

COVID-19 Pandemic and Anesthetic Challenges in Indian Scenario

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Due to the widespread nature of the COVID-19 pandemic, the safety of anesthesiologists is an international concern. Many international societies have issued consensus statements or guidelines for the anesthesiologists during the COVID-19 pandemic.^{1,2} These guidelines should be adopted strictly to prevent disease transmission. As the pandemic progresses, patients ranging from asymptomatic carriers to those who present with a false negative COVID-19 test may approach the anesthesiologist. Thereby, in this situation, the need arises for proper precaution for all aerosol-generating medical procedures, and anesthesiologist should renew their familiarity with airborne isolation procedures, which are seldom necessary in routine anesthesia practice. However, to follow all the steps of these guidelines properly is challenging in the Indian scenario. Local modification for safety of healthcare workers is the need of the hour.

The Royal College of Anesthetists and the Canadian guidelines recommend intubation to be done in a negative pressure room with >12 air changes per hour wherever possible.^{1,2} Although a few centers in India have managed to create negative pressure rooms, but most operating theaters are still in positive pressure setting. As positive pressure airflow environment increases the risk of viral spread, so it may be better to use normal pressure setting with closed doors if not negative. Furthermore, as COVID-19 can be spread by contact, environmental cleaning of the anesthesia workplace is particularly important.³ Plastic covers for the anesthesia machine, patient monitor, computer keyboard, mouse, and touch screens can be considered in the Indian scenario to reduce transmission from these “high touch” surfaces.

The basic principle of airway management in this pandemic is recommended to be that of safe, accurate and swift (SAS). The international guidelines have emphasized that barrier precautions are of critical importance.^{1,2} Standard personal protective equipment (PPE) comprising of an N95 mask, surgical cap, goggles, surgical gown, and gloves is a must. The guidelines recommend that N-95 mask must be fit tested. Fit testing prior to the use of an N95 is required by the Occupational Safety and Health Administration of the United States Department of Labor (OSHA), as improper

fitting can allow inadvertent exposure. The anesthesiologist must perform a fit test, but it may be challenging for a bearded person. Some guidelines recommend the use of powered air purifying respirators (PAPR), but a training on the proper use of PAPR is necessary, including techniques for removal without contamination and the need for meticulous cleaning after each use.^{1,2} Fogging of goggles and/or eyewear when using PPE is a practical problem for endotracheal intubation. The guidelines recommend the use of a videolaryngoscope, with a separate screen to enable the operator to stay further away from the airway, which is not possible in many Indian scenarios due to the lack of video laryngoscopes in some operation theater complexes.^{4,5} For us, a standard Macintosh blade and a bougie is likely the best option, but one should be careful while removing the bougie or stylet, so as not to spray secretions on the team. Double gloving for airway management and discarding the outer glove immediately afterward has been shown to decrease environmental contamination. Confirming correct depth of tube insertion is extremely difficult, as auscultation of the chest is problematic when wearing the PPE. It is recommended instead to observe bilateral chest expansion, end-tidal CO₂ waveform, and respiratory parameters. However, all ICU setup may not have capnography. The guidelines recommend careful monitoring of airway cuff pressure to avoid airway leak.¹ However, cuff pressure monitoring device may not be available in the peripheral centers of India. Another similar concern is the availability of closed tracheal suction.

COVID-19 is a far more extensive challenge encountered by the global medical community. Yet, the key principles of meticulous team-based planning in accordance with local protocols and strict adherence to barrier precautions remain crucial. “Standardized practice” should be developed according to the local institutional policies. It is thus important that anesthesiologists are well-prepared with local modifications of these guidelines and ready to act when called upon.

Conflict of Interest

The authors hereby declare that they have no conflict of interest.

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