THE HELLP SYNDROME

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PLAN

- INTRODUCTION
- BURDEN
- PHYSIOPATHOLOGY
- DIAGNOSIS
- SCREENING
- MANAGEMENT
- COMPLICATIONS
- CONCLUSION

INTRODUCTION

- Hypertensive disorder in pregnancy is the third cause of maternal mortality in Cameroon.
- HELLP syndrome stands for: Hemolysis, Elevated Liver enzyme and Low Platelets count.
- A severe complication of preeclampsia and eclampsia, described by Weinstein in 1982.

INTRODUCTION 2

- The syndrome is present in about 10% of patients with severe preeclampsia-eclampsia.
- May occur remote from term and with no elevation of blood pressure.
- A disorder that mimics acute fatty liver of pregnancy, hepatitis, gallbladder disease, idiopathic thrombocytopenic purpura or thrombotic thrombocytopenic purpura.

INTRODUCTION 3

- Most hematologic abnormalities return to normal within 2-3 days after delivery but thrombocytopenia may persist for a week.
- Intrahepatic and sub capsular hemorrhage are more common.
- Liver function deteriorates rapidly, and delivery is essential in treatment.

INTRODUCTION 4

- It occurs in the last trimester of pregnancy.
- Characterized by vomiting, upper quadrant pain and progressive nausea.
- For preeclampsia complicated by HELLP syndrome, the most common cause of death is due to the difficulties in its management.

BURDEN

- Constitutes a management dilemma for obstetricians.
- The reported incidence of HELLP syndrome among patients with preeclampsia ranges from 4 to 12% depending on the criteria that are used to define the syndrome.
- The incidence is highest among older, white and multiparous patients.

BURDEN 2

- HELLP syndrome occurs in 30% of cases in postpartum, with the majority developing within 48 h after delivery.
- Stillbirth is frequent (10-15%).
- High neonatal loss due to prematurity (20-25%).

PHYSIOPATHOLOGY

- The selective occurrence of HELLP syndrome is poorly understood.
- Hemolysis being the main clinical symptom of the HELLP syndrome, is defined as the presence of microangiopathic hemolytic anemia.
- Caused by the passage of red blood cells through small blood vessels with intima damage and fibrin deposition.

PHYSIOPATHOLOGY 2

- These deposits seen in the sinusoids, may obstruct blood flow and cause cellular damage and distension of the liver capsule and elevated liver enzymes.
- Some unknown factor leads to undue intravascular platelet activation resulting in the release of thromboxane A2 and serotonin which cause vasospasm, platelet aggregation, and further enhance endothelial damage already present in preeclampsia.

DIAGNOSIS

- Hemolysis in the HELLP syndrome Dg: schistocytes, burr cells and polychromasia in peripheral blood smears, haptoglobin consumption, increase in bilirubin and lactic dehydrogenase levels.
- Liver involvement in the HELLP syndrome is associated with periportal and/or focal parenchymal lesions with large hyaline deposits of fibrin-like material.

CLINICAL DIAGNOSIS 2

Blood Pressure >160 mmHg Systolic

>110 mmHg Diastolic

Pulmonary edema: dyspnea, chest discomfort, tachypnea, lung crepitations, CXR with diffuse haziness in the lung fields with perihilar butterfly appearance.

Oliguria: <500 ml per 24 hours

CLINICAL DIAGNOSIS 3

- Symptoms of end organ involvement: headache or visual disturbance, clonus or deep tendon hypererflexia, epigastric or right upper quadrant pain.
- Foetal involvement: IUGR, oligohydramnios, absent fetal movements, absent or reverse umbilical end-diastolic Doppler flow velocity waveforms.

BIOLOGICAL DG CRITERIA

Hemolysis: - abnormal peripheral smear

- total bilirubin level >12 mg/dl
- lactate dehydrogenase >600u/l

Elevated liver function

- serum aspartate aminotransferase >70u/l
- Lactate dehydrogenase level >600 u/l

Low platelet count: <100,000 /mm3 (classes)

SCREENING

- Rollover test of Grant?
- Free βHCG >3.0 MoM
- *Uterine artery Doppler studies*

MANAGEMENT

- The high maternal and perinatal morbidity necessitates an effective treatment.
- Iatrogenic preterm delivery and adverse neonatal outcome.
- Prolongation of pregnancy remains controversial, 32 week cut point.
- It is important to manage such patients in a tertiary centre by a skilled team familiar with the clinical manifestations of HELLP syndrome.

MANAGEMENT 2

- Magnesium sulphate
- Familiar antihypertensive drugs
- Volume expansion
- Corticosteroids
- Prostacycline
- Serotonin2-receptor blockers
- Plasma exchange therapy

CONCLUSION

- There is room for conservative management in tertiary centers.
- *Strict maternal-fetal monitor; clinical, US and monitoring.*
- Vaginal route often preferred.
- HELLP not an indication of cesarean section except other clinical factors come into play.

THANK YOU

MERCI

GRACIAS