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## Corona pandemic: Bringing Anaesthesiologist's professional role and other skills to the fore

Corona virus and COVID-19 (Corona Virus Disease - 2019) are probably the most commonly spoken words among everyone in the past few months. COVID-19 caused by SARS-CoV-2 virus originated in Wuhan, Hubei, China, in late 2019. Since then, the highly contagious primary respiratory disease has spread across 187 countries causing over 4 million infections and over 280,000 deaths till date. The disease has posed unique challenges for the healthcare community in a short span of time, overwhelming the healthcare facilities in countries like Italy and Spain. Anaesthesiologists have been at the forefront in managing the COVID-19 patients, especially those requiring critical care. Even those anaesthesiologists working in non-COVID areas need to modify their working pattern so as to address the new challenges.

The role of anaesthesiologists has been recognised by everyone in the community like never before during this pandemic. Being experts in airway management, ventilator management and critical care, anaesthesiologists have gained an important role in managing all facets of COVID-19.<sup>[1]</sup> However, management strategies during a pandemic have not been part of traditional teaching in Anaesthesiology. Hence, it is essential to sensitise the Anaesthesiology fraternity to the unique challenges faced during a pandemic so that their existing knowledge and skills can be utilized to full potential in overcoming the pandemic.

Various strategies have to be followed to minimise exposure of healthcare professionals working in COVID hospitals and wards. This includes but is not limited to usage of protective gear, simple innovations like aerosol boxes, modifications in intubation and extubation techniques, changes in guidelines of resuscitation etc. Many of these have been discussed

in this supplementary issue of the Indian Journal of Anaesthesia (IJA). Indian Resuscitation Council (IRC) Guidelines for Comprehensive Cardiopulmonary Life Support (CCLS) for suspected or confirmed corona virus disease (COVID-19) patients published in this issue would provide modifications in resuscitation strategies to be followed during this pandemic.<sup>[2]</sup>

With the ongoing lockdown and minimal patient flow in hospitals, non-COVID patients are suffering, unable to get necessary healthcare. We will have to acclimatize ourselves, develop innovative strategies and changes in our workflow pattern so that we do not overwhelm our healthcare resources, but continue providing treatment to those in need. This pandemic is going to stay with us for some more time. Hence, this might be the new normal in the forthcoming days. The scope of triaging system has to be extended to include quasi-emergency conditions like cancer and the like. Otherwise, in an attempt to minimise COVID related mortality, we would be compromising on non-COVID-related mortality.

Cancer patients pose unique challenges during this pandemic. They are immunocompromised and are easily prone to get a severe form of COVID, if exposed. Their nature of disease warrants a semi-emergent approach so that they do not lose precious time and prevent progress to metastasis. There need to be modifications in all elements of anaesthesia care for cancer patients. This starts right from the pre-anaesthesia check-up and necessitates modifications in anaesthetic technique, post-operative analgesic technique, and intensive care. Temporary engineering arrangements have to be made in the operation theatres to ensure unidirectional personnel and patient flowing in and out of the theatre. Air handling units have to be modified to provide negative

pressure rooms in the operation theatre complexes. Society of Onco-Anaesthesia and Perioperative Care (SOAPC) advisory regarding perioperative management of onco-surgeries, published in this issue would provide the necessary advisory to proceed with safe and efficient usage of healthcare resources for cancer patients.<sup>[3]</sup> With evolving evidence and information during an ongoing pandemic, guidelines are bound to change frequently. We must be accommodative and receptive to new information and advisories in order to provide safe patient care without causing a healthcare resource burn-out.

Ever evolving health policies and continuously changing concepts do necessitate changes in guidelines over a period of time especially related to COVID-19. Even the consensus guidelines, including that of difficult airway management, being presented in this issue may not be able to completely cover all the aspects which essentially require larger number of studies and observational data needed to formulate evidence based guidelines in the coming times.<sup>[4]</sup> Therefore, these consensus guidelines are being supported by respective commentaries which have additionally covered various debatable issues arising frequently during this evolving COVID-19 era. These commentaries have emphasized considerably that with the emergence of new evidence in changing times, these guidelines also do have a scope to change and modify.<sup>[5,6]</sup>

Even though postponing elective surgeries seems to be a feasible option in active COVID-19 patients, we might not get this luxury when handling emergency surgical procedures. We are posed with the unique challenges of avoiding infection of involved healthcare personnel and the perioperative risk the patient faces due to the active respiratory illness. The challenges become multi-faceted when it comes to a parturient requiring an emergency Caesarean section or labour analgesia. Responsibility is added when the new-born has to be prevented from infection. A case report in this issue will deal with this novel problem.<sup>[7]</sup>

Presently, major attention has been snatched by COVID but surgical work can never come to a standstill especially the emergency surgeries. Apart from that, COVID patients have also started coming for surgical services, the risks with asymptomatic COVID patients though remain very high. Indian Society of Anaesthesiologists (ISA) has already issued advisories regarding the setting up of COVID OR and

managing the surgical volume in COVID patients.<sup>[8,9]</sup> If these surgeries have to be performed under general anaesthesia (GA), the risk of aerosol generation will be higher with inhalational induction.

