

HEALTH

New Vision YOUR WELLNESS GUIDE

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PRE-ECLAMPSIA: A MAJOR CAUSE OF MATERNAL DEATHS

Tomorrow, is World Pre-eclampsia Day, which will be commemorated under the theme: "Ending Pre-eclampsia". Ahead of the day, **Agnes Kyotalengerire** explores how the condition can impact on the lives of mothers and their babies

What is pre-eclampsia / eclampsia?

Dr Gonzaga Andabati, a gynaecologist at Bethany Women Hospital in Luzira, Kampala, describes pre-eclampsia as a life threatening high blood pressure disorder in pregnancy.

This happens when blood pressure in pregnant women rises higher than normal. The condition, according to Dr Andabati, occurs at 20 to 28 weeks of pregnancy.

He says in its severe form, pre-eclampsia progresses to eclampsia. This manifests through seizures and may lead to death of both the mother and her unborn baby.

Dr Evelyn Nabunya, a senior gynaecologist at Mulago Hospital, says pre-eclampsia and its complications is the leading cause of maternal deaths in Mulago Hospital in the last four years. Annual reports from the hospital show over the years death resulting from the condition have been increasing.

Of the maternal death that occurred in 2014, 15.3% were due to complications of pre-eclampsia. In 2015 pre-eclampsia caused 14.9% of the maternal deaths. In 2016, 20.7% of the maternal deaths resulted from pre-eclampsia and in 2017, 23.6% of the mothers who died had pre-eclampsia complications.

A 2016/17 report dubbed "Maternal and perinatal death Surveillance and Response" by the health ministry indicates that of the number of women who died, up to 16% were due to complications of pre-eclampsia.

Globally, the condition is estimated to cause about 76,000 maternal deaths and 500,000 infant deaths each year.

Complications

If not detected and managed early, pre-eclampsia can progress to eclampsia where the mother starts to convulse (fits), Dr Charles Kiggindu, a senior gynaecologist/obstetrician Mulago Hospital, explains.

The fits may result in an unborn baby not getting enough oxygen, nutrients, which restricts the growth of the foetus, leading to low birth weight or still birth.

The condition can also damage the kidneys and cause renal failure.

"The kidney is responsible for filtering waste products from the body. However, the sudden rise of blood pressure damages the vessels thus leading to renal failure," Andabati explains.

He adds that the condition also affects the liver. He explains that due to an increase in the enzymes, the patients develop jaundice (turn yellow).

Pre-eclampsia also affects the central nervous system causing stroke.

It can lead to bleeding from the nose, eyes and kidney, which can cause a mother to die.

This is because the high blood pressure has damaged the blood vessels and causes formation of small clots which can go to the mother's brain and lungs causing death.

Additionally, the high blood pressure can lead to early separation of the placenta, while

Turn to page 30



Pregnant women need to go for regular checks which helps in detecting conditions such as pre-eclampsia



Pre-eclampsia presents with signs of swollen feet, hands and face

PAULINE NATYABA'S STORY

"At about 28 weeks of pregnancy, my face started to swell. Gradually, the swelling spread to my hands and feet," Pauline Natyaba, 17, recalls as she fidgets to breastfeed her newborn baby at Mulago Hospital Directorate of Obstetrics and Gynaecology at Kawempe.

On May 12, Natyaba's condition worsened and her body and feet ached terribly. At 3:00am, she was rushed to Mpigi Health Centre IV where she was diagnosed with severe pre-eclampsia and immediately referred to Kawempe Hospital. Here, she was delivered by caesarean section.



Nabyonga survived eclampsia but her baby died

The afternoon before the fateful night, Efrance Nabyonga, 30, went for an antenatal care visit at a clinic in Hoima town. A midwife gave Nabyonga medication and recommended that she takes bed rest immediately because her blood pressure had shot up.

"I did not take the midwife's recommendation of bed rest seriously since I had never suffered from hypertension. So, that evening, I shifted to my new residence and planned to see a doctor the following day," Nabyonga narrates.

That evening, as Nabyonga headed to a

latrine, she collapsed. Her new neighbour rescued and watched over her as she convulsed throughout the night.

