Department of Anaesthesiology

Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow

BEFORE

Staff Protection

a) Hand Hygiene

- Doctor intubating as well as assisting staff should put on fresh pair of gloves on previous glove. This glove has to be discarded immediately after procedure.

b) Full Personal Protection Equipment

- Doctor as well as assisting staff should be in full PPE. (COVID19 ICU staff already in PPE)

c) Minimize Personnel During Aerosol Generating Procedure

- Airway operator (doctor), airway assistant (Technician/ nursing staff), team leader (doctor) and a floor runner (nursing staff) should be present

Preparation

a) Early Preparation of Drugs and Equipment

DRUGS:

- Inj propofol (20 ml) loaded in 20 ml syringe/ INJ ETOMIDATE (10 ml) loaded in 10 ml syringe
- Inj fentanyl (4 ml) loaded in 5 ml syringe
- Inj scoline (2 ml) loaded in 2 ml syringe
- Inj noradrenaline infusion to be kept ready in concentration 4mg/50 ml
- Emergency drug cart at standby

MONITORING: SPO2, ECG, NIBP, RR, TEMP

EQUIPMENTS:

- Macintosh Video-laryngoscope (with blade sized to patient) [In our population start with No 3]
- Macintosh direct laryngoscope if difficulty with Video-laryngoscope
- Bougie/Stylet*
- 10ml syringe
- Tube tie
- Lubricant jelly
- Endotracheal tubes (appropriate size range for patient) preinserted with j shaped stylet
- Second generation supraglottic airway (sized to patient)

- Oropharyngeal airway and nasopharyngeal airway (sized to patient)
- Scalpel and bougie CICO kit
- Large bore nasogastric tube (appropriate size for patient)
- Continuous waveform end-tidal CO2 (ETCO2) cuvette or tubing
- Viral-Bacterial filter (One each at Expiratory port, inspiratory port and common port)
- In-line suction catheter
- *At least one pre-curved introducer (bougie/stylet) must be available for use with hyper-angulated VL blade.

OXYGEN (preoxygenation):

- Oxygen mask with O2 at flows of 5-6 l/min to be connected.
- Pre-oxygenation should be performed using a well-fitting occlusive face mask attached to a manual ventilation device with an oxygen source.
- A hand-held circuit (e.g. Mapleson circuit) or a self-inflating bag-valve-mask (BVM) attached to an occlusive face mask can be used as the manual ventilation device.

b) Meticulous Airway Assessment:

- Meticulous airway assessment to be performed early by senior airway clinician and clearly documented.
- Airway management strategy should be formed, including plans of intubation and airway rescue by face mask, Supraglottic airway devices and eFONA with definite triggers of shifting between each (Plan A-D of DAS protocol)

c) Use of Closed Suctioning System

- Closed suctioning catheter system to be connected to circuit in-advance to decrease further discontinuation of circuit

d) Polythene wrapping of the patient

e) Connect Viral/Bacterial Filter to Circuit and Manual Ventilator

During

Team Dynamics

a) Clear Communication of Airway Plan among team

- Gather outside the cubicle of the patient prior to Intubation, discuss for Plan by senior most.

b) Clear Delineation of Roles including drug administrator

- Intubation (one), assistant for ventilation (one), airway equipment handler (one), drug (one), monitoring (one), floor nurse (one)

c) Closed-loop Communication

- Follow ACLS like protocol of closed loop communication

d) Cross-monitoring by All Team Members for Potential Contamination

- Floor nurse should monitor for this (other may be involved in procedure)

Technical Aspects

a) Airway Management by Most Experienced Practitioner

b) Tight Fitting Mask with Two Hand Grip to Minimize Leak

c) Ensure Paralysis to Avoid Coughing

- Any airway manipulation to be done only after apnea and patient is paralyzed

d) Lowest Gas Flows Possible to Maintain Oxygenation (Less than 4 liter/min)

e) **Rapid Sequence Induction and Avoid Bag-Mask Ventilation When Possible**

- Inj fentanyl to be given in dose 2-3 mic/kg, followed by predetermined dose of induction agent (propofol/etomidate) and succinylcholine, rapid sequence intubation to be done, endotracheal tube to be kept clamped/blocked prior to placement.

f) Positive Pressure Ventilation Only After Cuff Inflated

- Cuff pressure to be checked to be optimal using cuff pressure device (Initially inflate enough to made a good seal)

After

a) The laryngoscope blade should be bagged and sealed for sterilisation immediately after intubation according to hospital standards
b) Avoid Unnecessary Circuit Disconnection
c) If Disconnection Needed, standby Ventilator+/- Clamp ET Tube and any circuit disconnection has to be done only after clamping ET tube
d) Strict Adherence to Proper Degowning step and Hand Hygiene
e) Team Debriefing
g) A nasogastric tube should be placed at the time of intubation to avoid further close contact with the airway

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