

Silent Severe Fetal Anaemia in a Low-Risk Pregnancy - A Case Report

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Background

Fetal anaemia is a potentially life-threatening condition associated with significant perinatal morbidity and mortality. While commonly linked to alloimmunisation or infection, it may also occur due to fetomaternal haemorrhage (FMH). Middle cerebral artery (MCA) peak systolic velocity (PSV) Doppler is a recognised non-invasive tool and may provide an early diagnosis prior to clinical deterioration.

Aims

To highlight the diagnostic role of elevated MCA PSV in detecting fetal anaemia and to emphasise the importance of recognising this condition even in otherwise low-risk pregnancies.

Case

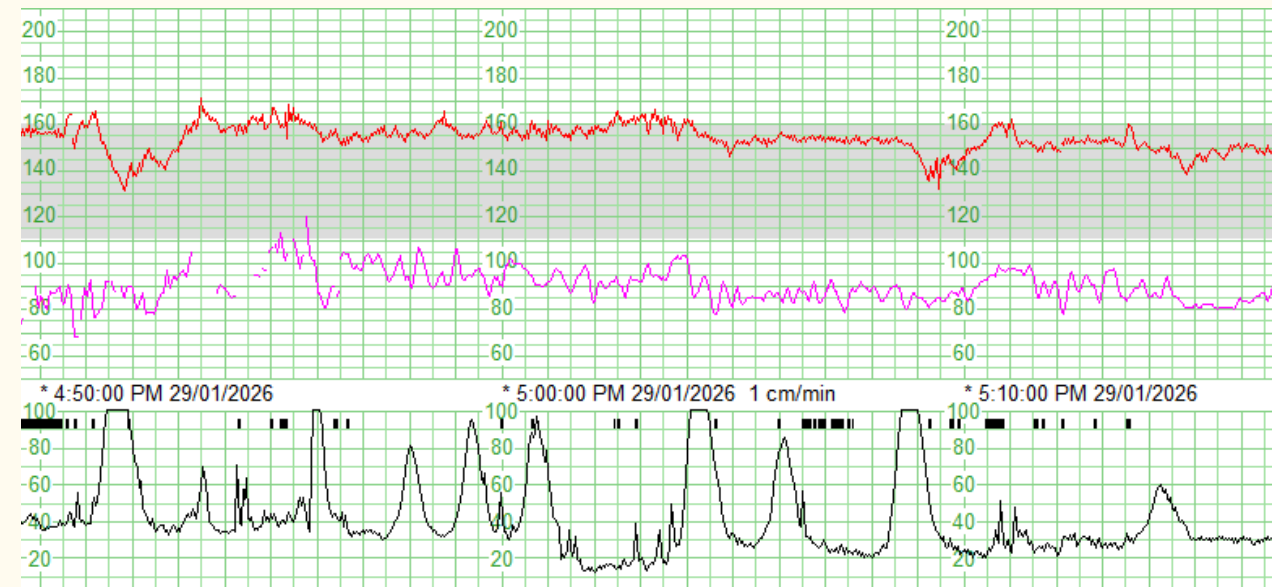
A 30-year-old G3P2 at 36+3 weeks' gestation attended a routine growth ultrasound for low maternal BMI of 19. She reported normal fetal movements and had an otherwise uncomplicated antenatal course.

Scan 36+3:

- EFW 90% AC 96%, normal AFI
- Markedly elevated MCA peak systolic velocity of 3.2 MoM
- Normal umbilical artery, ductus venosus and CPR dopplers

CTG demonstrated reduced to absent variability with unprovoked decelerations and uterine activity.

Emergency category 1 caesarean was performed (uncomplicated).



Neonatal Outcomes

- Born pale with reasonable tone and spontaneous eye opening. Allowed delayed cord clamping by neonatology team 60secs.
- APGAR 6 @ 1, 9 @ 5
- Cord haemoglobin 42 g/L
- Normal arterial Gas: pH 7.33, Lactate 3.7
- Required intubation due to respiratory distress.
- Admitted to NICU with two packed red cell transfusions, with cardiac and cranial USS.
- Discharged well D5 of life.

Impression:

Likely chronic in-utero haemorrhage with some evidence of cardiac remodelling (D0 TTE: Evidence of pericardial effusion, ascites - resolved on repeated TTE on D4)

Investigations

Feto-Maternal Haemorrhage	93.8mls
Parvovirus B19 serology (IgG / IgM)	Pos / Neg
Toxoplasmosis serology (IgG / IgM)	Neg / Neg
Cytomegalovirus Serology (IgG / IgM)	Pos / Neg

Placenta Histopathology:

- Singleton placenta, 430 g
- Mild fetal erythroblastosis and hydropic change of chorionic villi.
- Vascular changes raising the possibility of foetal vascular malperfusion.
- Intervillous thrombo-haematomata.

Discussion

This case highlights that significant FMH can occur unexpectedly in low-risk pregnancies. Elevated MCA Doppler in the presence of abnormal CTG should prompt urgent obstetric assessment. Early recognition and timely delivery facilitate rapid neonatal intervention, optimising outcomes. Awareness of these diagnostic features is crucial even in pregnancies without classic risk factors.