

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. contraindicated in severe MS due to both maternal and fetal risks. Severe MS can further be complicated by heart failure and arrhythmias. Medical management includes management of heart rate, arrhythmia, heart failure and thromboembolic phenomenon prevention/management. Few cases require percutaneous balloon dilatation during early pregnancy and valve replacement is reserved only for cases not tolerating balloon dilatation as cardiac bypass required for the procedure, which is not tolerated by 20–30% of fetuses.

Case Report: A 35-year-old woman G5P4 at 33 weeks of gestation developed with a one-week history of right-sided hemiparesis due to left basal ganglia ischemic stroke. She was previously healthy without cardiac comorbidities. All her previous deliveries were at home and were uneventful. On evaluation, she was found to have severe MS with mitral valve area of 1 cm². Caesarean delivery was conducted for decreased fetal moment with severe oligohydramnios, under graded epidural anaesthesia (EA) using 2% lidocaine, adrenaline and fentanyl. Perioperative blood pressure and other vital parameters were maintained in targeted range. A single female child of birth weight 1.5 kg was delivered with an Apgar score of 6 and 7 at one and five minutes, respectively. There were no major problems in the immediate postpartum period. Postoperatively, the mother received low-molecular weight heparin, aspirin, antibiotics and analgesics. Her postoperative course was uneventful until day 6, when she developed heart failure, which was managed with oxygen, BiPAP and furosemide. She was discharged home on day 12 with stable vitals parameters and improved neurological status. On 30 days follow-up, the mother's neurological status was improving and the baby was well.

Discussion: The main concern in our patient was pregnancy with severe MS with thromboembolic stroke with hemiplegia. Graded epidural anaesthesia was the technique of choice in our case as the haemodynamic changes brought by the epidural anaesthesia in severe MS is tolerated better than other anaesthetic techniques [1]. Also, EA is considered to be safe for both mother and fetus. Conduction of regional anaesthesia is debatable in patients with pre-existing neurological deficits; however, with proper documentation, precaution, and informed consent, regional anaesthesia can be conducted [2].

References

- 1. Wu W, Chen Q, Zhang L. Epidural anaesthesia for caesarean section for pregnant women with rheumatic heart disease and mitral stenosis. *Arch Gynecol Obstet* 2016; 294: 103–8.
- 2. Bajaj P. Regional anaesthesia in the patient with pre-existing neurological dysfunction. *Indian J Anaesth* 2009; 53: 135–8.

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P.183 Parafalcine subdural haemorrhage after accidental dural puncture; a reminder to consider alternative differentials for post dural puncture headaches A. Chapman, M. Behravesh

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Introduction: Intracranial haemorrhage (ICH) post dural puncture is a rare complication of epidural insertion. We present a case of a 34-year-old woman who presented after a dural puncture with a severe headache.

Case Report: A nulliparous woman had an inadvertent dural tap after epidural insertion with an 18G Tuohy needle. The intrathecal catheter was left in situ receiving anaesthetist-only top-ups. Following vaginal delivery, the patient was discharged with safety advice. She presented 48 h later with severe headache radiating to the frontal region, nausea and vomiting and associated neck stiffness. She had no postural aspect to the headache or photophobia. On examination she had no abnormal neurology with normal observations and blood results. A CT brain scan was requested due lack of postural component to her headache and the presenting complaint of vomiting which showed 'small parafalcine subdural haemorrhages (SDH) on the right side of the inter hemisphere space'. Neurosurgical advice was to be admitted for conservative management and observation. Further imaging including CT Venogram and CT Angiogram did not show any vascular abnormality. The patient's symptoms improved and she was discharged.

Discussion: Care should be taken to rule out other more serious causes of headaches in postnatal women such as meningitis, cerebral vein thrombosis, preeclampsia and ICH [1]. The pathophysiology behind SDH after dural puncture is thought to be from traction and rupture of bridging veins due to low CSF pressure and vasodilation [1]. This patient had no neurological deficit and her symptoms resolved but other case reports include large SDH after epidural insertion needing neurosurgical intervention [1]. Although SDH after dural puncture is rare, a high level of suspicion will facilitate earlier detection. Symptoms described are headache, vomiting, altered mental state, focal motor deficit, visual changes and aphasia/dysarthria [2]. When symptoms are atypical of post-dural puncture headache (PDPH) or do not respond to usual measures, investigations such as non-contrast CT should be performed and depending on level of suspicion CT angiogram and venogram to investigate for vascular abnormalities and venous sinus thrombosis. In patients who are anticoagulated earlier imaging is encouraged. Timely discussion with neurology and neurosurgeons is of paramount importance. This rare case report highlights the importance of early neurological imaging to investigate PDPH.

References

- 1. Davies JM, Murphy A, Smith M, O'Sullivan G. Subdural haematoma after dural puncture headache treated by epidural blood patch. *Br J Anaesth* 2001; 5: 720–3.
- 2. Szeto V, Kosirog J, Eilbert W. Intracranial subdural haematoma after epidural anaesthesia: a case report and review of the literature. *Int J Emerg Med* 2018; 11: 36.