How these risks can be minimized by use of Total Intravenous Anaesthesia (TIVA) technique has been very well elaborated in the article 'Re-emergence of TIVA in COVID era'.<sup>[10]</sup> The article has covered the numerous beneficial effects of various induction agents including Propofol, Ketamine, Etomidate and others. In surgical population belonging to special subsets such as paediatric, geriatric, obese and American Society of Anaesthesiologists-III (ASA-III) patients, TIVA has been advocated to be more beneficial than other techniques of GA. However, it is believed that more concrete evidence will appear at the end of this pandemic as these observations are only preliminary assumptions based on previous literary data. No doubt, the technological advancements and other literary evidences as highlighted by this article do give TIVA an upper edge at the moment, but somehow these potential benefits may be partially nullified in resource challenged nations.

Life of an anaesthesiologist has taken altogether an abrupt turn globally including in our nation since the beginning of this lockdown. Few important insights have been brought to the fore by an article on non-clinical aspects of an anaesthesiologist in this pandemic.<sup>[11]</sup> The article aims to shed light on interacting dynamics of various social, family, behavioural and professional aspects of life of an anaesthesiologist in present times. Daily challenges in a new restricted normal atmosphere do create a variable degree of stress which can prove extremely harmful if this battle with corona is long drawn where everyone is being advised to confine in their homes and shelters. Anaesthesiologists and intensivists have to create a virtual protective shell around them so as to thwart the dangers of infection, boredom, stress, minimal family time, health, and many others. Thus, considering the present circumstances, it seems absolutely necessary that before going to duty, donning or doffing PPE, during surgeries and dealing with various other professional commitments, he or she must take a deep breath and should ask him or herself, "Am I alright?"<sup>[11]</sup>

Every member and association of our fraternity is geared up to fight against this invisible enemy. The depth and horizon of this fight can be understood

from the fact that like many other ISA forums, our railway anaesthesiologists are also coming up with various proactive planning and counter measures to fight against COVID. In the article 'Railway Anaesthesiologists and Indian Railway COVID 19 Management System', the authors have very nicely elaborated the redesigning and upgradation of the structure and functioning of the railway hospitals' infrastructure to manage the COVID-19 patients.<sup>[12]</sup> The main aim of this article is to highlight the prompt, optimal and effective contributions of the Indian Railways, Indian Railway Health Services and the Railway Association of ISA (RAISA) towards the provision of safe and scientific health services to maximum number of our fellow citizens during this crisis hour of corona pandemic.<sup>[12]</sup>

We cannot be sure that our healthcare system will not be overwhelmed in the near future. Therefore, we should train the non-core healthcare personnel to get involved in mainstream clinical care. The existing number of anaesthesiologists and critical care physicians might not be sufficient in case there is a massive surge in the number of critical COVID-19 cases. Hence, it is essential that we emergently train doctors from non-anaesthesiology background in ventilator management and critical care. An article on simulation based teaching in this issue will provide an insight into this added responsibility of ours.<sup>[13]</sup>

Numerous surveys and research studies on COVID-19 may have commenced in our nation, but their results will take a long time to come. The enthusiasm of our fellow anaesthesiologists in fighting against COVID-19 can be gauged from the content of various manuscripts being published in this issue of IJA. In various hospitals and institutes, our fraternity is working hard in modification of existing equipment and miscellaneous material, designing newer equipment for protection from aerosols, simple innovations to protect themselves and others from disease transmission, ideas generation to manage sudden surge of COVID-19 patients in case of deficit supply of ventilators, simple innovations, designing and restructuring of operating rooms with minimal resources, modifications in examination equipment and developing various other measures to fight against this pandemic. Many more modifications of the existing resources and infrastructure would have started by the time these innovations are published which clearly shows the unity and attitude of our fraternity to fight against this deadly pandemic.<sup>[14-21]</sup>

This pandemic has underscored the importance of clinical healthcare and medical research like never before. Similarly anaesthesiologists have gained immense recognition and responsibility among the medical community in managing this pandemic. This pandemic has proved once again that medical science is ever-changing and it is imperative for medical professionals to stay updated in the ongoing developments. This also emphasises the need for inclusion of the subject of management of pandemics in the medical curriculum so that the medical fraternity would be able to manage future pandemics in a more efficient manner.

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