

BACKGROUND

Coronavirus disease 2019 (COVID-19) has been a global pandemic affecting millions of lives across the world. Thrombocytopenia, a common finding among COVID-19 patients, have been observed to have a positive correlation with the disease severity. But data is scarce regarding the inter-relationship among pregnant women. Thrombocytopenia in pregnancy poses challenges in delivering regional anaesthesia, interactions with analgesics and higher risk of postpartum haemorrhage (PPH). We hereby present a COVID-19 positive pregnant woman with refractory post-partum haemorrhage and DIC owing to idiopathic thrombocytopenia, requiring emergent interventions.

CASE

A 25 year-old para 2, 38 weeks pregnant lady presented to the emergency department with high-grade pyrexia of one day. Over the last 9 days, she was self-isolating at home for testing positive to COVID-19 and was generally asymptomatic until 24 hours prior to attendance.

On initial evaluation she was febrile, tachycardic with normal blood pressures and oxygen saturations. However, due to an abnormal antenatal CTG, she was considered for a category 1 emergency caesarean section and delivered a healthy child.

PRESENTATION & COURSE

Intra-operatively, un-identifiable source of diffuse bleeding in the abdominal cavity was noted. Uterus continued to be well contracted with the aid of uterotonics. On reviewing her blood investigations, severe thrombocytopenia, high C-reactive protein, low fibrinogen level and abnormal coagulation parameters were recognised. However due to non-compressible bleeding with an estimated loss of 1500mls, a major obstetric haemorrhage protocol was initiated, a provisional diagnosis of Disseminated Intravascular Coagulation (DIC) was established and transfusion of blood products commenced.

Subsequently, patient transferred to intensive care for monitoring of intra-abdominal drain, haemodynamic supports, multi-disciplinary consults and investigations work-up. A steady recovery was observed over the following 48 hours with minimal drain output, haemodynamic stability and improvement in the platelet counts with normalised coagulation parameters.

Concomitantly, patient developed Covid pneumonitis, requiring parenteral steroids, antibiotics, non-invasive ventilatory supports and postnatal intensive care for the next few days. Eventually, she made an uneventful recovery and was discharged on improvement of her platelet counts and respiratory compliance.

