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Acute Fatty Liver of Pregnancy: A Case Report.

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ABSTRACT

Diagnosing the aetiology of jaundice is extremely important in pregnant patients as certain conditions like Acute fatty liver of pregnancy (AFLP), HELLP syndrome and intra-hepatic cholestasis of pregnancy (ICP) may require early termination of pregnancy even in the presence of jaundice and or coagulation failure. Once diagnosed, prompt delivery is associated with a significantly improved outcome. A 20 years old primigravida patient with 34 weeks pregnancy presented to outpatient department of obstetrics and gynecology department of SBH Government Medical College, Dhule, with nausea, vomiting, jaundice, ascites and coagulopathy. The patient was subjected to detailed work-up including laboratory investigations and radiological examinations. A diagnosis of acute fatty liver of pregnancy was made based on the Swansea criteria. The labour was induced with delivery of live male fetus of 2.1 kg in good condition. The case of AFLP was managed using supportive treatment in intensive care unit with blood products, careful fluid management and prevention of hypoglycaemia. Careful history and physical examination in conjunction with compatible laboratory and imaging results are often sufficient to make the diagnosis and liver biopsy is rarely indicated.

Keywords: Acute fatty liver in pregnancy, HELLP syndrome, Hepatic encephalopathy, Jaundice.

INTRODUCTION

Conditions unique to pregnancy that cause liver dysfunction include intrahepatic cholestasis of pregnancy, pre-eclampsia, Hemolysis Elevated Liver enzymes Low platelet count (HELLP) syndrome and acute fatty liver of pregnancy. While cholestasis and pre-eclampsia are frequently seen, HELLP syndrome and acute fatty liver of pregnancy are both rare, and potentially life-threatening conditions.[1] Management of jaundice during pregnancy especially in third trimester remains a dilemma for the obstetrician because of its varied aetiology, unpredictable prognosis and guarded perinatal outcome. Diagnosing the aetiology of jaundice is extremely important in pregnant patients as certain conditions like Acute fatty liver of pregnancy (AFLP), HELLP syndrome and intra-hepatic cholestasis of pregnancy (ICP) may require early termination of pregnancy even in the presence of jaundice and or coagulation failure.[2] Thus, the maternal and fetal outcomes of pregnancy can significantly be improved by appropriate management.[2] Acute fatty liver of pregnancy (AFLP) is a rare life-threatening complication of pregnancy that affcts one in 7,000 to one in 16,000 deliveries.[3] Acute fatty liver of pregnancy is a rare but life threatening cause of jaundice in the third trimester of pregnancy and early postpartum period. It is associated a high maternal and neonatal mortality.[2] Acute fatty liver of pregnancy (AFLP) is a serious complication unique to pregnancy first described by Sheehan in 1940. It is characterized by microvesicular steatosis in the liver. The foremost cause of AFLP is thought to be due to a mitochondrial dysfunction in the oxidation of fatty acids leading to an accumulation in hepatocytes. The infiltration of fatty acids causes acute liver insufficiency, which leads to most of the symptoms that present in this condition.[2] Once diagnosed, prompt delivery is associated with a significantly improved outcome but peripartum management becomes difficult if the pregnancy is complicated by coagulation failure also.[2,4]

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MATERIAL AND METHODS

A 20 years old primigravida patient with 34 weeks pregnancy presented to outpatient department of obstetrics and gynecology department of SBH Government Medical College, Dhule, with nausea, vomiting, jaundice, ascites and coagulopathy. The patient was subjected to detailed work-up including

laboratory investigations (Complete blood counts, liver profile, renal profile, urine routine and specific investigations) and radiological examinations (Ultrasonography and obstetric doppler). A Swansea criterion was used for the diagnosis of AFLP in this case.[4]

The data was collected using MS Excel software and tabulated to draw inferences.

RESULTS

A 20 years old primigravida patient with 34 weeks pregnancy presented with nausea, vomiting, jaundice, ascites and coagulopathy. In her general examination, the patient was afebrile and her vitals were stable with normal blood pressure on admission. She was subjected to diagnostic workup for diagnosis and setting line of management for the case as follows.

Table 1: Laboratory Investigations (Biochemistry).

CBC	• Hemoglobin- 8.8 gm% • Platelets- 1,26,000/cumm • TLC- 19,820/cumm
Peripheral smear	• Few tear drop cells and target cells. • Schistocytes not seen
LFT	• Total bilirubin-21mg/dl and • Direct bilirubin- 6.7 mg/dl • SGOT- 110 IU/L • SGPT- 80 IU/L • Alkaline phosphatase- 105.9 IU/L
Blood sugar level	• 69 mg/dl
KFT	• S. Creatinine- 2 mg/dl, • BUN- 32 mg/dl
PT/INR	• PT- 58.4 • INR- 5.01
Urine	• Bile salts and bile pigments present. • Sugar and proteins absent

Table 2: Radiology findings.

USG	• Mild hepatomegaly with grade 3 fatty liver, mild ascites.
Obstetric Doppler	• Decreased diastolic flow in umbilical artery. Normal S/D ratio and RI in uterine artery and fetal MCA

From the above findings, we observed that serum bilirubin levels were found to be elevated, transaminases were also elevated, there was leukocytosis, renal impairment, and reduced blood sugar levels were also noted. We also reported coagulopathy in the patient. Platelets were normal in number and blood pressure was also found within normal limits. Radiological findings suggested hepatomegaly and ascites. Liver biopsy was not done due to presence of coagulopathy.

In the post-partum period follow up, ongoing renal impairment and persistent coagulopathy was noted on day 2 while hepatic encephalopathy developed on day 5. The Renal function tests returned to normal on day 7, Hepatic encephalopathy persisted for 5 days and was resolved on day 9, Coagulopathy resolved on day 12 and Bilirubin levels and ascites decreased slowly over a period of 20 days.

DISCUSSION

A present case of AFLP presented with nausea, vomiting, jaundice, ascites and coagulopathy. She was afebrile with normal blood pressure on admission. In her laboratory investigations we found that liver functions were deranged with raised liver enzymes, raised serum and urine bilirubin, evidence of coagulopathy, and decreased blood sugar levels [Table 1]. We also reported deranged renal function tests. Total leucocyte counts were raised with normal platelet counts. Radiological findings (ultrasonography) were suggestive of hepatomegaly and ascites [Table 2]. Encephalopathy was developed during the course of disease. Based on the entire above clinical, laboratory and radiological findings a diagnosis of acute fatty liver of pregnancy was made based on the Swansea criteria. Similar findings were noted by Cheng Na et al, they observed that the main manifestations of AFLP were jaundice, nausea and vomiting, malaise, and ascites, and its complications included acute renal failure, hepatic encephalopathy, infection, and postpartum hemorrhage.[5]

The labour was induced with delivery of live male fetus of 2.1 kg in good condition. The case of AFLP was managed using supportive treatment in intensive care unit with blood products, careful fluid management and prevention of hypoglycaemia.

CONCLUSION

Acute fatty liver of pregnancy is a rare life threatening disease that occurs in third trimester or early postpartum period. Careful history and physical examination in conjunction with compatible laboratory and imaging results are often sufficient to make the diagnosis and liver biopsy is rarely indicated. Prompt delivery of the fetus and intensive supportive care remain the mainstay treatment.

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