PERSPECTIVE

Coronavirus Disease 2019 and Pregnancy: What An Anesthesiologist Needs to Know

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Abstract

Coronavirus disease 2019 (COVID-19) is a pandemic, has emerged as a public health crisis for the entire world. In contrast to other areas of healthcare which can be delayed to priorities treatment of COVID-19 patients, the care of obstetric patients remains a clinical priority. All the patients and their support persons having suspected consistent symptoms of COVID-19 should be completed the screening via phone or video conferencing. The CDC has issued notifications that labor and delivery floors be identified for those pregnant patients with known or suspected positive cases and allow the staff to make the proper arrangements for isolation rooms and personal protective equipment (PPE). Due to uncertainty about the severity of COVID-19 and no clear evidence of vertical transmission, obstetric care is directed toward social distancing as a protective mechanism, and mother/baby separation to avoid contact transmission.

Keywords: Coronavirus, Personal protective equipment, Pregnancy.

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Coronavirus disease 2019 (COVID-19) is a pandemic, has emerged as a public health crisis for the entire world. In contrast to other areas of healthcare which can be delayed to prioritize treatment of COVID-19 patients, the care of obstetric patients remains a clinical priority.[1] Symptoms to screen in COVID-19 obstetric patient include a history of fever, cough, shortness of breath, diarrhea, and history of possible exposure to COVID-19. However, pregnancy symptoms may overlap with mild COVID-19 disease and many patients may be asymptomatic at the time of admission. Screening pregnant patients may miss infection with SARS-CoV-2 in communities with a high prevalence or high projected infection rate.[2]

Procedures like preoperative screening, cesarean deliveries, labor analgesia, and elective labor inductions must be ready for all pregnant patients. All patients and supports persons with consistent symptoms of COVID-19 should be screened via telephone or video conferencing.[3] The CDC has issued notifications that separate labor and delivery floors must be designated for those pregnant patients with known or suspected positive case, allowing the hospital staff to make the proper arrangements for isolation rooms and personal protective equipment (PPE).[2] Before any procedure, it must be ensured that the number of healthcare workers is reduced to a minimum necessary, and specified in the delivery room or operation theater. All healthcare works involved in the obstetric procedures must be well trained on donning and doffing proper PPE, including face shield protection, N95 mask, or powered air-purifying respirator (PAPR) for aerosolizing procedures. The patient must wear a surgical mask throughout the procedure, during transportation, and during the postoperative period to minimize the risk of infections. Before any procedure, the operation theater or labor room should be kept ready, including all equipment, all emergency drugs, and medications for labor analgesia, cesarean delivery, and general anesthesia. If possible, positive or suspected positive patients should be confined to a negative pressure room. Visitors must be limited to one support person, while the use of video messaging with other ways of distant communications between the patient and families should be promoted. Neuraxial anesthesia is suggested in obstetric anesthesia and mainly in women with COVID-19. It is used to minimize the risk of infection from aerosolization associated with general anesthesia. Although high-efficiency particulate air (HEPA) filter is commonly used, in general anesthesia, it must be kept ready at all times in anticipation of neuraxial anesthesia failure and need to change to general anesthesia. Video-laryngoscopy is recommended to minimize mask ventilation. The later should be avoided due to the potential aerosolization, and patients must be extubated to oxygen mask with flows or nasal cannulas. All above procedures should be performed by experienced anesthetist with the use of proper PPE. The summary of obstetric anesthesia care is shown in Table 1.

The standard setting for appropriate care of a healthy and term newborn is the same room as mothers; commonly called "rooming-in". Current evidence suggests that the risk of a neonate acquiring SARS-CoV-2 from the mother is low. Furthermore, data suggest that there is no difference in risk of SARS-CoV-2 infection to the neonate, whether the neonate is cared for in a separate room or remains in the mother's room.[4] Mothers should wear a mask and practice hand hygiene when in contact with the neonates. Mothers who room-in with their infants can more easily learn and

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Table 1: Summary of obstetric anesthesia care

Preoperative screening	• Preoperative screening must be done by history and assessment of respiratory symptoms. • Phone/video screening. • Minimize interactions with patients and visitors.
Labor analgesia	• Neuraxial analgesia, performed by an experienced hand • Check platelet count.
Intraoperative care for cesarean section	• Transfer arrangements to and from the operating theater. • Minimizing the number of clinical staff in the theater. • PPE in both elective and emergency cesarean delivery. • Emergency drugs or equipment should be ready.
Postoperative care	• Wear a surgical facemask for transfer to the recovery location. • Mother/baby separation to avoid contact transmission. • NSAIDs can be continued.
Postpartum considerations	• Adequate management of usual postpartum issues (postpartum hemorrhage, pain, hemodynamic status). • Adequate fluid management. • Surveillance for respiratory decompensation, and early involvement of subspecialty care as needed.
Management of postdural puncture headache	• Similar to usual care, conservative measures should be initially provided. • Epidural blood patches should be contraindicated. • Sphenopalatine ganglion should be avoided.
Breastfeeding	• COVID-19 transmitted through breast milk is not known. • Until additional data are available, mothers who intend to breastfeed and are well enough to express breast milk should be encouraged to do so; breastfeeding can be instituted after she is no longer considered infectious.

respond to their feeding cues, which supports to the establishment of breastfeeding. Breastfeeding reduces morbidity and mortality for both mothers and their infants.[5]

After surgery, an infected or possibly infected patient is to be observed in the operating room until discharge to the isolation ward, or room. Operation theater and the shifting route to the ward or room should be well disinfected. A collective effort between anesthesiologists, obstetricians, neonatologists, nursing, infectious disease physicians, and environmental services is required to minimize infection risks to patients as well as to the healthcare workers.

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