COVID-19 PANDEMIC: LESSONS LEARNT AND THE NEW NORMAL AS I SEE IT

"Prevention is better than cure". This saying has proved it's worth in the current scenario.

An unprecedented healthcare crisis has taken the world under its grip. Novel Coronavirus disease (COVID-19) started in December 2019. But it was declared a pandemic by the World Health Organization on 11 March 2020 because of its rapid worldwide spread. This infection spreads by human-to-human transmission via droplets exposure and contact transfer. Symptoms are usually mild in the majority of cases, but critical illness, vascular thrombosis, bilateral viral pneumonitis, and ARDS can happen in vulnerable cases.

The main focus of controlling the spread of SARS-CoV-2 infection worldwide, is through prevention techniques like wearing masks, social distancing, washing hands frequently, and avoiding mass gatherings, as there can be a transfer of viral load from asymptomatic people also. The virus can be detected 1-2 days before the onset of symptoms, but usually on 4th to 5th day from upper respiratory tract samples. The duration is 7-12 days in moderate cases and up to 2 weeks in severe cases. The 2nd wave of infection is also noted.

COVID pandemic has challenged the healthcare systems across the globe. Governments have to balance between the health of citizens and the economic crisis due to the imposed lockdown. It has made healthcare a priority issue where the focus is on resource management, heightened infection control and mutual sharing of knowledge and understanding across borders.

The Anaesthetists have taken charge of managing Covid19 patients (proven or suspect) as well as minimizing Covid19 infection not only in the operating room but also in ICU setups, emergency rooms, Covid wards, etc. They are working as Frontline warriors, neck to neck with Intensivists and Physicians to manage Covid19 outbreak.

First time in history, an Anaesthetist made it to the cover page of Times magazine. This proves the importance of Anaesthetists in the present scenario. Covid19 has been a curtain-raiser for Anaesthetists around the world as people now know that these "behind-the-curtain" doctors work as hard as the surgeons or physicians and are important in the perioperative management of patients.

The role of an Anaesthetist starts with PAC. This is the first contact with the patient. Anaesthetists now prefer to do video calling or wear PPE or other protective gear, before approaching the patients and their relatives. The art of auscultation has taken a backseat in view of social distancing. Mask and PPE make speaking and hearing difficult. Still, it is better to be safe than sorry.

In the operating room, Anaesthetists have stepped up safety precautions and measures to control Covid19 infection. Various guidelines have come up and have been shared to all Anaesthetists to ensure that each operating room in the country and the world is made safe for the surgeons as well as the staff working there. The anaesthetic practices have taken a shift towards Regional Anaesthesia and TIVA. Only emergency cases were being taken during the lockdown. Post lockdown, gradually planned surgeries have started, but with all precautions as in case of covid positive patient.

Importance to general precautions is emphasised by Anaesthetists to staff and other doctors. Mask, social distancing and frequent washing of hands holds true for all. The Anaesthetist, Surgeon and Staff need to wear N95 mask and a surgical mask. The N95 mask fit test is required. The patient wears a surgical mask. O2 supplementation can be either through nasal prongs under the mask or through facemask to avoid aerosol generation which is the prime source of spread of infection in the OT. Bag mask ventilation is contraindicated in CovidOT. Closed Circuit is advised during induction of general anaesthesia.

PPE has become an essential requirement to protect healthcare workers from Aerosol Generating Procedures (AGP). AGP include

- tracheal intubation,
- NIV,
- HFNO provision,
- bronchial suctioning,
- bronchoscopy,
- tracheostomy, etc.

Clinicians are in close proximity to the upper respiratory tract source of viral load, which leads to an increased risk of transmission of coronavirus. The small particle aerosols can remain in air for upto 3 hours, travel upto 20 feet, and remain on surfaces for upto 72 hours. So healthcare workers need to be constantly on their guards, in the suffocating and hot PPEs. Donning and doffing of PPE should be done as advised in the guidelines along with a trained staff. A "mask on first, mask off last" approach has to be applied. Improper doffing leads to self-contamination.

