M, Englisch J, Faber S, Ossami Saidy RR, Vita ML, Porziella V, Rueckert JC, Margaritora S. Uniportal vs triportal video-assisted thoracic surgery in the treatment of primary pneumothorax—a propensity matched bicentric study. *J Thorac Dis.* 2018;10(31):S3712–9.
5. Treede RD, Rief W, Barke A, Aziz Q, Bennett MI, Benoliel R, Cohen M, Evers S, Finnerup NB, First MB, Giamberardino MA, Kaasa S, Korwisi B, Kosek E, Lavand'homme P, Nicholas M, Perrot S, Scholz J, Schug S, Smith BH, Svensson P, Vlaeyen JWS, Wang SJ. Chronic pain as a symptom or a disease: the IASP classification of chronic pain for the international classification of diseases (ICD-11). *Pain.* 2019;160(1):19–27.

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