

Women with smaller-than-average fetuses may face heart problems

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(Medical Xpress) -- Women pregnant with smaller-than-average fetuses may also need to worry about their long-term cardiovascular health risks, according to new research in the American Heart Association's journal *Hypertension*.

Women diagnosed with fetal growth restriction (FGR) may also have an asymptomatic diastolic dysfunction in which the heart doesn't work at peak efficiency during its relaxation phase.

FGR is an abnormality of pregnancy in which the fetus doesn't grow as well as 90 percent of other fetuses. It can compromise the health of the infant, cause fetal distress and the need for early delivery.

“Women whose pregnancies are affected by FGR are known to have high risk of cardiovascular disease and death in the decades to come,” said Basky Thilaganathan, M.D., Ph.D., lead author of the study and Director of the Fetal Maternal Medicine Unit at St. George’s University of London. “Our findings help clarify how this risk develops so these women can be identified and receive preventative treatment.”

People with impaired left ventricle diastolic function have a high long-term risk of heart failure , researchers said.

“Clinicians should be aware of the maternal susceptibility to heart strain and failure in these pregnancies,” Thilaganathan said. “Lifestyle changes and medical interventions earlier in life could help these women reduce their risk of future cardiovascular disease and death.”

Women with FGR pregnancies also had a significantly higher body mass index (BMI) on average than the other study groups, researchers said. Greater BMI may be one of the causes of diastolic dysfunction. But the study design didn’t allow researchers to analyze cause and effect because women were recruited into the study at diagnosis of the disorder.

Previous research has established that pregnancy-induced high blood pressure or preeclampsia has long-term heart risks to the mother. FGR occurs without causing high blood pressure in the mother but has similar potential heart complications for the mother.

Pregnant women were recruited from St. George’s Hospital in London starting in 2008. Twenty-nine women with FGR, 25 women with preeclampsia and FGR and 58 women with normal pregnancies were compared.

The women had echocardiograms (ultrasound movie of the inside of the heart) and electrocardiograms (measures the electrical activity of the

heartbeat), blood pressure readings, and other studies to measure heart function. These studies were done upon diagnosis of the FGR or pre-eclampsia, and at 12 weeks after delivery.

While FGR has many potential causes, researchers looked at women without pre-existing illnesses and fetuses without any known physical or genetic abnormalities.

Researchers said further studies are needed on cardiac dysfunction in these women after childbirth.

Co-authors are Karen Melchiorre, M.D., Ph.D.; George Ross Sutherland, M.D., Ph.D.; and Marco Liberati, M.D., Ph.D. Author disclosures are on the manuscript.

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