In Response

W e thank Wardhan and Smith1 for their interest in our recent research article.2 First, we had clearly predefined the primary outcome—the number of needle passes as “the number of forward advancements of the needle required to achieve successful dural puncture.”2 2 The number of passes/attempt required for success has been the main outcome measure of many previous publications on this subject3 because it represents the technical difficulty of neuraxial procedures along with the procedural time. Moreover, we considered excessive needle passes and insertion attempts during spinal anesthesia would increase the chance of traumatic needle manipulations near the epidural/intrathecal structures, postdural puncture headache, and infection and patient pain, discomfort, and dissatisfaction. Hence, providing spinal anesthesia via a single needle pass was recommended by consensus guidelines on neuraxial anesthesia and anticoagulation.4,5

We agree that the optimal medial angle of needle insertion is important to the successful paramedian approach.1 Ultrasound-assisted spinal anesthesia could be more accurately executed if the angle of the ultrasound probe was measured. The angle might be different according to the depth of intrathecal space and the distance from the midline to the site of probe applied. However, we considered it to be too difficult to implement in real practice. We did not measure the accurate angle of ultrasound probe but relied on the memory of the anesthesiologist of the angle of the probe in our study.

In the landmark group in our study, the paramedian approach was used in 80%, whereas the midline approach was used in 20% of subjects as noted in Table 3.2 In the landmark group, we allowed the anesthesiologists to use either midline or paramedian approach at their own discretion. Since our study enrolled patients with abnormal spine anatomy, the anesthesiologists seem to have chosen to use paramedian approach rather than midline approach in most cases. For each of the 3 performers in this study, anesthesiologists A and C used a midline approach in 2 subjects, respectively. We do not believe that the predominant selection of midline approach would have changed our results. It must be better if we can avoid walking off the lamina, which requires multiple needle passes, to reach the interlaminar space regardless of approaches. Ultrasound-assisted spinal anesthesia may decrease unnecessary needle manipulations to locate the interlaminar space.

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Lessons Learned From First COVID-19 Cases in the United States

To the Editor

There is a real paucity of data surrounding best anesthesia management of pregnant women tested positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; coronavirus disease-2019 [COVID-19]). The simultaneous surge of cases compounded by a critical shortage of protective personnel equipment (PPE), including N95 masks and high-efficiency particulate air (HEPA) filters to avoid contaminating anesthesia machines, has added to the challenge that anesthesiologists are facing today on labor and delivery units across the United States.

Reflecting on the review of COVID-19–positive patients reported in this issue of Anesthesia & Analgesia,1 we noted that 43% of women were delivered before term, that 71% presented with fever, and that evidence of pneumonia by computed tomography was reported in all patients. Almost all women (13 of 14) had a cesarean delivery, all with an uncomplicated neuraxial anesthesia and no neurological complications. That neuraxial anesthesia is safe in women with COVID-19 is reassuring, given that it is always preferred to general anesthesia, and specifically to avoid viral aerosolization and wastage of dwindling medical equipment and PPE.

The reality is that all recommendations have centered on the risk stratification of patients; persons under investigation (PUI) or patients who have been...
Letters to the Editor

Diarrhea, myalgias, and chest tightness, may over-sensitize when admitted in the labor and delivery unit in the absence of universal testing, universal precautions are required. An asymptomatic when admitted in the labor and delivery unit in the absence of universal testing, universal precautions are required.

An asymptomatic parturient who presents as COVID-19 positive later in the labor course has not been described in the case series reported so far, which has prompted us to share our experience. A healthy, asymptomatic multiparous woman was admitted for induction of labor at 37 weeks of gestation for gestation diabetes, and neuraxial analgesia was provided uneventfully. Hours later, an intrapartum cesarean delivery under epidural anesthesia was completed for prolonged second stage of labor and a diagnosis of chorioamnionitis with maternal fever. After delivery of the baby, a postpartum hemorrhage and atony treated with massive transfusion and uterotonic required conversion to general anesthesia; endotracheal intubation precipitated immediate and prolonged bronchospasm. Though bronchospasm could be attributed to carboprost tromethamine (Hemabate; Pharmacia & Upjohn Co, Division of Pfizer Inc, New York, NY), the degree of respiratory decompensation and the fever in labor prompted a nasal swab for COVID-19 testing, which came back positive 4 hours later.

As per current recommendations, for this patient who was neither tested nor symptomatic for COVID-19, the anesthesia team did not use any PPE (besides surgical masks and gloves) nor was a HEPA filter placed between the endotracheal tube and the anesthesia machine. In this scenario, had it been suspected that the patient was COVID-19 positive, all providers would have been wearing airborne protection (gown, gloves, N95 with face shield or powered air-purifying respirators [PAPRs]) and a filter would have been placed.

Our case emphasizes that in labor and delivery units managing parturients from communities with a high prevalence of COVID-19 infection, in the absence of universal testing before cesarean delivery, all patients, even those initially asymptomatic on admis-sion, should be treated as PUI when inducing general anesthesia.

We hope this case will raise awareness to use appropriate measures to avoid personnel exposure and equipment contamination, and that in the absence of universal testing, universal precautions are required.

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Oral and Nasal Decontamination for COVID-19 Patients: More Harm Than Good?

To the Editor

The recent article by Dexter et al1 provides much-needed guidance for anesthesiologists and other health care workers involved with the perinatal care of confirmed or suspected coronavirus disease 2019 (COVID-19) patients. The unprecedented nature of the pandemic has lead to confusion regarding the safest infection control and operating room management strategies. Furthermore, the evidence base is rapidly evolving or is extrapolated from historical experience, making best practices difficult to discern for frontline clinicians and institutional leaders. The review provided by Dexter et al1 gives a concise 5-step road map for evidence-based infection control in the operating room. Although many of the suggestions seem to have clear merit, the proposed method for patient decolonization may be counterintuitive.1 While some evidence exists for nasal decontamination in preventing surgical-site infection in Staphylococcus aureus carriers,2,3 they present no substantive evidence that nasal/oral decontamination would actually reduce viral transmission. Perhaps more importantly, application of nasal povidone-iodine could induce sneezing, paradoxically increasing the spread of aerosolized viral particles, and a chlorhexidine mouth rinse might also risk inducing...