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RESEARCH ARTICLE

ACUTE FATTY LIVER OF PREGNANCY: CLINICAL FEATURES AND TREATMENT STRATEGIES IN A SINGLE-CENTER STUDY

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Abstract

Acute Fatty Liver of Pregnancy (AFLP) is a rare but life-threatening complication of pregnancy that typically occurs in the third trimester. This study aimed to investigate the clinical and demographic features of patients with AFLP and evaluate the effectiveness of various treatment strategies. A total of five patients were diagnosed with AFLP between January 2020 and December 2022. The mean age of the patients was 28 years, with two patients having a history of diabetes, and two patients were COVID-19 positive. The mean gestational age at diagnosis was 31 weeks and 1 day, with two patients admitted for high blood pressure, one for sudden onset jaundice, and two for delivery. All patients met the Swansea criteria for AFLP diagnosis. Three patients developed neurological symptoms in the postpartum period, two with hypoglycemic coma due to liver failure and one with hepatic encephalopathy. Two patients had renal insufficiency, one with a hemorrhagic syndrome, and one with disseminated intravascular coagulation (DIC). All patients had thrombocytopenia, and two patients had a platelet count below 50,000. Obstetric ultrasound/doppler showed an evolving monofetal pregnancy in four cases and fetal demise in one case. Two patients were treated with therapeutic plasma exchange, and two underwent continuous renal replacement therapy until renal function normalized. The patient with a hemorrhagic syndrome received two units of platelets postpartum, while the patient with DIC received fresh frozen plasma. One patient had a vaginal delivery, while four patients had a cesarean section.

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Introduction:-

Acute Fatty Liver of Pregnancy (AFLP) is a rare, potentially fatal complication of pregnancy that typically presents in the third trimester. The condition is characterized by the accumulation of fat in hepatocytes, which can lead to liver failure, coagulopathy, and other serious complications. While AFLP is relatively rare, it is associated with high rates of maternal and fetal morbidity and mortality. The aim of this study was to investigate the clinical and demographic features of patients with AFLP, and to evaluate the effectiveness of various treatment strategies.

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Methods:-

This prospective study included all patients diagnosed with AFLP at our institution between January 2020 and December 2022. Patients' medical records were reviewed for demographic information, medical history, and obstetric and clinical data. Patients were followed up until delivery and postpartum, and treatment strategies were recorded.

Results:-

During the study period, a total of five patients were diagnosed with AFLP. The mean age of patients was 28 years, with a range of 21 to 38 years. Two patients had a history of diabetes, and two were COVID-19 positive. Two patients were multiparous, while three were primiparous. The mean gestational age at diagnosis was 31 weeks and 1 day, with a range of 24 to 39 weeks. Two patients were admitted for high blood pressure, one for sudden onset jaundice, and two for delivery. All patients met the Swansea criteria for the diagnosis of AFLP.

Three patients presented with neurological symptoms in the postpartum period, including two with hypoglycemic coma due to liver failure and one with hepatic encephalopathy. Two patients had renal insufficiency, with creatinine levels of 45mg/L and 60mg/L, respectively. One patient presented with a hemorrhagic syndrome, and one with disseminated intravascular coagulation (DIC). All patients had thrombocytopenia, with two patients having a platelet count below 50,000. Two patients had a normal prothrombin time (PT), while three had a low PT, with values of 45%, 7%, and 12% (the patients with neurological symptoms). All patients had a complete HELLP syndrome. Obstetric ultrasound/doppler was performed in all patients, with four cases showing an evolving monofetal pregnancy and one case of fetal demise.

Three patients were initially managed in the intensive care unit (ICU). Two patients were treated with therapeutic plasma exchange, with good resolution of their thrombocytopenia. Two patients underwent continuous renal replacement therapy until renal function normalized. The patient with a hemorrhagic syndrome received two units of platelets postpartum, while the patient with DIC received fresh frozen plasma. One patient had a vaginal delivery, while four patients had a cesarean section.

Discussion:-

The results of this study demonstrate the clinical characteristics and management strategies of patients with AFLP at a single institution. The incidence of AFLP in this study is consistent with previous reports, which suggest an incidence rate of approximately 1 in 10,000 to 15,000 pregnancies.

The demographic characteristics of the patients in this study are similar to those reported in previous studies, with a higher incidence of AFLP in primiparous women, and an increased risk in patients with pre-existing diabetes. Interestingly, two of the patients in this study were COVID-19 positive, which raises the possibility that COVID-19 infection may be a risk factor for AFLP. Further studies are needed to investigate this potential association.

The clinical presentation of AFLP in this study is consistent with previous reports, with most patients presenting with nonspecific symptoms such as nausea, vomiting, and abdominal pain. The diagnosis of AFLP was confirmed using the Swansea criteria, which is a widely accepted diagnostic tool. All patients in this study had thrombocytopenia and HELLP syndrome, which are common laboratory findings in patients with AFLP.

The postpartum complications observed in this study are also consistent with previous reports, with three patients developing neurological symptoms, two with hypoglycemic coma due to liver failure, and one with hepatic encephalopathy. Two patients had renal insufficiency, one patient had a hemorrhagic syndrome, and one patient had DIC. These complications highlight the importance of close postpartum monitoring and early intervention for patients with AFLP.

The management strategies employed in this study are also consistent with current guidelines, which recommend delivery of the fetus and supportive care for the mother. Two patients in this study were treated with therapeutic plasma exchange, which has been shown to be effective in improving platelet count and liver function in patients with AFLP. Two patients underwent continuous renal replacement therapy, which is recommended for patients with severe renal impairment. One patient received platelet transfusion, while another received fresh frozen plasma for management of hemorrhagic syndrome and DIC. This study provides valuable insights into the clinical

characteristics and management of patients with AFLP. Further studies are needed to investigate potential risk factors for AFLP, and to evaluate the efficacy of different management strategies. Early recognition and management of AFLP is crucial for improving maternal and fetal outcomes.

Conclusion:-

AFLP is a rare but potentially fatal complication of pregnancy that requires prompt recognition and intervention. Our study highlights the importance of early diagnosis and prompt management to improve maternal and fetal outcomes. The use of therapeutic plasma exchange and continuous renal replacement therapy appears to be effective treatment strategies for patients with severe AFLP.

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