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POST COVID CASE UNDERGOING ELECTIVE LSCS UNDER SPINAL ANAESTHESIA

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ABSTRACT Coronavirus disease(COVID-19), an infectious disease caused by newly discovered coronavirus, is spreading rapidly around the globe .The diagnosis of COVID-19 was confirmed by positive results of reverse transcriptase polymerase chain reaction test for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Numerous reports handled emergency cesarean delivery. Primary symptoms and laboratory data of pregnant women with COVID-19 were similar to those of non-pregnant patients. Although the mortality rate is reported to be high after surgery in patients with COVID-19, cesarean delivery was successfully performed under regional anesthesia in most cases and postoperative course was favorable both in the parents and newborns. There is no direct evidence of vertical mother-to-child transmission of SARS-CoV-2. Given the potential for multisystem involvement, timing of surgery needs to be carefully considered to plan for safe surgery. Elective surgery should not be scheduled within 7 weeks of a diagnosis of SARS-CoV-2 infection unless the risks of deferring surgery outweigh the risk of postoperative morbidity or mortality associated with COVID-19. SARS-CoV-2 causes either transient or asymptomatic disease for most patients, who require no additional precautions beyond a 7-week delay, but those who have persistent symptoms or have been hospitalised require special attention. Patients with persistent symptoms of COVID-19 are at increased risk of postoperative morbidity and mortality even after 7 weeks. The time before surgery should be used for functional assessment, prehabilitation and multidisciplinary optimisation. Vaccination several weeks before surgery will reduce risk to patients and might lessen the risk of nosocomial SARS-CoV-2 infection of other patients and staff. National vaccine bodies should consider whether such patients can be prioritised for vaccination. As further data emerge, these recommendations may need to be revised, but the principles presented should be considered to ensure safety of patients, the public and staff.

KEYWORDS : Cesarean delivery · COVID-19 · Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) ·

INTRODUCTION

Pregnant women were particularly susceptible to respiratory pathogens and severe acute respiratory syndrome(SARS) caused by a coronavirus. Although SARS-CoV-2 has up to 85% sequence similaritywith SARS-CoV , pregnant women with COVID-19 in recent studies had fewer adverse maternal and neonatalcomplications and outcomes than would be anticipated for those with previously reported SARS infection.

Aim

To evaluate the post operative complication and vertical transmission in pregnant mother who was previously tested positive for COVID-19 posted for elective caeserian section.

MATERIALS AND METHODS

The study was conducted in Vinayaka Missions Medical college and Hospital, Karaikal on 5 patients undergoing elective caeserian section under spinal anesthesia from April 2021 to May 2021.The study was approved by Hospitals Ethics Committee .5patients belonging to ASA grade I or II (age 18 to 35) were selected for the study.

Inclusion Criteria

- 3rd trimester
- Previously tested COVID positive(>7 weeks)
- Vomiting,
- Fever,
- Age more than 18 years.

All the patients had routine blood tests, Reverse Transcriptase Polymerase Chain Reaction test and a sonographic examination.

Exclusion Criteria

- Patients with severe fever,
- cough
- Newly diagnosed COVID positive.

All patients were informed about spinal anesthesia in detail. As all pregnant patients are supposed to have a high risk of aspiration and difficulty in intubation so, conversion to general anesthesia is associated with relatively higher risk than the general population. The patients were informed about the risk of conversion to general anesthesia, and all patients provided informed consent. Simple questionnaire forms were developed for patients to provide comments about the operation.

An IV cannula was inserted, then a 10 mL/kg intravenous infusion of Ringer Lactate solution was administered over 20 min. All patients underwent standard monitoring, including electrocardiography, non-invasive blood-pressure measurements and pulsoximetry. Standard spinal puncture with 26G spinal needle was done between L2 and L3 spaces at right lateral position. Only 2 ml of 0.5% bupivacaine heavy was given. All of these patients were turned supine immediately. All patients were monitored for blood pressure (non-invasive), heart rate, electrocardiogram, and oxygen saturation by pulse oximetry. If blood pressure decreased by more than 25% of baseline and heart rate dropped to less than 50 beats/min, the patient was considered to suffer from hypotension or bradycardia, respectively. The hypotension was managed with Inj. ephedrine 6 mg IV incremental doses and bradycardia was managed using Inj.atropine 0.6mg IV.Sensory blockade was assessed with pin prick and motor blockade by modified bromagescale.Soon after baby delivered, InjOxytocin 10IU in 500ml Normal Saline was started.Surgery was uneventful .The patients were started orally after 4 hrs of operation and solid food on the next day. For baby, Apgar scores were 8–9 and 9–10 at 1 and 5 min, respectively. Patients were called for a revisit after a week for follow-up. Operative time, conversion, complications ,post operative pain ,hospital stay &cosmetic results were analyzed.

RESULTS

The operation was completed and surgery was uneventful for 5 patients. None of the patients had cardiopulmonary problems other than transient hypotension (<20% of pre anaesthesia value) during surgery which was managed with intravenous fluid. None of the patients required conversion to general anaesthesia. Mean operative time was 35 minutes (range 45-60 minutes). In post operative period median pain score at 4 hr was 1.5 (range, 0–5), at 8 hr it was 1 (range, 0–6), and at 24 hr it was 1 (range, 0–4). No one patient developed wound infection or any othercomplication. All 5 patients were discharged after 48 hr. None of them developed fever or severe pneumonia postoperatively. Amniotic fluid, cord blood, neonatal throat swab and breastmilk samples from five patients were all

negative for SARS-CoV-2 by reverse transcription polymerase chain reaction (RT-PCR).Almost all patients satisfied with their cosmetic results.

DISCUSSION

Neuraxial anesthesia is preferred wherever possible, based on its reducing the possibility of exacerbating pulmonary complications accompanied with intubation.Monitoring of patients under spinal anesthesia is easier than general anesthesia. Complication of endotracheal intubations like exposure to patients aerosole during corona virus pandemic,damage to oral cavity, teeth, sore throat, and aspirations, failure of intubations are absent in spinal anesthesia. Cost of spinal anesthesia is far less than general anesthesia. Nausea and vomiting are less with spinal anesthesia.Hypotension is a problem of spinal anesthesia, which can be overcome by preloading with fluids.In this study 2 patients developed transient hypotension (<20% of pre anaesthesia value) which was managed with extra intravenous fluid and no one patient required injection of mephentermine .

Under regional anesthesia the respiratory mechanism remains intact, and diaphragm the main inspiratory muscle is unaffected allowing the patient to adjust minute ventilation without any significant changes in ventilatory parameters or CO2 levels.

CONCLUSION:

Spinal anesthesia can be successfully and safely performed in post COVID case.Furthermore, it seems that spinal anesthesia is associated with minimal postoperative pain and at least an equally good recovery . Furthur studies are still required for proving the efficacy of spinal anesthesia in post covid cases.

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