

## **She is not a witch, she has eclampsia.**

Emediong (not real name) is a 20 year old primigravida (first time pregnancy) in labor. She was rushed to the nearest traditional birth attendant in the village. She complained of severe headache and blurring of vision for which the birth attendant gave her an herbal concoction. Few minutes after taken the drug, she screamed, twisted her mouth and face, her tongue protruded as she threw herself on the floor. Like drama, she started drooling saliva. Her hands and legs went into a rhythmic jerking movement. She was convulsing. The birth attendant called the husband aside, told him his wife was a witch and had been afflicted with a strange ailment by the gods. She had to be atoned for.

The scenario painted above depicts what happens on daily basis in our various communities. Patients that present in this way are tagged with various names from 'ogbanje' to 'emere' or 'ndem'. The truth is they are none of those; they simply have a condition called eclampsia.

Good day readers, today we shall be discussing eclampsia.

### **INTRODUCTION**

This is a pregnancy related disease in which the patient ultimately presents with convulsion in a woman with no previous history of brain damage. Prior to the seizure (convulsion), the patient usually complains of headache, blurring of vision, dizziness, among others. There may be a rise in blood pressure, protein in the urine or both. It usually occurs after twenty weeks of pregnancy to twenty eight days after delivery. Eclampsia is one of the leading causes of maternal mortality in Africa, solely responsible for about 50,000 deaths annually world over.

It is important to know that before a patient comes down with eclampsia, she passes through a phase known as pre-eclampsia.

Pre-eclampsia is also known as toxemia of pregnancy. It is characterized with high blood pressure of above 140/90mmHg taken at two different occasions at least six hours apart. The patient also has proteinuria, which can be detected when the urine is tested with a dipstick rapid test and shows at least a +1. Patient can also notice massive proteinuria when they pass urine and it foams like soap water. This group of patients can also have leg swelling (oedema). Pre eclampsia if not noticed early may ultimately lead to eclampsia.

## **HISTORY**

This condition was known to the ancient Greeks, who named it eclampsia. Prior to the 18th century, the term eclampsia was used only to refer to the visual phenomena which accompanied the neurologic aspects of the malady. Rayer's landmark contribution (1839-1841) provided evidence for renal involvement with the observation of protein in the urine of pregnant, edematous women. Lever (1843) reported finding proteinuria in eclampsia and concluded that disappearance of proteinuria after delivery of the child was evidence that eclampsia was different from Bright's disease.

## **CLINICAL FEATURES**

Patients suffering from eclampsia present with the following signs and symptoms.

- Symptoms include the following: Headache (82.5%), Hyperactive reflexes (80%), Marked proteinuria (52%), Generalized edema (49%), Visual disturbances (44.4%), Right upper quadrant pain or epigastric pain (19%)
- Prior to a seizure, some patients may present with the following:
  - Lack of edema (39%)
  - Absence of proteinuria (21%)
  - Normal reflexes (20%)
  - Presentation: Approximately 70% of eclamptic seizures occur prior to delivery.
- Twenty-five percent of eclampsia cases occur before labor (ie, antepartum).
- Fifty percent of eclampsia cases occur during labor (ie, intrapartum).
- Twenty-five percent of eclampsia cases occur after delivery (ie, postpartum).
- Patients with severe preeclampsia are at greater risk to develop seizures.
- Twenty-five percent of patients with eclampsia have only mild preeclampsia prior to the seizures.

### **Physical:**

- Eclamptic seizure
  - The patient may have 1 or more seizures.

- Seizures generally last 60-75 seconds.
- The patient's face initially may become distorted, with protrusion of the eyes.
- The patient may begin foaming at the mouth.
- Respiration ceases for the duration of the seizure.
- The seizure may be divided into 2 phases:
  - Phase 1 lasts 15-20 seconds and begins with facial twitching. The body becomes rigid, leading to generalized muscular contractions.
  - Phase 2 lasts approximately 60 seconds. It starts in the jaw, moves to the muscles of the face and eyelids, and then spreads throughout the body. The muscles begin alternating between contracting and relaxing in rapid sequence.
- A coma or a period of unconsciousness follows phase 2.
  - Unconsciousness lasts for a variable period.
  - Following the coma phase, the patient may regain some consciousness.
  - The patient may become combative and very agitated.
  - The patient has no recollection of the seizure.
- A period of hyperventilation occurs after the tonic-clonic seizure. This compensates for the respiratory and lactic acidosis that develops during the apneic phase.