The following morning on May 3, her new neighbour called Nabyonga's close friend, Monic Kyaterekera. The old lady explained to Kyaterekera how Nabyonga had fairs throughout the night.

Nabyonga was rushed to Hoima Hospital where she was diagnosed with eclampsia and immediately referred to Kawempe Hospital for further management.

Unfortunately, the strong frequent and untreated bouts of convulsions Nabyonga suffered throughout night had adverse

complications.

Nabyonga became unconscious; she lost her speech and could not recognise anybody. In addition, her unborn baby died in the womb and the high pressure also injured the vessels of her kidneys causing her to pass urine with clots of blood.

At the time of interview (12 days later) on May 14, Nabyonga had a catheter. Harriet Ndagire, a nursing officer at the postnatal ward at the hospital, says it was fixed to drain out clots of blood that she constantly passed out through urine.

She is also on the path to recovery as she is now talking and walking unsupported.



Efrance Nabyonga

Eclampsia cause of maternal death

From page 29

the unborn baby is still inside the womb causing death.

On the mother's side, during separation, the amniotic fluids and clots can go into the mother's brain and lungs, causing death.

Managing pre-eclampsia

Although Uganda has made a slight reduction in maternal mortality from 356 deaths per 100,000 live births (Uganda Demographic and Health Survey (UDHS) 2010) down from 458 deaths per 100,000 (UDHS 2011), cases of pregnant women with pre-eclampsia continue to be registered, some of which end up causing death.

Dr Nabunya attributes the high numbers of pre-eclampsia to pregnant women reporting late to hospital after all their endeavours to manage the condition have failed. For instance, she estimates that more than half of the women with pre-eclampsia delivered at the hospital are referred from other health units.

Many women do not know that hypertension in pregnancy can result in death. "Women come with other complaints, but upon doing investigations, we realise they have pre-eclampsia," explains Lillian Nakalyango, a midwife at Kamuli Hospital. She adds: "When advised to get treatment the women refuse claiming they are okay."

Nakalyango cites a recent example of a mother who came from Bunagye zone in Kamuli municipality, who was diagnosed with severe pre-eclampsia, but claimed her co-wife was bewitching her. It took a day-long persuasion for the mother to accept to undergo an emergency caesarean section.

This mother is not alone in assuming pre-eclampsia is caused by witchcraft. Often communities associate puffiness (body swelling) with multiple pregnancy; while others think that the convulsing mothers are epileptic.

However, Dr Nabunya argues that it stems from poor health seeking behaviour where mothers do not attend antenatal care regularly. "When some mothers go for antenatal care clinic and their blood pressure is confirmed to be fine, they never go back until the time of delivery, yet pre-eclampsia can happen anytime," she explains.

She adds that hypertension is a condition that can only be detected if only a mother visits a health facility and her blood pressure checked.

Nabunya laments that some mothers only seek medical attention when a complication presents. Instead of pre-eclampsia, medical personnel end up



A preterm baby being fed. Eclampsia is a major cause of preterm births

death of the mother, her unborn baby or both.

Lack of skills/drugs

Some midwives are unable to manage the condition because they lack the skills. But even when they diagnose the condition, some facilities frequently lack the essential anti-convulsion drugs such as magnesium sulphate and Dexamethasone; a drug given to help mature the lungs of a baby born prematurely.

A point of reference is Robert Kizito, the in-charge Nabirumba Health Centre III in Kamuli district who says currently the facility does not have any drug to manage pre-eclampsia.

"The only magnesium sulphate ampoule that was given to us recently when National Medical Stores delivered medicines was damaged," Kizito laments.

Susan Ibia, a midwife at Serere Health Centre IV in Serere district, says the facility has suffered from stock-outs of these essential drugs for the last three months.

As a result, Ibia says, pregnant women are advised to buy the medicine from private drug stores.

Delay to get medical attention

Emily Kamusiime, a senior midwife at Kambuga Hospital, says poverty and poor referral systems are the reason why pregnant women with pre-eclampsia delay to get to health facilities.

"Most referrals we get are in severe stage because either mothers fail to get transport in time, while others have to endure long distance rides on motorcycles," Kamusiime explains.

