Obstetric Anaesthesia
Annual Scientific Meeting 2021 goes virtual
10-11 June 2021

Emergency caesarean section for a parturient in acute respiratory distress due to CoVid-19

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Introduction

- Studies in early pandemic have shown that 1 in 10 pregnancy women admitted to hospital in UK with SARS-CoV-2 infection needed respiratory support.[1] The risk was increased with other co-morbidities.
- Hence a multi-disciplinary decision making and timely delivery is crucial.
- We described the anaesthetic management of emergency caesarean section (CS) of a morbid obese parturient with cerebral palsy and TRAPS (Tumour necrosis factor receptor associated periodic syndrome) who presented with respiratory distress during third trimester.

Case report

- A 34 year old lady who has background history of cerebral palsy, raised BMI of 46 kg/m^2 and a genetic disorder TRAPS. She was also known to be difficult for lumbar puncture.
- She was admitted with 2 days history of increasing shortness of breath and fever at 33 weeks of gestation. She was tested positive for CoVid-19.

Clinical findings:

- On admission, her respiratory rate was 40/min and has oxygen saturation 94% on 2L of oxygen. She was haemodynamically stable. Her condition deteriorated with increasing oxygen requirement to maintain saturation of 94% and $Pa0_2$ of 8kPa.

Radiological findings:

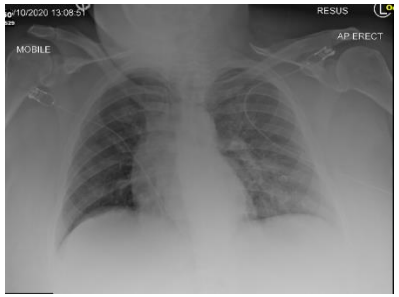


Fig 1

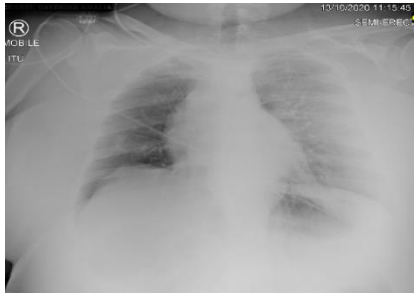


Fig 2

Chest X-ray on admission (Fig 1)- Patchy airspace opacification visualized in left lower zone.
Chest X-ray after 6 days (Fig 2)- Worsening patchy airspace opacification is seen in the left mid and lower zone together with right lower zone in keeping with infection.

Treatment and management:

- IV Co-amoxiclav and IV hydrocortisone were started. IV Dexamethasone and IV magnesium sulphate were administered for foetal lung maturation and brain protection.
- Multidisciplinary decision involving physicians, obstetricians, intensivists and anaesthetists was made to deliver the baby if her condition worsens to facilitate maternal stabilisation.
- Anaesthetic technique was single shot spinal at L3/L4 space in sitting position and was successful at second attempt despite significant scoliosis. 2.3 ml of Heavy Marcaine(0.5% Bupivacaine) with 250micrograms of diamorphine was administered intrathecally. No immediate complications
- Maintained cardiovascular stability with phenylephrine infusion and nasal oxygen. Baby was delivered in good condition.
- Post-operatively, she was transferred to high dependency unit for further respiratory support with high flow nasal oxygen therapy. She was treated with total of 5 days of remdesivir and total 10 days of dexamethasone. She responded to these treatment and was stepped down to ward after 5 days.

Discussion

- CoVid-19 infection in high risk pregnancy lady can result in severe respiratory failure requiring ventilator support.
- Multidisciplinary decision is essential for the management of such cases as timely delivery of baby is essential to provide optimal ventilator strategy for mother.
- Early studies have shown that non-invasive ventilation may be beneficial to patient in the initial phase and may prevent deterioration. Therefore, our aim was to avoid general anaesthesia.
- Single shot spinal was preferred over combine spinal epidural technique to minimize the time to administer block as patient has history of difficult lumbar puncture, difficulty in sitting up even with support due to cerebral palsy and significant scoliosis.

References

1. Knight M, Bunch K, Vousden N, et al. Characteristics and outcomes of pregnant women admitted to hospital with confirmed SARS-COV-2 infection in UK: national population based cohort study. BMJ 2020 :369; m2107