CESAREAN SECTION WITH EPIDURAL ANESTHESIA IN A MORBIDLY OBESE PARTURIENT WITH POST-COVID PULMONARY FIBROSIS

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Introduction

- Pregnancy and obesity are high risk factors of severe COVID 19
- Long term outcomes include residual pulmonary fibrosis
- Risk of placental and fetal hypoxia

Case Description

- 22-year-old 37w4d primigravida
- Cesarean section indication: morbid obesity and pulmonary fibrosis.
- Pathologies:
  - Pulmonary fibrosis: Severe COVID 19 infection one year before: 40 days mechanical ventilation and tracheostomy (Fig A-D)
  - Tachycardia
  - Morbid Obesity (BMI 45.7)
- Pharmacological therapy:
  - Rate control medication
  - Home oxygen therapy through nasal cannula at 3L/minutes to maintain a SpO2 of 95%
- Prenatal care: Dyspnea and palpitations with increased activities. No history of sleep apnea, but endorsed using a couple of pillows at night.
  - Transthoracic echocardiogram within normal ranges

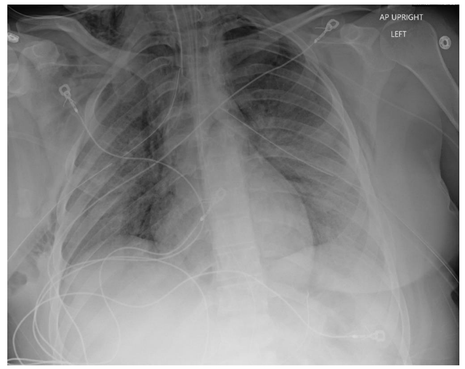

Fig A. Intubation 10/14/2021

Fig B. 11/19/2021

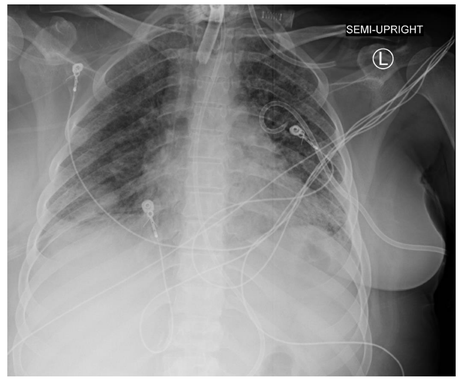

Fig C. 11/24/2021 tracheostomy

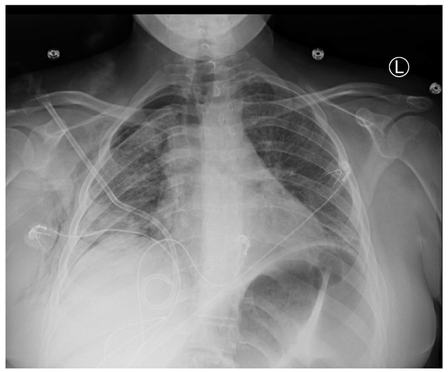

Fig D. 12/21/2021 Tracheostomy out

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Case Description (continued)

Physical Exams:

- Height 180.3cm, weight 148.6kg, BMI 45.7
- Blood pressure 110/74mmHg, Pulse 118 bpm, sinus rhythm
- SpO2 95% with oxygen through nasal cannula at 3L/minutes
- Head and neck: thick and short neck, anterior cervical scar of pervious tracheostomy, no difficulty swallowing, no voice changes, no obstructive sensation while breathing.

Anesthesia management

- Epidural anesthesia
  - T12/L1 level with a needle depth of 7cm
  - Catheter left 13 cm from the skin
  - Four doses of 100mg 2% lidocaine with 25mcg epinephrine
  - T5 level bilateral block
  - Blood pressure was maintained with continuous phenylephrine infusion with intermittent boluses.
- Discharged without complications two days later.

Discussion

- Cesarean delivery early in the third trimester to avoid a further decrease in lung capacity at the moment of labor
- Anesthesia care
  - High block levels could deteriorate respiratory function and be harmful for the fetus.
  - Avoiding Radical sympathectomy and leading tachycardia
- Challenging for general anesthesia conversion
  - Respiratory insufficiency
  - Unfavorable airway
- Alternative: Combined Spinal Epidural (CSE) could have been another option.

Conclusion

- Cesarean section in a morbidly obese parturient with post-COVID pulmonary fibrosis was successfully managed with epidural anesthesia.