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Case Report on HELLP Syndrome

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Running Title: HELLP Syndrome

Abstract: ***This case report concerns a women with 32 weeks of gestation, second gravida who was admitted due to chief complaints of severe pedal edema and had a history of pre eclampsia in her previous pregnancy. Her BP was constantly high and she was being administered with antihypertensives and corticosteroids for fetal lung maturity. Frequent investigations including urine albumin, hemogram, liver function and Non stress test were done. Patient developed epigastric pain during her stay. Emergency LSCS was conducted for the patient resulting in the delivery of a male child of 1.5 kg. HELLP syndrome is a laboratory diagnosis for a variant of severe pre eclampsia. It can occur in both primigravida and multigravida mothers. A unique form of coagulopathy occurs with HELLP syndrome. The platelet count is low, but coagulation factor assays, prothrombin time (PT), partial thromboplastin time (PTT), and bleeding time remains normal.***

Keywords: HELLP syndrome, pre eclampsia, eclampsia

1. Introduction

A 32 years old second gravida female with 32 weeks of gestation presented to a private hospital with chief complaints of severe pedal edema since one and a half month. She had history of pre-eclampsia in her previous pregnancy and her BP was 150/ 100 mmHg along with bilateral pedal edema. She underwent lower segment caesarean section for her previous pregnancy because of the risks involved. The random urine albumin after test was found to be +2 by dip stick method. Her general examination was found to be normal. On obstetrical examination there was edema found in the abdominal wall, previous caesarean scar, 28-30 weeks size uterus, cephalic presentation, regular fetal heart sound (FHS) and relaxed, and per vaginal examination showed os closed. Hemogram was done and hemoglobin was found to be 9 gm/dl and platelet count was found to be 3, 56,000 cells/cumm. Liver function test was performed showing serum bilirubin to be 0.71 mg/ dl, liver enzymes and prothrombin time to be within normal limit. Ultrasound fetal well being showed 32 weeks mature intrauterine fetus with early diastolic notch in right uterine artery on Doppler study. The patient was being administered with antihypertensive (Tablet methyl dopa and tablet nifedipine) and 2 doses of steroids for fetal lung maturity. The patient also developed epigastric pain during her stay and decreased urine output. The BPP was 150/ 100 at that that time and urine albumin was +2. There were repeat investigations performed which revealed hemoglobin to be 11.2 gm/dl, platelet count 65, 600 cells/ cumm, bilirubin 12 mg/ dl and SGPT was 193.5. Non stress test was done which was found to be equivocal. Emergency LSCS was opted for, resulting in the delivery of a male child 1.5 kg. Post-operative period was uneventful. Her investigation after delivery revealed hemoglobin to be 7 gm/dl, platelet count to be 1,1700 cells/ cumm, bilirubin 3.72 mg/dl.

2. Discussion

The syndrome of hemolysis elevated liver enzymes and low platelet count was first described by Weinsten in 1982 and is generally thought to represent a variant of the pre eclampsia/ eclampsia syndrome but can occur on its own or in association with pre eclampsia. It is a laboratory diagnosis for a variant of severe pre eclampsia. It can occur in both primigravida and multigravida mothers. A unique form of coagulopathy occurs with HELLP syndrome. The platelet count is low, but coagulation factor assays, prothrombin time (PT), partial thromboplastin time (PTT), and bleeding time remains normal. In some instances, hemolysis does not occur and the condition is termed as ELLP or partial HELLP syndrome.

Recognition of the clinical and laboratory findings associated with HELLP syndrome is important if early, aggressive therapy is to be initiated to prevent maternal and neonatal mortality. Complications reported with HELLP syndrome includes renal failure, pulmonary edema, ruptured liver hematoma, DIC, placental abruption, and preterm birth. Perinatal mortality rates range from 7.7% to 60%, and maternal mortality ranges from 0% to 24%.

3. Incidence

The incidence of the disease is reported as being 0.17-0.85% of all live births. The syndrome also occurs in 4% to 12% of patients with hypertension in pregnancy. It is also reported that HELLP syndrome occur from 5% to 20% in women with preeclampsia. HELLP syndrome occurs more frequently in Caucasian women than in women of other races.

4. Clinical Presentation

HELLP syndrome typically manifests itself between 32 and 34 weeks gestation and 30% of the cases usually occur postpartum. With postpartum presentation, the onset is typically within the first 48 hours following birth. Women with HELLP syndrome often complain of malaise, nausea and vomiting, upper abdominal pain with tenderness.

Some may have non-specific viral-syndrome-like symptoms. Hypertension and proteinuria may be minimal or absent. Headaches are reported by 33% to 61% of all women with the syndrome. A small number of women may exhibit

symptoms related to thrombocytopenia, such as bruising or hematuria.

5. Diagnostic Evaluation

Early diagnosis of HELLP syndrome is critical; any women presenting with the above symptoms should have a full blood count, platelet count and liver function tests, irrespective of maternal blood pressure. Haemolysis with elevated lactate dehydrogenase (LDH) and raised bilirubin levels, low (<100 x 10^9/ L) or falling platelets and elevated liver transminases (AST, ALT and GGT) assist in confirming the diagnosis of HELLP syndrome. A positive D-dimer test (indicator of coagulopathy) in conjunction with preeclampsia has also been found to be predictive of women who will develop HELLP syndrome.

HELLP syndrome may be classified as partial (one or two features of the syndrome) or full (all three features). It may also be classified on the basis of the platelet count: Class I <50x10^9/L, Class II 50- 100x10^9/L, Class III 100-150 x 10^9/ L. Women with class I HELLP syndrome are at increased risk for maternal and perinatal morbidity and mortality.

6. Complications

Serious maternal complications includes abruptio placentae, disseminated intravascular coagulation (DIC), eclampsia, acute renal failure and subcapsular hematoma of the liver. Rupture of the liver is a very rare but potentially fatal complication of the HELLP syndrome and usually presents with severe upper abdominal, neck and shoulder pain, which may persist for several hours. Radiographic imaging of the liver is required to access the extent of the damage; surgical intervention and/or liver transplantation, may be required to prevent hemorrhagic shock and liver failure. Infants whose mothers have HELLP syndrome are often small for gestational age and are at risk of perinatal asphyxia.

7. Treatment

Prompt recognition of HELLP syndrome and initiation of therapeutic interventions are essential to ensure the best outcome for mother and fetus. Women with HELLP syndrome should be admitted to a consultant unit with intensive or high dependency care facilities available. Treatment and interventions are based on the gestational age and the health of the mother and fetus. Corticosteroids may stabilize some of the abnormal biochemical and clinical parameters, as well as aid fetal lung maturity. However, further research is required to determine if maternal and perinatal morbidity and mortality is significantly reduced. In term pregnancies, or where there is deteriorating maternal or fetal condition, immediate delivery is recommended. A significant number of women with HELLP syndrome also requires blood product transfusions to correct the coagulation abnormalities.

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