#### What causes the seizure?

It has been suggested that the condition may cause narrowing and spasm of the blood vessels in the brain which may be severe enough to cause death of area of the brain supply by such vessels. When this happens, the patient goes into spasm. Other schools of thought proposed that alteration of the blood flow in the brain and subsequent swelling of the brain may cause dizziness, headache, blurring of vision and ultimately seizure.

#### People at risk of developing the disease.

Research has shown that the disease is common in women getting pregnant for the first time or age older than 35 years. Those with multiple gestations like twin pregnancy can also come down with the disease. Women that remarry for one reason or the other or getting pregnant

for a new man for the first time are also at risk. Other factors include women with hypertension, poor antenatal care, diabetes or renal disease. People with strong family history of such illness are also at risk, so also are people with a condition called systemic lupus erythematosus.

### The theories of eclampsia.

The actual cause of eclampsia is not known but many theories have been proposed. Presumably, the placenta and fetal membranes play a role in the development of preeclampsia because of the prompt resolution of the disease following delivery. A common pathway thought to be associated with the development of preeclampsia is utero-placental ischemia. Uteroplacental ischemia is postulated to predispose to the production and release of biochemical mediators that enter the maternal circulation, causing widespread endothelial dysfunction and generalized arteriolar constriction and vasospasm.

Preeclampsia/eclampsia creates a functional derangement of multiple organ systems, such as the central nervous system and the hematologic (blood), hepatic (liver), renal (kidney), and cardiovascular systems. The severity depends on medical or obstetric factors.

### Treatments

While treating a patient with eclampsia, one must consider the possibility of saving both the mother and the baby. However, when it comes down to saving one person, as is often the case, the life of the mother must be given a priority.

The blood pressure and a rapid urinalysis must be done to confirm the diagnosis. Once the diagnosis is confirmed, the seizure must be aborted. This is usually done with the aid of intravenous magnesium sulphate. The patient must be placed in left lateral position and if possible intranasal oxygen should be administered.

The blood pressure must also be rapidly brought down. Hydralazine and sub lingual Nifedipine are drugs of choice to do this.

The third objective will be to deliver the woman as fast as possible. The delivery is usually done through the fastest route possible, except in the case of post partum eclampsia which happens after delivery. After the emergency phase has passed, the next duty of the health worker will be to maintain the blood pressure at the acceptable level.

### Laboratory investigation.

- No single laboratory test or set of laboratory determinations is useful in predicting maternal or neonatal outcome in women with eclampsia.
- Laboratory studies that should be ordered include the following:
  - Complete blood cell count
  - Platelet count
  - Twenty-four-hour urine for protein/creatinine
  - Electrolytes
  - Liver function tests (ie, lactate dehydrogenase [LDH], aspartate aminotransferase [AST])
  - Uric acid
  - Serum glucose
- The most common hematologic abnormality in obstetric disorders is thrombocytopenia, occurring in 17% of patients with eclampsia.
- Disseminated intravascular coagulation (DIC) appears to be uncommon in patients with eclampsia.

### Complication

The complications are both maternal and foetal. Maternal complications include, pulmonary oedema, low platelet count, hemolysis, elevated liver enzyme. Others are neurological deficit, aspiratory pneumonitis, death to mention a few. Foetal complications include birth asphyxia, foetal distress and foetal death to mention but a few.

### Prevention

Routine antenatal care should be made compulsory for all pregnant women. In situation where it is suspected, in women with family history of this disease or when there is a previous history of eclampsia, such women should be placed on low dose aspirin early in pregnancy.

## **Conclusion**

The community should be aware of the possible outcome of this case and should do everything possible to prevent it. Pregnant women should attend regular ante natal care and routine blood pressure should be done. Pregnant women with leg swelling should seek medical care where urinalysis and blood pressure will be checked.

Staff writer

Dr Daso O Samuel ([saydasho@yahoo.com](mailto:saydasho@yahoo.com))

Medical Officer AAUA Health Centre.

Editor in Chief

Dr Aiyejumoh J.B

Director of Health Services

AAUA Health Centre.

Health centre hotline

07057595713