Consensus statement: Safe Airway Society principles of airway management and tracheal intubation specific to the COVID-19 adult patient group

To the Editor: We write in reference to the recommendations published by Brewster and colleagues[1] to report our centre's experience with tracheal intubation in adults with coronavirus disease 2019 (COVID-19) in Australia. Intubating patients with COVID-19 requires careful balance between providing adequate pre-oxygenation while concurrently maintaining staff safety through minimising aerosolisation. Guidelines from the Safe Airway Society (SAS),[1] the Australian and New Zealand Intensive Care Society,[2] and overseas[3] emphasised rapid sequence induction techniques with the minimisation of bag valve mask ventilation. Our institution developed a specific tracheal intubation protocol for the intubation of patients with suspected or confirmed COVID-19 incorporating the recommendations of the SAS.[1]

Eight patients with confirmed COVID-19 have been intubated in our intensive care unit. The demographic characteristics of these patients are similar to those reported internationally,[4,5] with a male predominance (seven out of eight) and a mean age of 69 years (range, 52–77 years). Before intubation, each patient was receiving high flow nasal oxygenation, with flow rates of 15–50 L/min and fraction of inspired oxygen (Fio_2) 60–100%. All patients were pre-oxygenated via bag valve mask with a positive end expiratory pressure valve in the assembly, as per the SAS recommended circuit set-up.[1] Video laryngoscopy with indirect view was used and a full view of the glottis was established for six of the eight patients; in the other two patients only the epiglottis was seen. All patients were intubated successfully on the first attempt with a bougie. During intubation, desaturation to peripheral capillary oxygen saturation (Spo_2) 70% or less occurred in six of the eight patients, although the Spo_2 recovered to more than 90% within one minute of being connected to the ventilator in five patients and within several minutes in the remaining patient. No patient received manual ventilation, and none of the patients developed haemodynamic instability during the intubation period.

Our centre's experience, while modest in number, highlights the significant risk of desaturation during intubation for patients with respiratory failure and COVID-19 using a conservative approach to pre-oxygenation and apnoeic oxygenation that minimises aerosolisation. We note the now updated SAS statement saying that "patients with severe disease are likely to require manual ventilation to prevent profound oxygen desaturation".[1] Whether manual ventilation, alternative pre-oxygenation methods, or other strategies, such as potentially tolerating desaturation as transient and expected, is the most suitable method for patients with COVID-19 remains to be determined.

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