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PII: S0104-0014(20)30042-7
Reference: BJANE 74358

To appear in: Brazilian Journal of Anesthesiology (English edition)
Received Date: 8 April 2020
Accepted Date: 18 April 2020

Please cite this article as: Masoud HashemiMehrdad TaheriReza Aminnejad Spinal anesthesia in COVID-19 patients, more research is needed (2020), doi:https://doi.org/10.1016/j.bjane.2020.04.002

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Spinal anesthesia in COVID-19 patients, more research is needed

Anestesia espinhal em pacientes com COVID-19, mais pesquisa é necessária

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Received 8 April 2020; accepted 18 April 2020

Dear Editor,

It hasn’t been long since the pandemic engulfs the whole world. In the same short period of time, some comprehensive advice has been given to health care providers, particularly anesthetists, about patient care during the Coronavirus 2019 (COVID-19) outbreak.[1,2] Neuraxial blocks may be considered preferred methods of anesthesia in the presence of respiratory disease risks. There are few valuable reports regarding the safety of neuraxial anesthesia in COVID-19 patients recently published.[3] Whilst spinal anesthesia has some advantages in COVID-19 patients, there are other considerations in the choice of anesthesia technique that require further research:

1. Coagulation derangement is not uncommon in Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infected patients.[4,5] Although hypercoagulation status is more common in these patients, the unknown nature of this disease and the medications the patient is taking require special attention to the preoperative coagulation status, especially when dural puncture for intrathecal injection of local anesthetics is to be performed on a patient.

2. The coexistence of myocardial involvement can make anesthesia challenging. Many of COVID-19 patients have underlying cardiovascular disease and a lot of them develop acute cardiac injury in the course of the illness. Potential long-term consequences of the disease is another worrying issue that could be problematic in the future.[6,7] Therefore, special attention to the patient’s heart condition before spinal anesthesia is of particular importance so that if there is a cardiac disorder, appropriate measures can be taken to maintain hemodynamic stability and prevent unwanted hypotension.
3. Spreading the SARS-CoV-2 to the central nervous system can cast doubt on the safety of spinal anesthesia.[8,9] The mechanism of this neuroinvasion is still not fully understood. Viral encephalitis, infectious toxic encephalopathy and acute cerebrovascular events are three nervous system disorders related to coronavirus infections. Maybe neurological symptoms such as headache, consciousness disorder, paresthesia, and other pathological signs which are seen in COVID-19[8] interfere with block evaluations following spinal anesthesia.

4. Particular attention should be paid to airway exams before performing any regional anesthesia. If the COVID-19 patient is considered a case of difficult airway, it may be futuristic to have general anesthesia at the outset, so that if regional anesthesia suddenly fails, airway management will not be in an emergency situation, what would increase the risk of virus transmission to the operating room medical personnel.

5. COVID-19 patients are more anxious than other surgical patients entering the operating room.[10] The administration of an anxiolytic such as midazolam as a medication prior to anesthesia in these patients is not just a suggestion but a strong recommendation.

Lastly, the most important thing in anesthesia management is to establish a balance between costs (disadvantages) and benefits. Undoubtedly, keeping away from the patient's airway is important for the protection of health care providers, but the distance from the airway cannot be used as a basis for anesthesia management. Despite all mentioned doubts about the safety of spinal anesthesia in COVID-19 patients, this technique can still be one of the recommended methods to reduce the risk of infecting the operating room staff, if all the above considerations are taken into account. In other words, the relative and absolute contraindications for spinal anesthesia are precisely the same for COVID-19 and nonCOVID-19 patients. Therefore, hemodynamically unstable patients, patients suffering from severe respiratory distress, or those presenting with coagulopathy, for example, are not suitable to undergo intrathecal anesthesia.

Conflicts of interest
The authors declare no have conflicts of interest.

References


