



Ventilation and other strategies for COVID-19 patients

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Since the current coronavirus pandemic still remains as an unsolved mystery in the field of medicine, and a lot many research studies are currently underway on different aspects of the disease and its management on all over the world, no definite treatment or management regimen has agreed upon yet for these patients. The same applies to the ventilation management in these patients. What we have been relying upon so far has largely emanated from the worst effected countries and their experience.

What we know so far about COVID-19 is that it causes bilateral pneumonia and a rapid deterioration leading to an ARDS like condition. But when it comes to ventilatory management of ARDS in these patients, the physicians have been experiencing it different and difficult to manage and many of them have described that invasive ventilation can itself be harmful in these patients. The other noticeable thing which has been found differently in these patients is the presence of pulmonary thrombosis and dead space ventilation as a result. So, for the moment ventilatory and other strategies adopted under the circumstances are;

1. Adequate hydration, but no under- or over-hydration
2. Avoid high PEEP and certainly do not exceed PEEP of 12 cmH₂O, as it can be harmful to the lungs and it may also reduce the cardiac output
3. An early adoption of prone position considering

more involvement of posterior lung segments in this disease

4. An early Echocardiography to rule out any strain on right side of the heart, keeping in view the possibility of pulmonary thrombosis
5. Therapeutic anti coagulation has not been recommended yet as it can be harmful
6. Frequent checking of tracheal cuff leak before extubation, as incidences of upper airway swelling and failed extubation have been reported.
7. Use of dexamethasone and/or adrenaline nebulisers if there is any suspicion of upper airway swelling. Don't use steroids like hydrocortisone in ARDS of COVID as it can be harmful.

The sheer magnitude of the pandemic has forced the world to dedicate all of its resources to control it and to save as many lives as possible. The scientific community is struggling to find out the best management options and strategies as soon as possible to halt the ever increasing number of new patients and the rising mortality rate in many of the countries. Hopefully, the things may get changed for good in COVID-19 management with the passage of time and with more knowledge and expertise through shared experiences of the clinicians, the virologists and immunologists, in the near future.

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