# 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] Thrombocytopenia in a parturient with coronavirus disease is a challenge for the obstetric anaesthesiologist to choose between the risks and benefits of neuraxial procedures.

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 primigravida, 39 + 4 weeks gestation was listed for an elective caesarean section due to breech presentation. Past medical history included mild anxiety. At 28 weeks the platelet count was 111 x $10^9$/L and 72 x $10^9$/L at term. Pre-eclampsia had been excluded during the antenatal visits. Asymptomatic COVID-19 infection was incidentally discovered a week before delivery. The agreed anaesthetic plan was to request platelets to be available as they usually 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 x $10^9$/L. Spinal anaesthetic was performed with a 25G Sprotte needle. 2.5mls of heavy bupivacaine 0.5% + 0.3mg diamorphine was used. It was an uneventful caesarean section with an estimated blood loss of 500mls. Platelet count 6 hours postoperatively was 87 x $10^9$/L and increased to 96 x $10^9$/L after 2 days.




Platelet count trend throughout pregnancy

## DISCUSSION

- Thrombocytopenia during pregnancy affects 5 – 10% of patients.[2] Aetiologies include gestational/immune thrombocytopenia, preeclampsia, haemolysis, elevated liver enzymes and low platelets (HELLP) 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 x $10^9$/L.[1]
- In our case, the platelet count showed an initial mild drop during the second trimester, which is suggestive of gestational/immune thrombocytopenia. However, this drop became significant at the time of COVID-19 diagnosis.
- A platelet count of 70 x $10^9$/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.
2. Cines DB, Levine LD. Thrombocytopenia in pregnancy. Blood 2017; 130:2271–7.