Enough time should be allocated for preparation of airway equipment and fitting of PPE outside the intubating room. A checklist should be used. Communication in full PPE can be challenging. Preparing team members, assigning roles, and setting out the airway plan before donning PPE, improves safety and team effectiveness. Intubating team should be limited to one experienced intubator, one skilled assistant to help in intubation and another to administers drugs. A runner should be placed outside the room to assist the intubating team. The most experienced anaesthetist should perform intubation using videolaryngoscopy to limit exposure risk.

The basic universal droplet precautions, wearing of N95 masks by all healthcare workers, appropriate use of standard PPE (including an N95 mask, eye protection, cap, gown, face shield and double gloves) has led to control of transmission of SARS within healthcare facilities. But when the standard PPE was not used during emergency procedures like intubation or tracheostomy, they were often exposed to a high viral load.

In accordance with updated government guidelines, hospitals have defined their own safety protocols, checklists, special consent forms, disinfection methods and training of healthcare staff to curtail spread of infection and to manage patients in a safer way.

- Elective surgeries were stopped during lockdown, to keep healthcare workers free to manage Covid19 patients and also to maintain drugs for emergency purposes in case of mass inflow of patients.
- The relatives of patients were not allowed in to reduce footfall in hospitals.
- Shift duties were started with minimum on-duty staff.
- There was temperature screening at entry of hospital.
- Use of hand sanitiser and mask was compulsory before entry.
- Registers maintained details of all who entered the hospital.
- Upgrading of disinfection techniques became a priority in hospitals.
- Airflow in hospitals is being managed to control nosocomial infection. Central ACs should be avoided and good ventilation maintained.
- In ICUs, negative pressure isolation rooms are required.
- There should be sufficient supply of oxygen to support NIV, HFNO and ventilatory management of patients.
- PPE, high-end antibiotics and emergency drug supply should be maintained.

Patients need to be affirmed that every possible precaution is taken by the hospital to control infection. Inturn, they need to support the healthcare workers and understand the problems they face due to PPE, prolonged working hours and staying away from their family. Patients need to get tested for Covid19 as and when required. Basic

precautions of wearing mask, social distancing and frequent handwash has to be followed.

The rapid implementation of basic recommendations for screening and prompt isolation of all suspect patients and staff, together with quarantine of contacts, was ultimately effective in preventing significant healthcare worker and patient infection.

Around the world, there has been an unprecedented demand for PPE, with the rapid spread of the pandemic across all countries. The supply-demand ratio was disrupted due to lockdown in most countries around the world. So emphasis was on local manufacturing and local supply. But maintaining standards according to government guidelines was a big challenge. Many factories started procuring materials and machines for manufacturing PPEs at a fast rate. Quality of the material, stitching and the seal, all were important.

Healthcare Personnel should be provided with indemnity by government. Fatigue and burnout should be prevented by frequent shifts as it is difficult to work for prolonged hours in PPE with no access to basic necessities like food, water, etc. Mental health is also a major concern nowadays. Proper quarantine and treatment facilities should be made available to them.

Education methods have been redefined post-Covid19 Pandemic. Conferences have been canceled and colleges shut down. Webinars, simulation techniques, teleconsultations, online courses and workshops have taken precedence. The main topics focussed around

- Covid19 posing challenges in airway management and ventilatory strategies in OT and ICU
- scavenging in OT
- maintaining adequate OT airflow turnover
- laminar flow and negative pressure in OT
- cardiopulmonary resuscitation
- methods of disinfection
- types of masks
- quality of PPE
- donning and doffing of PPE
- effects of prone ventilation
- critical care in ICU, etc.

Local, national and international webinars have become popular way of spreading knowledge on how to contain and manage this global pandemic.

Anesthetists need to focus more on personal fitness, health and immunity along with that of their family members. Personal safety while treating patients is of utmost importance. Anesthetists need to break transmission of infection at various levels. Safety of colleagues, staff and patients along with stress on disinfection methods in hospitals is a priority.

“Survival of the Fittest” stands true in the current global pandemic. Quick adaptability to the fast-changing scenarios and information is the new normal.