



Regional anesthesia during the COVID-19 pandemic: a time to reconsider practices? (Letter #1)

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To the Editor,

We read with interest the recent article by Lie *et al.* entitled “*Practical considerations for performing regional anesthesia: lessons learned from the COVID-19 pandemic*”¹ and are thankful for their contribution, which has been helpful and thought-provoking. Since transmission of coronavirus disease (COVID-19) occurs with symptomatic as well as asymptomatic patients, we too are concerned with aerosol-generating procedures and are interested in techniques that decrease or avoid them altogether.

Lie *et al.* wisely recommend administering regional anesthesia and recovering the patient in the operating room to minimize exposure to hospital staff and other patients. While they assert that regional anesthesia is not an aerosol-generating procedure,¹ there is recent preliminary evidence that COVID-19 may spread via small (< 5 µm) respiratory droplets, which can remain in the air for prolonged periods of time. These droplets are generated not only through coughing and sneezing, but also through forceful

exhalation and loud speech.² Regional block placement, especially if challenging, may therefore result in an unnecessary potential exposure. Thus, for those patients having a planned general anesthetic where a concomitant regional technique is also going to be used, we should consider re-evaluating the current recommendations of the American Society of Regional Anesthesia that currently advises against the routine performance of peripheral nerve blocks in anesthetized adult patients.³ Proponents of this practice believe that patient wakefulness may aid in the detection of local anesthetic systemic toxicity (LAST) or impending peripheral nerve injury.^{3,4}

To put things into perspective, the relatively low incidence of long-term neurologic injury and LAST, reported to be as high as 0.04% and 0.1%, respectively,^{3,4} should be contrasted with the highly contagious nature of COVID-19 and its high mortality rate in susceptible individuals. While ultrasound guidance may not decrease the risk of nerve injury, it has been shown to decrease the incidence of LAST by 65%.⁵

In addition, a neuraxial anesthetic on an awake (preferably quiet and non-coughing) patient who is wearing a surgical mask may not require continuous capnography monitoring or oxygen supplementation^A; this can be especially useful in cases of shortages of antimicrobial breathing circuit filters or in austere/resource-poor environments. Furthermore, an awake

This letter is accompanied by a reply. Please see Can J Anesth 2020; this issue.

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^A American Society of Anesthesiologists. Standards for Basic Anesthetic Monitoring. Committee of Origin: Standards and Practice Parameters (Approved by the ASA House of Delegates on October 21, 1986, last amended on October 20, 2010, and last affirmed on October 28, 2016). Available from URL: <https://www.asahq.org/~media/Sites/ASAHQ/Files/Public/Resources/standards-guidelines/standards-for-basic-anesthetic-monitoring.pdf> (Accessed April 2020).

patient may be transferred to their hospital room with minimal recovery time.

We recommend considering a risk/benefit approach to the provision of regional anesthesia for these patients, as the well-being of other patients and healthcare providers is a valid consideration during these challenging times.

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References

1. Lie SA, Wong SW, Wong LT, Wong TG, Chong SY. Practical considerations for performing regional anesthesia: lessons learned from the COVID-19 pandemic. *Can J Anesth* 2020; DOI: <https://doi.org/10.1007/s12630-020-01637-0>.
2. Asadi S, Bouvier N, Wexler AS, Ristenpart WD. The coronavirus pandemic and aerosols: does COVID-19 transmit via expiratory particles? *Aerosol Sci Technol* 2020; DOI: <https://doi.org/10.1080/02786826.2020.1749229>.
3. Neal JM, Barrington MJ, Brull R, et al. The second ASRA practice advisory on neurologic complications associated with regional anesthesia and pain medicine. Executive summary 2015. *Reg Anesth Pain Med* 2015; 40: 401-30.
4. Bernards CM, Hadzic A, Suresh S, Neal JM. Regional anesthesia in anesthetized or heavily sedated patients. *Reg Anesth Pain Med* 2008; 33: 449-60.
5. Neil JM, Barrington MJ, Fettiplace MR, et al. The third American Society of Regional Anesthesia and Pain Medicine practice advisory on local anesthetic systemic toxicity. Executive summary 2017. *Reg Anesth Pain Med* 2018; 43: 113-23.

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