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Acute consumptive coagulopathy in a SARS-CoV-2 positive patient

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Introduction

Evolution of disease knowledge during the COVID-19 pandemic has resulted in new clinical challenges. We present a case of acute coagulopathy secondary to consumption in an otherwise fairly asymptomatic SARS-CoV-2 positive patient.

Case report

A G6P5 35 weeks pregnant Asian woman was admitted after reporting no fetal movements for 14 hours. She gave a history of lung disease, having been ventilated as a premature neonate. Her BMI was 30 kg/m^2 and blood group AB. She was known to be SARS-CoV-2 positive from a test eight days earlier. She had a mild cough but was otherwise asymptomatic, with observations within normal ranges. Fetal heart rate on admission had poor variability and unprovoked decelerations necessitating delivery by caesarean section. Blood results before surgery revealed a platelet count of 55x10^9/L but on balance of risk she was consented for spinal anaesthesia.

In theatre, bloods that were taken, including a thromboelastogram (TEG6, Haemonetics), revealed a coagulopathy with fibrinogen 0.7 g/L, platelets 45x10^9/L, APTT 55.9 s, and D-dimer >20 ug/ml. There was no evidence of placental abruption, bacterial sepsis, pre-eclampsia or liver dysfunction. The baby was delivered in poor condition with an arterial pH of 6.96 and base excess of -14. Due to prolonged operating time conversion to general anaesthesia was required. The woman was transferred to intensive care and remained sedated for 36 h before returning to theatre for removal of abdominal packs. Bloods taken on admission to intensive care included IL-6 27.3 pg/mL, troponin 15.3 ng/L and lipopolysaccharide binding protein 27.0 ug/mL, all suggestive of severe COVID-19 disease and poor prognosis.

She made an uneventful recovery and was discharged home 11 days later with her baby. Placental pathology revealed multiple evolving infarcts in keeping with inflammatory changes induced by COVID-19. The working diagnosis was acute consumptive coagulopathy secondary to COVID-19.



Discussion

The International Society of Thrombosis and Haemostasis recommends that all patients presenting with COVID-19 have their platelet count, D-dimers and prothrombin time measured, as derangement has been associated with worse outcome. APTT and fibrinogen levels should also be measured in pregnant patients, and an individualised thromboprophylaxis programme commenced. Those developing a consumptive coagulopathy are at high risk of venous thromboembolism and must be treated accordingly. Timing of delivery and mode of anaesthesia in such patients needs a multidisciplinary team approach.

Prolonged sedation meant difficulty in monitoring for the development of a neuraxial haematoma in this patient. We suggest a low threshold for magnetic resonance imaging in such circumstances.

References

1. Thachil J, Tang N, Gando S, et al. ISTH interim guidance on recognition and management of coagulopathy in COVID-19. J Thromb Haemost 2020;18:1023–6.

2. RCOG. Coronovirus (COVID-19) Infection in Pregnancy 2020, www.rcog.org.uk/globalassets/documents/guidelines/2020-10-14- coronovirus-covid-19-infection-in-pregnancy-v12.pdf