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P.184 Anaesthetic management of COVID-19 and malignant hyperthermia for emergency caesarean section N. Runciman, K. Tan

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Introduction: We present a case of complex decision making about anaesthetic management in a woman with malignant hyperthermia, COVID-19, anxiety, obesity and fetal distress. Pregnant women with COVID-19 are more likely to be delivered by caesarean section (CS). The decision making in the management of these patients is complex and requires a multidisciplinary team approach to ensure the safety of the patient and delivery of fetus.

Case Report: A 37-year-old woman, 39+4 weeks gestation, G2P1, previous CS, presented to maternity assessment unit with uterine contractions, in established labour. She was unvaccinated and had tested positive for COVID-19 five days earlier, and an elective CS had been planned for 10 days after her positive PCR test. She had a past medical history of hypothyroidism, biopsy proven malignant hyper-thermia (MH), anxiety and obesity body mass index 43 kg/m² (38 at booking). At presentation her cardiotocography was abnormal requiring urgent delivery, by category 2 CS. She was tachypnoeic and

tachycardic but oxygen saturations were 100% on air. There were no recent blood results available. A successful single-shot spinal anaesthetic was performed and her baby was delivered in good condition and the operation was uncomplicated. She was discharged home day 2 post CS, but deteriorated day 10 of her COVID-19 illness with worsening hypoxia secondary to COVID-19 pneumonitis. She was admitted to ICU for invasive ventilation and proning. Unfortunately she was not deemed a candidate for extracorporeal membrane oxygenation (ECMO), and after a superimposed bacterial infection. deteriorated precipitously and passed away after three weeks in ICU. Discussion: We carried out regional anaesthesia in this patient after risk-benefit analysis. Despite the potential risks of thrombocytopenia and disseminated intravascular coagulopathy with COVID-19, we felt the benefits of spinal anaesthesia in a patient with malignant hyperthermia, fetal compromise and potential postoperative respiratory decompensation outweighed these risks [1]. Prior handover from the high-risk clinic enabled preparation for total intravenous anaesthesia at short notice. She tolerated the spinal anaesthetic well and was able to spend time with her baby immediately after. This case is important as the management of patients for operative delivery with COVID-19 is becoming more important with increasing prevalence and low number of pregnant patients vaccinated.

Reference

 Daykin H, Moore J. Anaesthetic management of pregnant patients with COVID-19. 2020. https://aura.abdn.ac.uk/bitstream/handle/ 2164/15745/Daykin_etal_ATOW_Anaesthetic_Management_Of_VOR. pdf?sequence=1&isAllowed=y

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P.185 Safe management of a patient with COVID-19-induced thrombocytopenia for an elective caesarean section

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Introduction: Thrombocytopenia occurs in one-third of patients with COVID-19 infection compared with 7–12% of non-COVID pregnant patients [1]. We describe the anaesthetic management of a patient with COVID-19 undergoing an elective caesarean section presented with moderate thrombocytopenia.

Case Report: A 28-year-old nulliparous woman at 39+4 weeks of gestation was listed for an elective caesarean section due to breech presentation. Her past medical history included mild anxiety. At 28 weeks the platelet count was 111×10^9 /L and 72×10^9 /L at term. Preeclampsia had been excluded. Asymptomatic COVID-19 infection was incidentally discovered a week before delivery. The agreed anaesthetic plan was to request platelets to be available as they take 75 minutes to procure. Spinal anaesthetic was planned as per the current COVID-19 guidelines. There were concerns regarding the risk of epidural haematoma due to thrombocytopenia. A pool of platelets was given preoperatively as per the recommendation of the haematologist. The post-transfusion platelet count was 86×10^9 /L. Spinal anaesthetic was performed with a 25G Sprotte needle. Hyperbaric bupivacaine 12.5 mg with diamorphine $300 \mu g$ was used. It was an uneventful caesarean section with an estimated blood loss of 500 mL. The woman's platelet count 6 hours postoperatively was 87×10^9 /L and increased to 96×10^9 /L after 2 days.

Discussion: Thrombocytopenia during pregnancy affects 5–10% of patients [2]. Aetiologies include gestational/immune thrombocytopenia, preeclampsia, and HELLP (haemolysis, elevated liver enzymes and low platelets) syndrome. Mild thrombocytopenia was recorded in

a third of non-pregnant patients with COVID-19. Thrombocytopenia is frequently associated with moderate to severe coronavirus disease. Many observations show that moderate to severe thrombocytopenia can exist in asymptomatic COVID-19. Thrombocytopenia was found in 2 of 14 cases (14%) of COVID-19 patients undergoing neuraxial procedures with the lowest reported platelet count of 81×10^9 /L [1]. A platelet count of 70×10^9 /L carries a low risk for neuraxial anaesthesia, especially for those at high risk for general anaesthesia [1]. We opted for transfusion of one platelet pool preoperatively considering the borderline platelet count and the progressive course of thrombocytopenia. Appropriate monitoring of the platelet count is essential to enable safe discharge. Good communication between clinical teams and haematologist ensured a positive outcome for our patient and her baby.

References

- 1. Bauer ME, Chiware R, Pancaro C. Neuraxial procedures in COVID-19 positive parturient: a review of current reports. *Anesth Analg.* 2020; 131: e22–4.
- 2. Cines DB, Levine LD. Thrombocytopenia in pregnancy. *Blood* 2017; 130: 2271–7.

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P.186 Anaesthetic management of a woman with renal transplant rejection for category 3 caesarean section Y. Ito, V. Machineni

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This abstract has been withdrawn