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phase must be interpreted with caution as acute haemorrhage does not result in a reduction in haemoglobin concentration. In this case the 'normal' POC haemoglobin led to false reassurances. Lastly, the delay in recognising active haemorrhage as the cause of ongoing cardiovascular disturbance may have been averted with a formal cross-specialty summary of both the physiological and surgical status of the patient. It is clear that acute maternal critical illness requires a collaborative multi-disciplinary approach to achieve the best possible outcome for both mother and baby.

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P.149 Emergency caesarean section at 31 weeks in an ICU patient with severe Covid-19

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Introduction: Pregnancy is not known to be a risk factor for Covid-19 infection, however due to changes in the immune system, pregnant women may be at higher risk of developing severe infection and critical illness in the later stages of pregnancy.¹ Decision making around the management of pregnant patients with severe infection is complex and should involve a multi-disciplinary approach.²

Case Report: A 37-year-old woman at 31 weeks of gestation was admitted with an 11-day history of Covid-19 symptoms. She had a background of asthma, a body mass index of 37 kg/m² and was of Indian Asian ethnicity, the latter two being risk factors for Covid-19 infection.¹ On admission she was hypoxic with oxygen saturations of 88% on room air, a respiratory rate of 26 breaths/min and increased work of breathing. Her significant investigations included a positive Covid-19 swab, a CRP of 222 and a CTPA with widespread bilateral ground-glass shadowing, but no pulmonary emboli. The degree of hypoxia and radiological appearances placed her in the severe category for covid infection. The CTG was normal, and she was given dexamethasone for fetal lung maturity. An oxygen saturation target of over 95% was set to avoid fetal hypoxia. The patient was admitted to ICU and CPAP was initiated. Ongoing management was discussed by the ICU, obstetric and neonatal consultants; given the lack of improvement on CPAP, the multi-disciplinary decision was to perform an emergency caesarean section under general anaesthesia. The patient was transferred to theatre and following a comprehensive team briefing, a rapid sequence induction was performed. At induction she briefly desaturated to 70% and then once intubated required an FiO₂ of 1.0 to maintain saturations above 90%, due to poor lung compliance. The baby was delivered 4 min after induction, initially in poor condition; however, the baby improved to an Apgar score of 10 at 10 minutes and was transferred to the neonatal unit. The patient was transferred back to ICU and received convalescent plasma as part of the recovery trial. She remained intubated and ventilated for 10 days, with a progressive reduction in her ventilator support, after which she was successfully extubated. Sixteen days after caesarean section she was stepped down to the ward and on day 22 both were discharged home and remain well.

Discussion: This case highlights the complexity surrounding the management of pregnant patients who develop severe Covid-19 infections. In severe infection with associated hypoxia, the outcomes for the mother are potentially improved by undergoing caesarean section.

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P.150 SARS-CoV-2 causing septic shock in pregnancy

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Introduction: As we learn more about the paradigm of disease with SARS-CoV-2 infection, we are discovering severe multi-system involvement at an early stage, including sepsis and septic shock.¹

Case Report: In March 2020, a normally fit 39-year-old Asian woman of 37 weeks' gestation (G2P1) presented to the emergency department (ED) with a two-day history of fever, cough, dyspnoea, myalgia, headache and vomiting. She was pyrexial, tachypnoeic and tachycardic, but normotensive, alert and orientated, with oxygen saturations of 99% on air. Blood tests showed a normal serum lactate, a lymphopenia of $0.2 \times 10^9/L$, WCC $6 \times 10^9/L$, CRP 34 mg/L and D-dimer of 609 ng/mL. Her urine contained ketones ++. A chest radiograph showed mild bi-basal infiltrates. Intravenous fluids and co-amoxiclav were commenced. The fetal heart rate in ED was normal. She was admitted with a persistent tachycardia and pyrexia. The next day she had a syncopal collapse with severe hypotension. She regained consciousness on correction of her blood pressure with a fluid bolus and peripheral vasopressors. The fetal heart rate remained normal. She proceeded to develop visual hallucinations, fluctuating confusion, drowsiness and hypotension with transient response to fluids. Intravenous ceftriaxone and acyclovir cover for meningitis was started on microbiology advice. We proceeded with an emergency caesarean section under general anaesthesia with peripheral vasopressor support and fluid resuscitation. A healthy baby was delivered, and postoperatively the woman was extubated successfully without an oxygen or vasopressor requirement. Overnight she again became hypotensive, tachycardic and drowsy. A non-contrast CT brain was normal and a CT pulmonary angiogram (CTPA) showed bilateral peripheral opacification and ground glass halo. Troponin T, BNP and a transthoracic echocardiogram were normal. Cerebrospinal fluid from a lumbar puncture showed only slightly raised glucose and her lymphocyte count remained low. On postoperative day 2 she developed a mild oxygen requirement. A repeat CTPA showed moderate to severe COVID-19 infection. Her PCR swab from admission was returned with a positive result for SARS-CoV-2. Blood cultures were all negative. The platelet count dropped from 102 to $88 \times 10^9/L$ on day two. The diagnosis was confirmed as COVID-19 pneumonia with encephalopathy and thrombocytopenia secondary to sepsis. She made a complete recovery after three days on oxygen, and seven days in hospital.

