2021 RANZCOG Virtual Annual Scientific Meeting 15–18 February

An Insidious Presentation of Acute Fatty Liver of Pregnancy

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Background

Acute fatty liver of pregnancy (AFLP) is a relatively rare disorder that is considered an obstetric emergency with a high morbidity and mortality rate. It has been estimated that of all the liver diseases in pregnancy, AFLP comprises roughly 4% of cases.[1] A patient with AFLP can rapidly develop acute liver failure, with possible secondary acute kidney injury and eventual progression to multi-organ failure. Many diagnostic tools have been created to assist in clinical decision making such as the Swansea criteria. The gold standard for management is the timely delivery of the fetus, with most patients rapidly recovering post-delivery.

Case

MM presented to the Gold Coast University Hospital and was admitted for decreased fetal movements. At the time of admission, MM was a fit and well 31-year-old, Gravida 2 Para 1, who was 30 weeks and 2 days pregnant. She was prophylactically on low dose aspirin secondary to a low PAPPA (0.1547). Her first pregnancy was low risk, and her baby was delivered via elective lower segment caesarean section (LSCS). She was initially admitted overnight for ongoing monitoring and to await formal ultrasound scan (USS) in the morning. Although the USS was normal, MM was not reassured and complained of ongoing headaches and vomiting. Although normotensive, a full pre-eclampsia screen was performed which revealed abnormal LFTs. The patient remained as an inpatient for ongoing observations and investigations. Overnight, a review was requested for patient distress and an abnormal CTG. The patient was now complaining of malaise, abdominal pain and headache not relieved by paracetamol or codeine. The CTG showed variable decelerations and reduced variability (Figure 1). MM was also found to have borderline high blood pressures. At this point in time the decision for a LSCS was made. The LSCS was uncomplicated, but the patient was sent to ICU as she continued to deteriorate post-operatively. Retrospectively, the diagnosis of AFLP was made as the patient fulfilled 8 of the 14 Swansea criteria (table 1).

Table 1 – Swansea Criteria + criteria met by MM

Swansea Criteria	MM's value
Vomiting	Throughout the day
Abdominal pain	Significant prior to emergency LSCS
Polydipsia/Polyuria	Not investigated
Encephalopathy	Not present
Bilirubin > 14 µmol/L	Bilirubin total = 34 µmol/L
Hypoglycemia < 4 mmol/L	Glucose = 3.8
Leukocytosis > 11 000 cells/microl	WCC = 12.1
Coagulopathy or PT >14s or APTT > 34s	PT = 13s, APTT = 32s
Elevated urate > 340 µmol	Urate = 650 µmol
Elevated ammonia > 47 µmol	Not tested
Elevated transaminases (ALT or AST >42 IU/L)	ALT = 39, AST = 307
Acute Kidney Injury or Creatinine >150 µmol/L	Creatinine = 172
Ascites or bright liver on USS	USS normal
Microvesicular steatosis on biopsy	Not performed

Discussion

Quick diagnosis and appropriate management are essential for the management of AFLP. A patient can deteriorate quickly, with devasting outcomes if treatment is delayed. AFLP as a differential diagnosis should be considered for any patient with deranged LFTs and the Swansea criteria is an incredible tool developed to help clinically diagnose such patients. Luckily in the case of MM, AFLP was diagnosed quickly and she and her new baby boy experienced a quick and uneventful recovery.

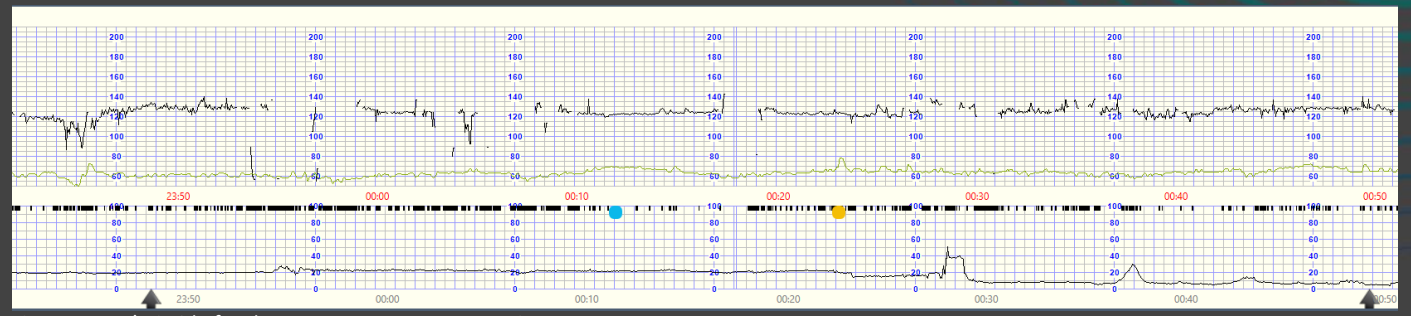

Figure 1: MM's CTG before her emergency caesarean section