Operative procedures performed during SARS-Cov-2 pandemic: Safe for patients and health care workers under appropriate guidelines

Sir,

Since the government of India elevated its response to unprecedented severe acute respiratory syndrome (SARS-Cov-2) pandemic, Indian Council of Medical Research (ICMR) has asked to postpone elective surgeries till pandemic is over in order to focus on managing SARS-Cov-2 pandemic. As per ICMR guidelines, emergency procedures should be performed even without SARS-Cov-2 testing.[1]

There is a long list of patients waiting for elective surgeries and we need to consider safety of patients and health care workers (HCW). There are American Society of Anesthesiologists and Anaesthesia Patient Safety Foundation recommendations for assessing all patients for SARS-Cov-2 by reverse transcription polymerase chain reaction preoperatively.[2] These recommendations have been suggested possibly based on current knowledge about SARS-Cov-2.

As per latest guidelines by ICMR, rapid antigen test (Std Q COVID-19 Ag) to be done for asymptomatic patients undergoing aerosol-generating surgical/nonsurgical interventions, which includes elective/emergency surgical procedures like neurosurgery, ear-nose-throat (ENT) surgery, dental procedures; nonsurgical interventions like bronchoscopy, upper gastrointestinal endoscopy, and dialysis.[3]

Few retrospective reports from Wuhan, China and other countries have shown higher morbidity in patients undergoing surgical procedures during incubation period.[4,5] Due to these initial reports, there was reluctance in medical fraternity about going ahead with surgical/nonsurgical interventions. As we are going through a rapidly changing situation that has not been

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experienced before, we need evidence-based data to formulate recommendations and guidelines for the same.

At our institute, we have done a retrospective analysis of all the patients (total no = 84) who came for emergency surgery during the early phase of pandemic between March 22, 2020 and May 13, 2020. Once patient was hospitalised for emergency surgery, history of sign and symptoms suggestive of SARS-Cov-2 was taken. If there was any positive history suggestive of SARS-Cov-2, patient was referred to physician for further evaluation. Throat swab was sent for testing, and emergency procedure was performed as per recommendations for SARS-Cov-2 positive patients. Further these patients were managed as per test report. Patients without any positive history were proceeded for surgery with appropriate personal protective equipments for all HCW. We analysed data for preoperative history of SARS-Cov-2 symptoms, types of emergency procedures, type of anesthesia given, and perioperative symptoms of SARS-Cov-2 among patients and HCW.

Data was analysed using percentage analysis.

The retrospective analysis of patients’ data (total no = 84) who underwent emergency procedures at our institute during SARS-Cov-2 pandemic between March 22 and May 13, 2020 is as follows:

The Figure 1 shows distribution of types of procedures.

As per available recommendations, anesthesia was central neuraxial (89.33%) and regional block for majority of patients to reduce aerosol-generating procedures and for remaining patients, general anesthesia (8.33%) was given. Table 1 is showing perioperative COVID-19 incidence. Our observations showed that no patient had symptoms of SARS-Cov-2 in postoperative period. No healthcare worker showed symptoms of SARS-Cov-2.

| Table 1: Perioperative incidence of SARS-Cov-2 | Total no | Percentage |
|-----------------------------------------------|---------|------------|
| Preoperative symptoms of SARS-Cov-2            | 3       | 3.57       |
| Postoperative symptoms of SARS-Cov-2           | 3       | 3.57       |
| Perioperative screening for SARS-Cov-2 done    | 6       | 7.14       |
| Positive RT-PCR for SARS-Cov-2                | 0       | 0          |
| Positive RT-PCR for SARS-Cov-2 in health care workers. | 0       | 0          |
| Perioperative morbidity or mortality.          | 0       | 0          |

As initial reports from other countries\(^4,5\) showed unexpected morbidity and fatalities, our observations do not report any perioperative morbidity or mortality. Retrospective analysis of data suggest that it is safe to operate asymptomatic patients in SARS-Cov-2 pandemic under proper guidelines.\(^6,7\)

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Conflicts of interest
There are no conflicts of interest.

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**Letters to Editor**

Frova saved the day!!

Sir,

A 5-year-old male child weighing 17 kg, a known case of bronchial asthma, brought intubated to our hospital, with history of extubation failure twice, was posted for airway assessment. The patient had a 3.5-mm ID uncuffed endotracheal tube (ETT) in situ. Previous attempts at extubation had resulted in bradycardia, respiratory distress and reintubation.

The difficult airway trolley was kept ready including smaller size endotracheal tubes, Frova® 8 Fr intubating introducer along with the usual armamentarium. The patient was ventilated using closed circuit with 100% oxygen and sevoflurane at 3 vol% and administered Inj. glycopyrrolate 80 µg, Inj. fentanyl 20 µg and Inj. ketamine 20 mg, intravenously. The otorhinolaryngologists visualised the trachea by inserting a Hopkins rod telescope through the ETT. The trachea showed erosions and denuded cartilage probably due to intubation trauma. In order to visualise vocal cords (VC) movements and subglottic region, we removed the ETT after inserting a Frova introducer through it into the trachea [Figure 1]. The patient was oxygenated during airway examination using the 15 mm Rapifit connector and Jackson Rees circuit. There was B/L abductor VC palsy with substantial edema of false and true VCs. A decision for tracheostomy was taken and the patient was reintubated with 3.5-mm ID ETT by railroading over the Frova after muscle relaxation using atracurium.

Airway assessment using rigid or flexible bronchoscopy in a child with respiratory comorbidities and difficult airway poses a double whammy which needs timely intervention and backup contingencies. Frova®intubating introducer (Cook Medical, Bloomington, USA) is a single use tracheal tube introducer which comes with two Rapifit connectors, 15 mm and Leur lock. [1] The Difficult Airway Society and All India Difficult Airway Association (AIDAA) guidelines recommend early use of such devices in cases of difficult intubation. [2,3] The appropriate placement of the device can be confirmed by applying end tidal carbon dioxide measurement due to the hollow nature of the device. [4] In our case, we used the 8Fr Frova with 1.6 mm ID, 35 cm length which can be used for placement of ETT with ID 3 mm or larger. It not only served as a guide for intubation but also enabled us to carry out airway examination while effectively oxygenating the patient. Another option would have been the use of High Flow Humidified Nasal Oxygenation after removal of ETT during airway assessment as well as tracheostomy. There are reports of use of Frova as an intubation aid in paediatrics; [5] however, we did not find any literature on the use of Frova as a means of oxygenation during airway procedures in children. The use of intubating aids is also fraught with complications such as airway trauma, bleeding, avulsions particularly if not introduced under vision. [6]

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