Slow-growing babies more likely in normal-weight women; Less common in obese pregnancies

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Obesity during pregnancy puts women at higher risk of a multitude of challenges. But, according to a new study presented earlier this month at the American Institute of Ultrasound in Medicine annual convention, fetal growth restriction, or the poor growth of a baby while in the mother's womb, is not one of them. In fact, study authors from the University of Rochester Medical Center found that the incidence of fetal growth restriction was lower in obese women when compared to non-obese women.

Researchers, led by senior study author and high-risk pregnancy expert Loralei Thornburg, M.D., conducted the study because a wealth of data shows that obese women are at greater risk of fetal death or stillbirth. Unfortunately, in the majority of cases, doctors don't know why. Thornburg's team wanted to determine if fetal growth restriction – which increases the likelihood of stillbirth – might play a role. She says growth restriction may go undiagnosed in obese women because it can be difficult to get an accurate measure of mom's belly size, which is a tool used to gauge the baby's growth – or lack of growth.

"We wondered if the increased risk of stillbirth could be due to a high level of undiagnosed growth restriction – the idea being that if the physician doesn't know that the baby is too small then they don't know that mom and baby need additional monitoring, which is essential to prevent fetal death," said Thornburg, an assistant professor in the

Department of Obstetrics and Gynecology at the Medical Center whose research focuses on obesity in pregnancy.

The team, including lead study author and Maternal-Fetal Medicine Fellow Dzhamala Gilmandyar, M.D., found that growth restriction was significantly lower in obese and diabetic women; it was higher in women with preeclampsia, or pregnancy-induced high blood pressure, and smokers – a finding in line with past research. Of the babies that had growth restriction, they determined how many moms were given an accurate diagnosis before birth and found that the rate was the same for obese and non-obese women, suggesting that missed diagnoses are not a major problem in obese pregnancies.

"Our results defeat the idea that undiagnosed growth restriction is behind increased rates of fetal death in obese women," noted Thornburg. Many obese women also have diabetes, which could influence the risk of fetal death, but more research is needed to understand whether or not that is the case.

Though stillbirth, most often defined as death occurring after 20 weeks gestation, is not very common in the general population – it occurs in around six of every 1,000 births in the U.S., according to the Centers for Disease Control and Prevention – it is more common in specific populations, including obese women, African Americans and teens.

While the cause of stillbirths in obese women remains elusive, Thornburg says "One thing we do know is that we are not just dealing with obesity in pregnancy anymore. We are seeing a real increase in extreme obesity, which may represent a different condition altogether, so we need to look at moderate obesity compared to severe, morbid obesity."

Thornburg and Gilmandyar reviewed birth record data from more than

16,000 women who delivered at the Medical Center between 2000 and 2010. Obesity was defined as having a pre-pregnancy body mass index or BMI of 30 or greater and growth restriction was defined as being below the tenth percentile of expected birth weight for gestational age. After taking into account the effects of diabetes, high blood pressure and tobacco use, growth restriction remained lower in obese women (8.5 percent) compared to non-obese women (nearly 10 percent).

"While our study shows that obesity by itself may not be a risk factor for growth restriction, it is still important to closely monitor women who also have high blood pressure or who are smokers, because these are established risk factors for growth restriction," said Gilmandyar, who is completing her second year as a fellow at the Medical Center.

Provided by University of Rochester Medical Center