Discussion: Whilst the risk of severe COVID-19 in healthy young adults is low, pregnancy is associated with an increased relative risk of severe disease, including the need for ICU admission.² Risk factors in pregnancy are high body mass index, chronic hypertension, pre-existing diabetes and age over 35 years.² Awareness of sepsis with COVID-19 is crucial to ensure early presentation and appropriate escalation in order to reduce morbidity and mortality.

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P.151 Respiratory failure from COVID-19: use of CPAP with spinal anaesthesia for caesarean deliveries

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Introduction: The COVID-19 pandemic has raised new considerations for managing labour and delivery in symptomatic patients. We describe two cases of hypoxic respiratory failure secondary to severe COVID-19 presenting in late pregnancy, which were successfully managed by emergency caesarean delivery under spinal anaesthesia assisted with continuous positive airway pressure (CPAP).

Case Reports: *Patient-1* was a 36-year-old woman with mild asthma, who presented to the emergency department at 36 weeks' gestation with a two-day history of worsening dyspnoea and a 10 days of myalgia, fatigue, and dry cough, with a positive test for COVID-19 in the community. On admission, she was hypoxic and tachypnoeic. A chest x-ray showed extensive bilateral ground-glass opacification in- keeping with severe COVID-19. *Patient-2* was a 31-year-old gravida-5 para-4 woman who presented at 35 weeks' gestation with a three-day history of exertional dyspnoea, chest tightness and productive cough with brown sputum. Although tests for COVID-19 were negative, due to the radiological features and her clinical course she was treated as COVID-19 positive. An MDT decision was made for emergency caesarean for both patients; Patient 1 due to respiratory distress and Patient 2 due to respiratory distress and spontaneous labour. In both cases surgery was conducted under spinal anaesthesia with respiratory support provided with CPAP throughout the operation. Post-operatively, both patients were managed in HDU using COVID-19 treatment protocols, broad-spectrum antibiotics, weaned off the respiratory support and discharged from HDU after a few days.

Discussion: COVID-19 is considered to have a negative impact on pregnancy, resulting in three times greater risk of preterm birth and increased risk of caesarean delivery, with severe illness appearing to be more common in the third trimester.¹ Neuraxial anaesthesia for caesarean delivery has been recommended where possible.² Of all the patients admitted to critical care from 1 September 2020, 71.6% of those requiring basic respiratory support were discharged compared to 24.9% of those requiring advanced respiratory support.³ This case series indicates that pregnant women with COVID-19 presenting for emergency caesarean delivery can be successfully managed with neuraxial anaesthesia supported by intra-operative CPAP, and are likely to have a more favourable outcome.

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P.152 The anaesthetic management of a patient with bilateral foot drop for caesarean section

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Introduction: Neuraxial techniques are considered safer than general anaesthesia, for the purpose of caesarean section.¹ However, in patients with pre-existing neurological deficits, there is often a concern amongst anaesthetists about impacting their neurology. In this case we describe the use of spinal anaesthesia for elective caesarean section, in woman with a background of chronic bilateral foot drop.

Case Report: A 27-year-old nulliparous woman was referred to the pre-operative assessment clinic prior to her planned caesarean section. She had sustained multiple injuries during a road traffic accident 15 years prior, and now suffered from bilateral foot drop, leaving her dependent on crutches for mobilisation. Other issues included multiple pelvic surgeries, fat embolism, and a right sided nephrectomy, all related to the accident. A thorough pre-operative assessment was carried out and documented using the American Spinal Injury Association scale. Sensory deficits were present in the L5-S1 dermatomes, and motor deficits from L4-S1 myotomes. Nerve conduction studies were reviewed which showed complete denervation in the lateral peroneal, tibialis anterior and hallux extensor on the right, A pre-operative echo was performed on account of her previous fat embolism, which was normal. This information aided in the discussion of risks with the patient. On the day of surgery, ultrasound guidance was used to identify the L3-4 interspace, to avoid interference with the L4-5 and L5-S1 interspaces. A good block was achieved, and she delivered a healthy infant. Post-operatively she was assisted with frequent position changes to avoid pressure sores or nerve compressions. She was monitored closely until she returned to her baseline mobility. On follow up she denied any new neurological issues, and was satisfied with her care.

Discussion: Pre-existing neurological deficits present a challenge to anaesthetists in their decision making. The concern is that any insult from anaesthetic technique may result in new or worsening neurologic impairment. However, neuraxial techniques are preferable in patients presenting for caesarean section, so they may be considered if they can be done safely. This case highlights the importance of thorough pre-operative assessment. The results of nerve conduction studies correlated closely with the clinical examination and allowed us to be certain of the pre-procedure pathology. Discussion with the patient regarding risks, and consideration of patient wishes were an important part of the pre-assessment. Using ultrasound guidance we could identify the appropriate interspace. She received close neurological monitoring post-operatively, as per 2020 guidelines by the Association of Anaesthetists and OAA.² Pre-operative documentation of her neurological status provided an element of medico-legal protection and also more importantly aided post-operative monitoring. The development of any new neurology that was not her baseline would have been identified promptly.

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