SEVERE EARLY ONSET FETAL GROWTH RESTRICTION (FGR): A CASE OF SEVERE PLACENTAL INSUFFICIENCY MIMICKING PRIMARY CYTOMEGALOVIRUS INFECTION

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BACKGROUND

Severe early onset FGR is associated with significant perinatal morbidity and mortality. Congenital cytomegalovirus (CMV) infection is an important differential diagnosis, however correlation between maternal serology and congenital fetal infection can be challenging. Ultimately, invasive testing and placental histopathology are required to confirm the diagnosis.

AIM

To describe the investigation and management of severe early onset FGR in the setting of suspected primary maternal CMV infection.

CASE DESCRIPTION

A 36-year-old G4P2 woman was referred to maternal fetal medicine at 19+0 weeks gestation in an IVF pregnancy with severe early onset FGR and a low risk NIPT. Ultrasound showed an estimated fetal weight of 131g (-4SD) and amniocentesis demonstrated a normal chromosomal microarray. Maternal serology at booking and antenatal testing demonstrated CMV IgG and IgM positivity with low avidity, concerning for primary infection. Following counselling, the patient elected a medical termination of pregnancy (mTOP).

EFW GROWTH CHART (HADLOCK 1991)

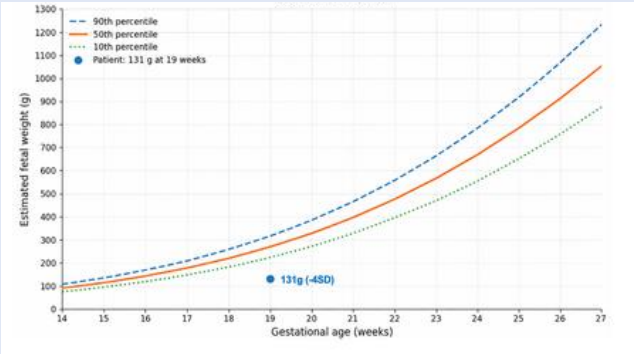

Figure 1: Estimated fetal weight (EFW) growth chart: Ultrasound at 19+0 weeks gestation showing EFW 131g (-4SD)

RESULTS

mTOP

- Mifepristone 20+1/40
- Misoprostol 20+3/40
- Delivery of a female infant 20+4/40 weighing 185g

Placental Testing

- 75g placenta
- **Placental histopathology showing severe placental insufficiency**
  - ➢Maternal and fetal vascular malperfusion
  - ➢Hypercoiled cord and interpositional cord insertion
- **No evidence of CMV infection on histopathology or DNA testing**

Maternal Testing

- Thrombophilia screen negative
- Obstetric medicine review planned with the possibility of commencing Plaquenil in future pregnancies

HYPERCOILED UMBILICAL CORD

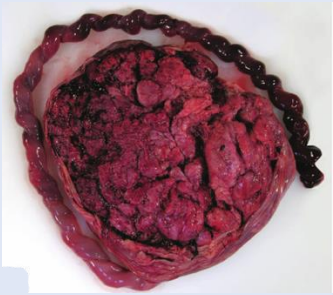

Figure 2: Placental specimen showing a hypercoiled cord

INTERPOSITIONAL CORD INSERTION

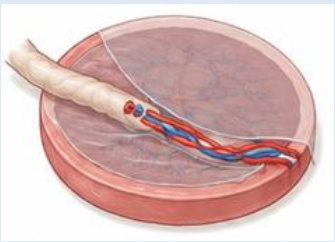

Figure 3: Schematic representation of an interpositional umbilical cord insertion

DISCUSSION

This case highlights the diagnostic complexity of severe early onset FGR with abnormal maternal CMV serology. Congenital CMV infection is an important consideration but remains only one differential. This highlights the limitations of antenatal CMV serology and reinforces the importance of placental histopathology for diagnosis, counselling and future pregnancy care.

REFERENCES

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