

## Awake Tracheal Intubation During COVID Pandemic

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Airway management in the operating room (OR) during the COVID-19 pandemic poses unique challenges. Airway interventions can cause a high amount of aerosolisation, putting all the team members at a high risk of acquiring COVID-19 infection during the procedure.<sup>1,2</sup>

During airway management, in addition to ensuring patient safety, additional measures to prevent aerosol generation and reduce viral spread are required to ensure safety of the airway manager and the other OR personnel.<sup>2</sup> Use of modified techniques, unfamiliar equipment like a customised intubation and extubation box (COVID box) or other barrier devices, make airway management more challenging. In addition, the fear of contamination and infection may lead to cognitive overload which may affect the performance of the airway manager. Vigilant precautionary measures are warranted during airway management in the OR to prevent the spread of infection among OR personnel. There is no robust evidence for a definite technique or strategy for airway management in OR during the COVID-19 pandemic. All India Difficult Airway Association (AIDAA) consensus guidelines for airway management in the operating room during the COVID-19 pandemic have been recently published that recommend avoiding awake tracheal intubation (ATI) as much as possible.<sup>3</sup> Managing an anticipated difficult airway is a challenging task for the anaesthesiologist, as ATI is a highly aerosol generating procedure.<sup>4</sup> Prolonged duration of ATI increases exposure time to the aerosols.<sup>3</sup>

Our institute caters to a large volume of cancer cases which include head and neck cancer and reconstructive surgeries. During the period of 23<sup>rd</sup> march 2020 to 7<sup>th</sup> June 2020 we performed 50 head and neck cancer resection surgeries with reconstruction. 26 patients from this group needed awake tracheal intubation because of their anticipated difficult airway.



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On the basis of our experience we propose the following if an awake tracheal intubation is inevitable.

Meticulous planning, optimal preparation, pre procedural briefing and proper coordination among team members, reduces procedural time. Good counselling and optimal level of sedation increases the success rate and also decreases the procedural time.<sup>3</sup> Use of dexmedetomidine infusion for sedation, keeping the patient calm and maintaining a patent airway can be considered.

Anaesthetising the airway using local anaesthetic techniques is challenging. There is a potential risk of aerosol generation with all the techniques. Therefore, these should be performed only after weighing the benefits and the risks and with the use of personal protective equipment (PPE). Spraying the oral cavity and posterior pharyngeal wall with 10 percent lignocaine spray, viscous lignocaine gargles, nasal lignocaine jelly or lignocaine soaked patty in the nose can be considered.

Airway blocks are to be considered only by an experienced operator and weighing the risk and benefits. Intratracheal local infiltration may be considered through a sterile plastic drape covering the patient.

Nebulisation is best avoided as it can be associated with aerosol generation.

Use of a disposable flexible bronchoscope may be considered if feasible. During intubation only the minimum required personnel should be present inside the OR. The team should be wearing the PPE as recommended by the parent institute protocols.

The aerosol box in its present design may be difficult to use for a Flexible fiberoptic bronchoscope (FFB) intubation, so we used a transparent plastic drape that was suspended over a support as

shown in the pic 1 and pic 2. This arrangement allowed comfortable manipulation of the FFB and containment of the aerosol generated under the plastic drape. A suction placed under the drapes to reduce the concentration of aerosols generated may be considered.

Therefore if an awake tracheal intubation in a Covid suspect or positive patient is inevitable proper planning, preparation and execution of the procedure is required to ensure patient and operator safety. Modification of techniques to reduce aerosol generation and spread must be considered. The goal should be to minimize intubation time, reduce aerosol generation and prevent aerosol transmission.

## References

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