

## An Unpredictable Course of Acute Fatty Liver of Pregnancy

### ABSTRACT

Acute Fatty Liver of Pregnancy is an obstetric emergency associated with high maternal mortality and morbidity. A decade ago, the maternal mortality rates were significantly higher reaching upto 70%. Presently maternal mortality has decreased to around 18% with associated neonatal mortality ranging from 7% to 66% attributed to focused liver intensive care and a robust multidisciplinary team approach. Our patient had a late and critical presentation with hepatic encephalopathy on admission. Swift and prompt decisions with a good liver team backup can reduce the mortality rates associated with AFLP. The patient had multiple life threatening catastrophic and turbulent events post Caesarean section. After weeks of intensive post operative care she was discharged from the hospital. We had a successful outcome in spite of delayed presentation.

**Keywords:** AFLP, Pregnancy, Fatty Liver

### INTRODUCTION

Acute fatty liver of pregnancy (AFLP) is an obstetric emergency associated with high mortality and morbidity. A decade ago, maternal mortality rates were significantly higher, reaching up to 70%. Presently, maternal mortality has decreased to approximately 18%, with associated neonatal mortality ranging from 7% to 66%, attributed to focused liver intensive care and a robust multidisciplinary team approach.<sup>(1)</sup>

AFLP is characterized by microvesicular steatosis in the liver, typically occurring in the third trimester of pregnancy. It is believed to result from mitochondrial dysfunction impairing fatty acid oxidation, leading to hepatocyte accumulation.<sup>(2)</sup> This condition can progress to acute liver failure, disseminated intravascular coagulation, postpartum hemorrhage, acute kidney injury, gastrointestinal bleeding, and, rarely, hepatic rupture. The primary treatment for AFLP is early termination of pregnancy to prioritize maternal safety.

### CASE REPORT

Here, we discuss a case of AFLP presenting in the third trimester with fulminant hepatic failure, necessitating an early cesarean section, followed by an unexpected tumultuous postoperative course.

A 27-year-old primigravida at 32 weeks gestation (last menstrual period 17/04/2023) was admitted with complaints of yellowish discoloration of the skin and eyes, vomiting, and fatigue persisting for 7 days, along with abnormal liver function tests. She was referred from a peripheral hospital in Maharashtra due to altered sensorium and worsening hemodynamic status.

On admission, she presented with hypotension, oliguria, severe metabolic acidosis (pH 7.16), an INR of 8.8, and an arterial ammonia level of 99  $\mu\text{mol/L}$ , indicating grade II

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hepatic encephalopathy. According to Swansea criteria, AFLP was suspected due to severe metabolic acidosis and hepatic encephalopathy.<sup>(3)</sup> Abdominal and pelvic ultrasound revealed grade 1 fatty liver infiltration, minimal left pleural effusion, and a single live intrauterine pregnancy at 33 weeks 1 day with breech presentation and reduced amniotic fluid (mild to moderate oligohydramnios, AFI 5cm). The Doppler finding was suggestive of placental insufficiency.

Due to worsening hepatic encephalopathy, she was electively intubated. Resuscitative efforts included crystalloid administration, N-acetylcysteine, sodium bicarbonate infusion, low-dose noradrenaline, and broad-spectrum antibiotics. Preoperatively, she received 2 units of fresh frozen plasma (FFP) and 10 units of cryoprecipitate based on thromboelastogram findings before being taken to the operating room.

A cesarean section was performed due to a high floating head and the patient's critical condition. A premature male infant weighing 1.6 kg was delivered with depressed respiration and a poor APGAR score, requiring Neonatal ICU admission.

Intraoperative estimated blood loss was 300 ml. Patient was transferred to the liver ICU, where she received 10 units of cryoprecipitate, 1 unit of single-donor platelets, and 2 units of FFP, due to severe coagulopathy and slightly hemorrhagic drainage output. Given persistent systemic inflammatory



sustained by exemplary intensive care management and timely interventions.

Overall, this case underscores the critical role of comprehensive medical management and interdisciplinary coordination in managing AFLP and similar severe maternal conditions, thereby significantly influencing patient outcomes

### CONCLUSION:

Patients suspected of having AFLP should be admitted to a facility equipped with intensive liver care capabilities, followed by expedited delivery when necessary. This approach aims to enhance survival prospects for both the mother and the baby.

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