In addition, Flavia Nambi, a midwife at Nankandulo Health Centre IV in Magogo sub-county, says the midwives cannot routinely check the blood pressure of the pregnant women because they lack basic blood pressure equipment.

"We cannot afford batteries to operate our digital blood pressure machine. In a week, we require two pairs costing sh.200," Nambi explains and estimates that daily they register about 30 pregnant mothers coming for antenatal and 80 deliveries in a month. Additionally, the facility is unable to conduct routine urine tests in pregnant women because they do not have reagents.

The facility does not have an operational theatre and also lacks an anaesthetist. This means they cannot conduct an emergency caesarean section for a woman with severe pre-eclampsia. So, they refer the patients to either Kamuli or Jinja hospitals which are many kilometres away.

Who is at risk, treatment

Dr Kiggundu says age is a major factor. The condition is commonly seen in women who have not. "After conception the fertilised ovum presents as foreign antigens and these have a higher chance of rejection," Dr. Kiggundu explains.

Women who have had pre-eclampsia before or those with history of chronic hypertension stand a higher risk of developing pre-eclampsia. "Women who have high blood pressure which can easily cause injuries in the kidneys causing protein in urine, consequently pre-eclampsia," he explains.

If one was diabetic or obese before you conceive, Dr Andabati says chances of developing pre-eclampsia increase. Diabetes causes problems with blood vessels leading to hypertension. Additionally, obesity is a major cause of these diseases (hypertension and diabetes).

Pre-eclampsia is also genetic, which means a pregnant woman is at increased risk of developing pre-eclampsia if her mother or sister suffered from the condition.

Andabati says abnormal development of the placenta is associated with pre-eclampsia. The vessels of the placenta are supposed to develop in a particular way. Because blood vessels in women with pre-eclampsia do not develop normally, their placentas produce toxins that affect the behaviour of blood vessels in the body pre-eclampsia.

Other signs include a lot of protein in the urine which is detected during routine antenatal tests. Another sign is pain in the upper right part of the abdomen.

Kiggundu also cites the male factor. The condition is commonly seen in women who have not.

"After conception the fertilised ovum presents as foreign antigens and these have a higher chance of rejection," Dr. Kiggundu explains.

Early warning signs

Excessive weight gain with swelling of the feet, face and hands are tell-tale signs of pre-eclampsia, Andabati says.

Others are persistent headache, double vision, reduced foetal movement and a sudden rise in the blood pressure beyond 130/90, especially from the 20th week.

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Treatment

Management of mild pre-eclampsia (with a raised blood pressure of about 130/90 to 140/100) involves admitting the woman, monitoring and treating her blood pressure with anti-hypertensive medication to enable the pregnancy go to term, Andabati says.

Additionally, bed rest is usually recommended to bring the blood pressure down and enhance blood flow to the placenta.

In case of severe pre-eclampsia, treatment is delivery not beyond 72 hours by caesarean section.

Is pre-eclampsia avoidable?

Dr Charles Kiggundu, a senior gynaecologist/obstetrician Mulago Hospital, asserts that nothing can be done to control the condition because its cause is not known.

"However, once pre-eclampsia is detected early, its progression can be controlled. The condition can be detected through accessing antenatal care services early and regularly," he explains.

According to the new World Health Organisation guidelines, pregnant women should access antenatal care services eight times before delivery. Additionally, every pregnant woman should go for antenatal care after the second month of missing their menstruation period. Accessing antenatal care services early and regularly, according to Dr Kiggundu enables health workers to take the mother's health history and quickly manage complications such as sudden rise in blood pressure.

Dr Gonzaga Andabati, a gynaecologist at Bethany Women Hospital in Luzira, Kampala, says antenatal care with emphasis on regular blood pressure check-up and routine testing of protein in the urine enables health workers to detect pre-eclampsia early.

Agnes Mokomiku, a midwife working at Adjumani Hospital, says during antenatal care visits, they give health education to pregnant women about the danger signs in pregnancy such as persistent headaches, swollen feet, hands and face. They also advise women to go to health facilities immediately the experience these danger signs.

Andabati advises women to opt for prevention because it is better than cure. The simple remedy is to avoid being obese before getting pregnant. Health conditions such as diabetes or underlying high blood pressure should be controlled.