AIDAA consensus guidelines for airway management in the operating room during the COVID -19 Pandemic

Aim

Safe airway management
Prevention of transmission of infection to the OR personnel
Proper disposal of single use items and disinfection of reusable items

Concern

High possibility of viral spread during airway management

Planning

Teaching and training
COVID-19 virus transmission and AGPs
Hand hygiene
Donning and doffing of PPE
Specific measures during airway management to prevent transmission of infection
Mock drills of airway management in OR (wearing full PPE and use of patient barrier devices)

Operating Room Environment
A negative pressure OR is preferred or increased air changes if feasible

Additional resource availability
Availability of PPEs
Transparent plastic sheets or a customised intubation box
Standby airway cart just outside the OR
Two heat and moisture exchanging filters (HMEFs)
Videolaryngoscope
Closed suction system
Surgical cricothyroidotomy equipment
Disinfectant solutions as per the institutional policy

Preparation

Team Preparation
Preferably two persons (one experienced)
Team briefing: concerns, roles, communication, airway and rescue strategy
Supervised donning of PPE

Patient Preparation
Use a surgical mask and cover patient with a transparent plastic sheet
Transfer patient directly to the OR bypassing the holding area
Patient examination performed using full PPE.

OR preparation (in addition to routine checks)
A HMEF is attached between breathing circuit and the mask and another one is attached between the expiratory limb of the breathing circuit and anaesthesia machine
The side stream capnography tubing is attached to the machine end of the HMEF
Videolaryngoscope, closed suction system and surgical cricothyroidotomy equipment
Standby airway cart is ready outside OR
Transparent plastic drapes or customised intubation box
Container with disinfectant solution
OR door kept closed

Procedure

Preoxygenation and Mask Ventilation

Patient should be covered with a transparent plastic sheet or a customised intubation box
Minimise the time between surgical mask removal and face mask application
Preoxygenation with a mask having a good fit using a two-hand two-person technique with a closed circuit
Use continuous waveform capnography to monitor for leaks

Induction of Anaesthesia and Tracheal Intubation

Rapid sequence induction
Use rocuronium or suxamethonium
Low flow (< 5 litres/min) nasal oxygenation during apnoea
TI performed by the most experienced airway operator
Initiate mechanical ventilation only after inflation of the ETT cuff
Confirm TI using waveform capnography
Use a closed suction system.

Unanticipated difficult airway management

Use the modified AIDAA algorithm for airway management during the Covid-19 Pandemic (Figure 4)
Awakening the patients is preferred after established ventilation with SAD. Proceed with surgery using the SAD only if considered safe, keeping in mind the risk of aerosolisation.
Surgical cricothyroidotomy if there is complete ventilation failure

Extubation

Higher aerosol generating procedure than TI
Same level of protection and precautions as during TI
Measures to prevent agitation, coughing and emesis before tracheal extubation
Defer tracheal extubation if there are concerns of a failed extubation

Awake tracheal intubation: ATI should be avoided, unless the patient has an anticipated difficult airway and performing TI under general anaesthesia is considered unsafe. Minimise intubation time, aerosol generation and transmission during ATI

Post Procedure Care

Proper disposal of single use items and disinfection of reusable items
Supervised doffing with proper disposal of PPE
Team debriefing

Not Recommended

Mask ventilation
HFNO for preoxygenation or apneic oxygenation or post extubation
NIV for preoxygenation or post extubation
Disconnection of the breathing circuit.
Open tracheal suction
Airway manipulation and airway exchange procedures during extubation
Tracheostomy or TI through the SAD following successful rescue ventilation
Cannula or needle cricothyroidotomy with jet ventilation
Nebulisation or gargles before ATI

OR = Operating room AGP = Aerosol generating procedure PPE = Personal protection equipment TI = Tracheal intubation ETT = Endotracheal tube
SAD = Supraglottic airway device ATI = Awake tracheal intubation HFNO = High flow nasal oxygen NIV = Non invasive ventilation HMEF= Heat and moisture exchanging filter

Apeksh Patwa, Amit Shah, Rakesh Garg, Jigeeshu Vasishtha Divatia, Pankaj Kundra, Jeson Rajan Doctor, Sumalatha Radhakrishna Shetty, Syed Moied Ahmed, Sabyasachi Das, Sheila Nainan Myatra, All India difficult airway association (AIDAA) consensus guidelines for airway management in the operating room during the COVID-19 pandemic. **Indian J Anaesth 2020;64:S107-15**