

# Anesthesia Management in Emergency Laprotomy Patients in COVID 19

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**Abstract:** *The COVID 19 pandemic caused by severe acute respiratory syndrome. COVID 19 has profound impact on life across the globe and has placed an enormous strain on health care system and economics.*

## 1. Introduction

- Emergency laparotomy is a common surgical procedure performed for wide variety of intrabdominal pathologies.
- Which has a significant associated morbidity and mortality included under this umbrella term are heterogenous group ranging with truly emergent cases such as patients with life threatening haemorrhages to urgent cases with intraabdominal sepsis and peritonitis.

### Key Points

- Covid 19
- Emergency laparotomy is common surgical procedure with significant economic impact and 30day mortality approaching 15%
- Patients are often elderly with comorbidities that might not be treated optimally

Key goals of anaesthesia in Covid 19-

- Secure airway management
- Maintain cardiovascular stability
- Goal directed fluid therapy
- Critical care facilities approaching guided risk scoring
- Post-operative pain relief

## 2. Case Report

61 Y/M, 52kg, came with chief complaints pain in abdomen on right side since two days, H/o constipation since two days.

### History of Presenting Illness

- Patient was apparently alright 2 days back came to hospital with chief complaints of pain in abdomen on right side, history of constipation, k/c/o hypertension
- No history of fever with chills and cough,
- No history of haematemesis/Malena, no history of similar episode in past, no history of diabetes, tuberculosis. Etc
- On examination diagnosed as ischemic bowel disease with SMA Thrombosis
- Patient was taken for an exploratory laparotomy with resection anastomosis with ileostomy.
- General examination-patient was well oriented with time place person

TEMP AFEB

PR 90/m BP 140/90mmhg, RR18/m.

- Systemic examination-  
CNS-higher centres normal  
CVS-S1S2heard, No murmur  
RS-AEEBS, clear no added sounds.  
BP-140/90mmhg  
SPO2-97% on RA
- Local examination –  
P/A Distended, tender on right side of abdomen, guarding present, bowel sounds absent.
- Blood investigations-  
HB 9.9, TLC 8270, PLT 639000, CREAT 0.7, UREA 48, NA 132,  
K3.5, BSL (R) 112mg, TB 1.1, DB0.8. SGOT22, SGPT17INR1.2  
ECG-CONC LVH,  
2DECHO-Mild Conc LVH, no RMWA, Good lv systolic function type 1dd EF 60%.  
CXR-increased broncho vascular markings  
CECT ABDMEN PELVIS-Superior mesenteric artery thrombosis.  
Covid19 antigen-positive  
Patient was accepted for anaesthesia under ASA GRADE 3 HIGH RISK GENERAL ANESTHESIA.

### Preoperatively general preventive measures taken are

- While shifting the patient to dedicated operation theatre it was compulsory for the patient to wear the mask, and accompanying person.
- And everything related to anaesthesia drugs and trolley was ready
- Air conditioning and positive pressure system was off.
- Less staff in the operation theatre, two anaesthetist one senior and one assistant, one nurse.
- HME FILTERS were attached to ventilator at expiratory port, at inspiratory port and at Y PIECE of tube.
- Also closed suction catheter were attached
- Well sterilised Instruments-laryngoscopes and blades kept along with endotracheal tubes.
- Intubating equipment were kept in close proximity to the patient, and plan for its disposable in a manner that limits the distance of contaminated equipment
- 3PPE kit for personal protection used to avoid aerosol exposure with proper donning method, headgear (helmet), with N95mask, goggles, face visor, shoe covers with two double layered surgical gloves.

- After donning and everything ready,
- Preoxygenated the patients for 5min with low flow o<sub>2</sub>.
- We premedicated the patient with Inj Glycopyrrolate 0.2mg+Inj midazolam 1mg+inj fentanyl 50mcg were used.
- After preoxygenation and premedication, Induction done by using propofol 100mg+ inj succinylcholine 100mg, patient was intubated endotracheal cuffed tube inserted no 8 by rapid sequence induction.
- Immediately following intubation, inflated the ETT cuff, before applying positive pressure ventilation
- The laryngoscope immediately post intubation placed in sealed specimen bag.
- One surgical glove removed as that was, we used at the time of intubation
- Anaesthesia was maintained using oxygen and air (50:50) and isoflurane (MAC 1-1.5)

admission and implement risk strategies has been time pressurized. anxiety and fear placed additional pressure on providers due to inadequate supply of PPE/Lack of clarity of information, confusion, slow implementation protocol, in our institution tertiary referral centre, we recommend an escalation of standard practice protocols to be followed during the perioperative management of all patients to reduce exposure

#### Intra-operatively

- After taking incision and opening the cavity patients pressure fall occurred to 80 to 50mmhg, adequate fluid management done with iv fluids like normal saline and ringer lactate and crystalloids (hetastarch) after that pressures were maintained
- Patient was vitally stable, analgesia was provided in the form of top ups of inj atracurium 5mg iv,
- And with inj neomol iv saline.
- With normal output.
- The procedure was completed within 2 and half hours.

#### At Extubation-

- There were no surgeons in the operation theatre, low number of staff, only the one who is extubating anaesthetist and assistant.
- Covered patient with polydrape sheath specially face, attached closed suction catheter, and with closed suctioning without touching anywhere.
- Patient was reversed with inj glycopyrrolate 0.01/kg and inj neostigmine 0.005/kg.
- And extubated smoothly
- Patient was shifted to desired area.

### 3. Discussion

COVID19 pandemic has brought in several new challenges to deal with surgical emergencies international and national societies have published guidelines to address this situation. however, local situation may vary from hospital to hospital and health care personnel need to adapt and improvise to deliver safe and effective health care.

SARS-COV-2 pathogen transmission can occur between human via inhalation of infected respiratory droplets, in particular if the exposure of droplets is within close proximity (6feet). if you are in relatively closed off environment with continuous exposure to high aerosol counts. SARS-COV2 is able to survive outside body for approximately 12 hours (fabrics, cardboard surfaces) and up to 72 hours (plastic/metal) preventing transmission of the SARS-COV 2 remains the most effective public health effort to lessen its impact. Due to rapid spread of COVID19 the ability of health care organization to prepare for increasing