



RISE OF ANAESTHESIOLOGIST IN PANDEMIC

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ABSTRACT Anaesthesiology time and again deals with a pandemic. Whether it is cholera, polio, and SARS epidemics or most recently covid-19, anaesthesiologists continue to lead at the forefront. Covid-19 proving to be one of the most difficult test for anaesthesiologists all over the world. There is history how pandemics have influenced this specialty. But covid-19 shifted the role of anaesthesiologist from perioperative care to intensive care units (ICUs) majorly. The sheer volume of patients who require invasive mechanical ventilation support put anaesthesia providers under pressure and contagious nature of illness made things difficult. Covid-19 was a public health problem with little known about the natural history of the disease, so it was required to follow evidence-based approach from the beginning.

KEYWORDS : Pandemic, Covid-19, Anaesthesiology.

INTRODUCTION:

Pioneer of anaesthesiology, John Snow did methodical work with inhalational anaesthetics, such as his development of the dose-titrated delivery of chloroform, was amongst the first to characterise the stages of anaesthesia.¹ And his research of the 1848 London cholera epidemic is a milestone in history. Arthur Guedel is credited with introducing the cuffed tracheal tube in 1932. Originally intended to reduce aspiration risk, cuffed tubes enabled administration of positive-pressure ventilation.² As early as the 1948 California polio outbreak, patients were observed to fare better with intermittent positive-pressure ventilation.³ Ibsen proposed that, rather than metabolic alkalosis, the elevated bicarbonate stemmed from hypercapnia and severe hypoventilation.² He set medical students to manually ventilate bulbar patients around the clock, efforts that reduced mortality from 90% to <25%.⁴ This was the first ICU, and an anaesthesiologist led its development.⁵ The position of anaesthesia in the COVID-19 reaction manifests the legacy of these pioneers.

Due to covid-19 till date more than 34 million people are infected and more than 4.5 lakh died in India only. Dealing with shortage of hospital beds, personal protective equipment, working long duty hours and reducing the transmission of disease are few of the challenges we faced.

In regards to the best practice when intubating and ventilating Covid-19 patients, there is no universal agreement, but the experiences of different countries should be considered.⁶⁻⁹ (1) maintain the oxygenation and ventilatory support that has already been used in the patient; (2) avoid bag-mask ventilation if possible; (3) use 100% oxygen for 5 min during pre-oxygenation; (4) cover the patient's nose, mouth, and face; (5) perform rapid sequence induction; (6) aim for complete muscle relaxation; (7) avoid coughing and bucking; (8) perform video laryngoscope guided intubation; and (9) avoid chest auscultation. Anaesthesiologist should adopt lung-protective ventilation strategies; set an ideal oxygenation goal; deliver early prone position ventilation; ensure adequate sedation and analgesia; and provide muscle relaxation when needed.^{6,10} Lastly, the best approach to extubation is equally important as it may generate infectious aerosols because of patient coughing, and agitation.⁵

Anaesthesiologists are at additional risk of contamination given their role in aerosol-generating procedures.¹¹ Anaesthesiologists have developed novel plastic barriers to reduce droplet spray during tracheal intubation procedures.^{10,12} Other issues we are facing- how to start operation theatre in full capacity, some covid patients need ICU for longer periods, we need to increase number of ICU beds.

CONCLUSION:

Covid-19 has challenged the medical profession in countless ways. Anaesthesiologists have been in the front lines throughout the pandemic and are often dealing with the most vulnerable patients. This specialty has a long history with epidemics and pioneers of anesthesia helped develop contact tracing, intensive care, and infection control.

The battle with covid-19 is still ongoing and we as medical professionals will overcome it. Covid-19 changed many things in anaesthesia practice, we should learn from this and move forward to ensure better preparedness in future. Pandemic teaches us the importance of self-protection, organized response, remote education, research, and teamwork. All these lesson learned will help in dealing with future public health problem.

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