Letters

Coagulation concerns in patients with COVID-19 proposed for regional anesthesia

To the Editor

Recently, we published practice recommendations about regional anesthesia in patients with suspected or confirmed COVID-19.¹ Many anesthesiologists have embraced regional anesthetic techniques during the COVID-19 crisis due to presumed physiological benefits as well as possible reductions in transmission risks. There may be some unique characteristics of the coagulation state of patients with COVID-19 that we thought merited a communication.

Mild thrombocytopenia is common in the affected population, but platelet count is rarely less than 100,000/mL.² Around 20%–55% of hospitalized patients for COVID-19 have laboratory evidence of coagulopathy, namely elevated D-dimer concentrations (≥ 2 times above normal range), mildly prolonged prothrombin time (1–3 s prolongation above normal range) and, in late disease, decreased fibrinogen levels (< 2 g/L (5.88 $\mu\text{mol/L}$)).² Indeed, coagulopathy correlates with severity of disease.² Therefore, preoperative platelet count and coagulation assays should be considered for all patients scheduled for neuraxial or profound blocks, with postoperative re-testing if a perineural catheter is used in the previous locations.¹

A platelet count above 75,000/mL is an acceptable level for performing neuraxial techniques in obstetric patients.³ In select circumstances of obstetric anesthesia, platelet count between 50 and 80,000/mL may still allow neuraxial block.³ The platelet count threshold for lumbar puncture is substantially below and the risk of spinal hematoma is very low in oncology patients.³ Since a thinner needle is used and no catheter is placed at the epidural space, the risk of spinal hematoma after spinal anesthesia seems to be lower than after epidural catheterization.³

When neuraxial procedure is considered desirable, thromboelastography may be useful in patients with worrisome thrombocytopenia.³ In these cases, the decision to proceed with spinal anesthesia is a balance between benefits and risks for the patient.³

COVID-19 coagulopathy seems to be prothrombotic.² In the absence of a contraindication, inpatients infected with COVID-19 should receive thromboembolic prophylaxis, with some evidence supporting low molecular weight heparin for pregnant

women with confirmed COVID-19 even at home.^{2,4} Standard regional anesthesia precautions are in order for starting and stopping anti-coagulation.⁵

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Contributors All authors discussed the topics included on this letter. All authors contributed to scientific rigor and writing of this work. NL and HM supervised the work.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

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To cite Mendes AB, Penedos C, Vaz Rodrigues L, et al. *Reg Anesth Pain Med* 2021;**46**:457.

Received 8 May 2020

Revised 12 May 2020

Accepted 14 May 2020

Published Online First 28 May 2020

Reg Anesth Pain Med 2021;**46**:457.

doi:10.1136/rapm-2020-101676

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