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African women of childbearing age with diabetes at high risk of cardiovascular disease

New research by the University of Cape Town's (UCT) PhD graduate in Medicine, Tawanda Chivese, found that one in every 11 African women of childbearing age had type 2 diabetes and were at high risk of cardiovascular disease.

Africa, and South Africa, in particular, is in the middle of an epidemiological transition, from a situation where infectious diseases such as Tuberculosis (TB), HIV and malaria were the biggest causes of illness and death, to a situation where non-communicable diseases, such as diabetes and cardiovascular diseases, are the biggest causes of illness and death. Across all demographic groups, after TB, diabetes has been the second leading cause of death in South Africa since the year 2015 and is also one of the biggest contributors to deaths due to cardiovascular diseases.

The research focused on the burden of type 2 diabetes in African women of childbearing age and type 2 diabetes and cardiovascular disease in women in Africa and their offspring within 6 years after a pregnancy complicated with hyperglycaemia first detected in pregnancy (HFDP).

HFDP is as any form of glucose derangement first discovered in pregnancy and data from other countries have shown that it raises the risk of diabetes after the pregnancy in the mother by almost seven times and that the child from the pregnancy may also have a higher risk of diabetes. HFDP encompasses women with gestational diabetes and women who have high blood glucose levels in pregnancy – that are in the range of diabetes outside of pregnancy.

The study was conducted in two phases. The first phase consisted of a systematic review to estimate the prevalence of type 2 diabetes mellitus in African women of childbearing age. In this, he collated all results from 80 studies from 39 African countries, with a total of 52 075 women, and then carried out a meta-analysis to obtain a single estimate of the prevalence of diabetes in women of childbearing age.

In the second phase, during the progression to type 2 diabetes, he recalled 220 women who had been diagnosed with HFDP, for five to six years previously, and then tested

them for diabetes and other related cardiovascular risk factors. He also measured the weight and height of their children from the index pregnancy.

"I found that one-third of the women's children were either overweight or obese at preschool age. Therefore, maternal glucose levels during the pregnancy impacted both the mother and the child's cardiovascular health within 6 years of the pregnancy," he said.

Chivese shared: "Our health system is not yet capacitated enough to prevent and treat diabetes, almost two-thirds of people with diabetes are undiagnosed and a huge proportion of people with diabetes have unmet health needs."

He said diabetes epidemic is being fuelled by the obesity epidemic with current data suggesting that more than two-thirds of women of childbearing age are either overweight or obese.

"This suggests that the future burden of diabetes in women will become bigger than the current. In Africa, we had no data to inform us about the risk of diabetes after a pregnancy that was complicated by HFDP, or what factors caused some women to have diabetes after the pregnancy while others did not, and how the pregnancy affected the cardiovascular health of their offspring," he said.

Said Chivese: "One of the chief motivations for this study is that HFDP gives us a window of opportunity to stem the diabetes epidemic through prevention of future diabetes in the mother and her offspring, and through her, her family. If we understand the risk factors that cause future diabetes in the women with HFDP, we can provide interventions tailored for our context, and not only for her but be able to inspire lifestyle change in her family too."

He recommends the need to prevent hyperglycaemia first detected in pregnancy by optimising preconception health, and further, that both mothers and their children need to be followed up postnatally, with interventions to reduce the risk of cardiovascular disease in both mother and child.



Tawanda Chivese

Photo: Supplied

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