To the Editor,
In the ongoing COVID19 pandemic due to Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), clinicians have been using several permutations and combinations to deal with COVID19 Acute Respiratory Distress Syndrome (ARDS). As there is no evidence based anti-viral or a vaccine available at this moment, management is purely supportive based on existing evidence. Clinicians all over the world have used non-invasive/invasive ventilation with lung protective strategies using high FiO2 and positive end expiratory pressure (PEEP), corticosteroids, inhaled nitric oxide (NO), extra-corpoeral membrane oxygenation (ECMO), anticoagulants, antivirals, hydroxy-chloroquine sulphate, inflammatory inhibitors, serotherapy with variable results. Researchers are still searching and experimenting various pharmacological agents in variety of doses which could improve intrapulmonary shunting leading to refractory hypoxia in COVID19 ARDS. One such drug is almitrine bismesylate.

Almitrine is a respiratory stimulant and acts as an agonist of peripheral chemoreceptors situated on the carotid bodies. It is a selective pulmonary vasoconstrictr which is mediated by calcium and in various doses has been shown to facilitate pulmonary vasoconstriction which eventually diverts increased pulmonary blood flow from areas of lung which are diseased or injured and thus cannot contribute to oxygenation. Roch et al. had demonstrated in a small cohort that a dose of 4-16 µg/kg/min infusion has shown to improve PaO2/FiO2 (P/F) ratio which is used to assess improvement in oxygenation.

Almitrine has seen resurgence in clinical use during the recent COVID19 pandemic owing to its unique mechanism of action on pulmonary vasculature. Losser et al. recruited 17 intubated COVID19 ARDS patients who were administered 4–12 µg/kg/min infusion and found that there was statistically significant improvement in oxygenation from baseline in patients after almitrine infusion. Barthélemy et al. analyzed the data from 19 mechanically ventilated patients with advanced settings, paralyzed with prone ventilation in almost all patients. Almitrine infusion was administered at 2 µg/kg/min which showed improvement in P/F ratio but did not improve overall patient outcomes. Huette et al. managed a 57-year-old female who developed acute cor pulmonale secondary to COVID19 ARDS, diagnosed by transesophageal echocardiography. She was ventilated as per ARDS protocol but hypoxemia was refractory. Almitrine infusion at 4 µg/kg/min was initiated which improved oxygenation and also right ventricular function.

Contrary to this, the findings of Cardinale et al. were contradictory. The authors used almitrine along with inhaled NO in 20 COVID19 ARDS patients with P/F ratio of less than 120 and were sedated, paralyzed, and mechanically ventilated. They found that almitrine alone or with NO could not improve oxygenation in moderate to severe ARDS. They also mentioned that loss of HPV could not be the only mechanism of intrapulmonary shunting. In all above-mentioned scenarios, the sample size was small, patient characteristics and ICU management was not standardized and there was no control group. The timing of starting almitrine infusion was not uniform. Well-designed, adequately powered studies with a control arm would be necessary to know the dose, timing of starting and duration of infusion in critically ill COVID19 ARDS patients. Till then, almitrine bismesylate can be used as a rescue drug and titrated to manage refractory hypoxemia.

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Conflicts of interest
There are no conflicts of interest.

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Anesthesia practice amid the pandemic mayhem: Time for critical appraisal and reorganization

To the Editor,

We read with great interest the article by Babu et al. regarding anesthetic management of a COVID suspect case. [1] Suspected or confirmed COVID patients pose unique challenges for the anesthetist due to its contagiousness and systemic implications of the illness. Unfortunately, this article is somewhat unclear, apparently resulting from the authors’ omission of recent literature, probably due to the perils of the extensive nature of the literature on the management COVID related guidelines. We wish to highlight some concerns and finer nuances regarding the case.

First, the patient was asymptomatic and only suspected to be a COVID case based on her foreign travel that was 20 days back. The definition of a suspected case is any patient with acute respiratory illness with no other etiology fully explaining the clinical presentation, and a history of travel to or residence in a place with reported local spread of COVID19 disease during the 14 days prior to symptom onset. [2] In most cases, the incubation period of COVID is 5-11 days and generally, patient is noninfective after 14 days.

Second, there is no mention of the COVID status of the patient. Considering the widespread pandemic, all patients for any kind of surgical procedure (except emergency lifesaving surgery) should be tested for COVID-19 using reverse transcription-polymerase chain reaction (RT-PCR) and be posted only when it is negative. [3] Also, standard personal protective equipment (PPE) inclusive of an N-95 mask and face shield should be used for all aerosol-generating procedures (AGP) irrespective of report results. They have mentioned that PPE was worn by everyone in operating room (OR), but the type of PPE used is not mentioned. In general, the surgical procedures should be triaged and only emergency and time-sensitive surgical procedures should be allowed until this epidemic is contained. Medically necessary, time-sensitive (MeNTS) scoring system is one such prioritization tool which can be utilized to manage the precious resources efficiently and ethically in these times. [3] Also, the COVID patients who are operated have poorer outcomes due to perioperative immunosuppression, venous thromboembolism, unmasking of severe infection, etc. [3] The necessity of doing this case without getting the RT-PCR test has not been described and could amount to exposing the staff to an avoidable risk.

We have some concerns regarding their anesthetic management of the patient. Anesthesia management for patients in COVID setting is intricate and considering...