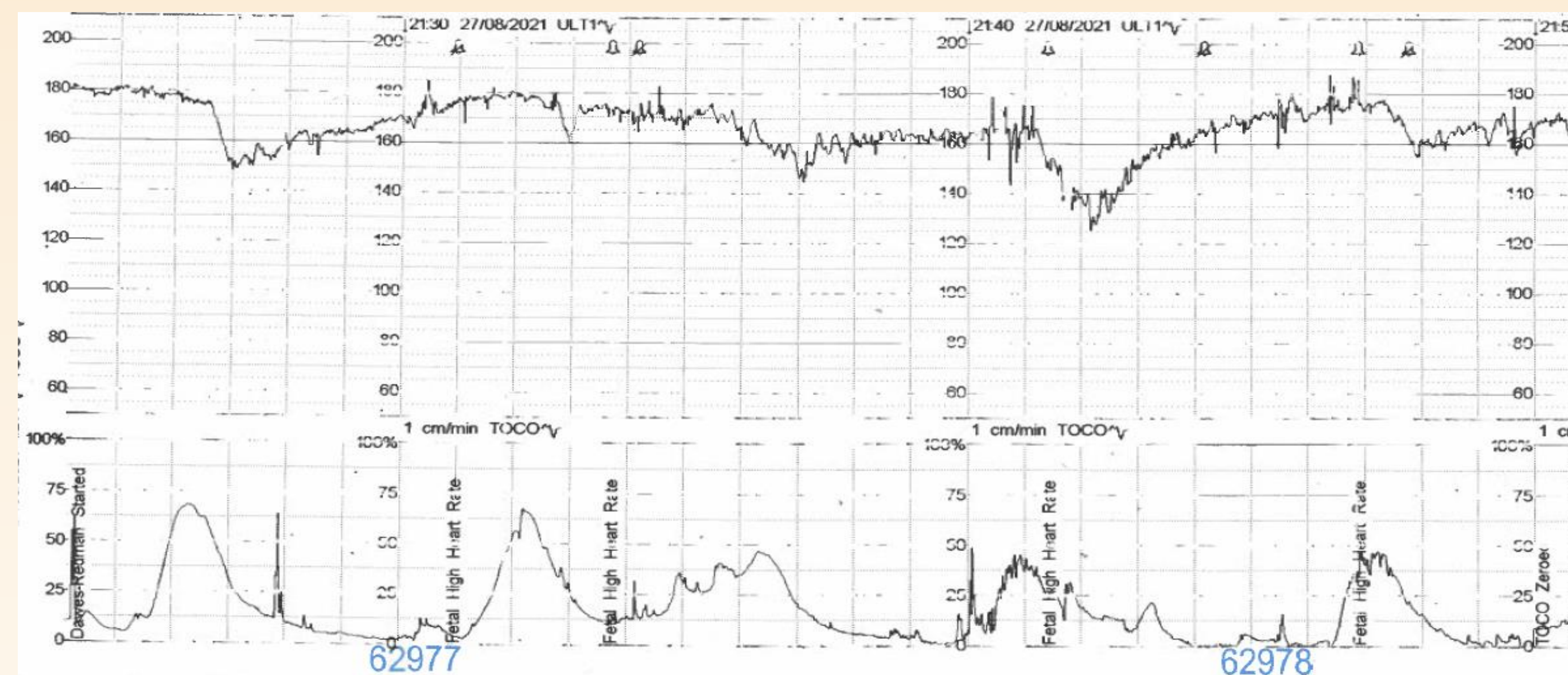


Fig :CTG from Emergency Department demonstrating abnormal antenatal trace

Parameters	Normal values	Pre-op	Intra-op	Post-op	Day1 morning	Day1 evening	Day2	Day3	Day4
Haemoglobin (g/L)	115-165	115	71	71	69	83	84	86	85
Platelets (x 10 ⁹ /L)	150-450	59	49	66	49	61	68	135	235
WBC (x10 ⁹ /L)	4.0-11.0	5.6	6.1	5.3	5.4	5.7	7.2	8.9	6.4
Lymphocytes (x 10 ⁹ /L)	1.0-4.0	0.8	0.7	0.5	0.6	0.7	1.1	1.7	1.4
Prothrombin time(s)	9.2-12.7		17.9	12.6	11.6	9.0	9.1	9.6	10.5
APTT (s)	28.0-34.0		60.9	34.6	33.9	28.3	29.8	29.7	28.4
INR			1.6	1.1	1.0	0.8	0.8	0.9	0.9
Alanine transaminase(U/L)	7-40		43	39		30	29	48	50
C-Reactive protein (mg/L)	<10	85	55	47		103	94	45	22
Fibrinogen (g/L)	1.5-4		<0.5	0.8	1.5				
D-Dimer (ng/ml)	0-230							632	511

Table : Trend of inflammatory markers and coagulation profile.

DISCUSSION

Here we describe a pauci-symptomatic Covid-19 pregnant lady with no prior co-morbidities, in whom thrombocytopenia was observed. The differentials considered initially were thrombocytopenia secondary to Covid-19 infections, late-onset Immune thrombocytopenic purpura (ITP), gestational thrombocytopenia and HELLP syndrome.

The suspected mechanisms of thrombocytopenia in Covid infected patients are impaired platelet production, peripheral immune-mediated destruction of platelets or increased consumption. Though gestational thrombocytopenia is quite common, the presentation of our case, severe thrombocytopenia, concomitant Covid-19 infection and response to steroids makes the diagnosis unlikely. Also, Atypical HELLP syndrome should not be overlooked with normotensive patients and absence of elevated liver transaminases.

Recent literature have concluded on a strong association between Covid-19 and pre-eclampsia. Thus, supporting the presumption of a significant role of Covid-19 in either inducing thrombocytopenia or causing severe pre-eclampsia/ HELLP with our patient.

LEARNING OUTCOMES

- Literature has proved that infections with influenza, SARS-COV, and MERS-COV, which are similar to COVID-19, could increase the risk of maternal mortality, spontaneous miscarriage, preterm labour, and intrauterine growth restriction during pregnancy.
- Early detection, prompt treatment and multidisciplinary input ensures good outcomes.
- Triad of management in this case was correcting coagulation parameters by replacing blood products, dexamethasone and multidisciplinary care and support.
- Our case highlights the need for monitoring and evaluation for bleeding tendencies among Covid-19 positive pregnant women. Further cases studies and research are required to provide further data.

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