An Unexpected Case of Fetal Anemia

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Background

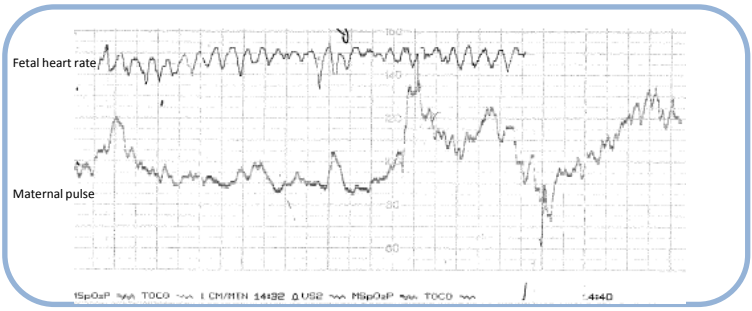
A sinusoidal fetal heart rate pattern is rare.[1] It is associated with conditions that result in severe fetal anemia/fetal hypoxia.[2] Fetal- maternal hemorrhage is one of these conditions.[3] Most commonly patients present with decreased fetal movements or cardiotocography (CTG) changes. [3]

Case

A 25-year old healthy nulliparous female presented with her first episode of decreased fetal movements for the past 24 hours at 37+5 weeks gestation. She was under a private obstetrician allowing her continuity of care. She had an uneventful antenatal course. Blood group was O positive. A growth and well-being scan done the day before presentation confirmed an appropriately growing baby, normal dopplers, placenta and liquor. Admission CTG demonstrated a sinusoidal pattern and a category 1 emergency caesarean was called after 10 minutes for a clinical suspicion of a placental abruption. The operation was uncomplicated and placenta was macroscopically normal. Baby was pale and floppy and resuscitation was commenced. Hemoglobin was 41 and the baby received 30ml/kg of packed red cells and proceeded to a quick recovery. Placental histology did not show obvious placental abruption. Kleihauer- Betke test was 114 and confirmed feto-maternal transfusion.

Image 1: CTG demonstrating sinusoidal pattern. Modanlou and Freeman proposed the following definition[1]:

1. Stable baseline FHR of 120-160 bpm
2. Amplitude of 5-15 bpm, rarely greater
3. Frequency of 2-5 cycles/min
4. Fixed/flat short term variability
5. Oscillation of the sinusoidal wave form from above and below a baseline
6. No areas of normal FHR variability



Discussion

A feto-maternal transfusion, most likely shortly before admission, appeared possibly on the grounds of a placental abruption. There was no proceeding trauma or known risk factors. Placental abruption is a clinical diagnosis and supportive histological features are not always identified.[4,5] Feto-maternal transfusion can cause significant morbidity and mortality to the fetus.[3]

References

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