Treating even mild gestational diabetes reduces birth complications (w/ Video)

September 30 2009

Treating pregnant women for mild gestational diabetes resulted in fewer cesarean sections and other serious birthing problems associated with larger than average babies, according to a study conducted in part at the University of North Carolina at Chapel Hill.

'This study is important because it clearly indicates the value to mothers and their newborns of screening for and treatment of diabetes-like conditions provoked by pregnancy," said John M. Thorp, M.D., McAllister distinguished professor of obstetrics and gynecology at the UNC School of Medicine and a co-author of the study.

"Our work resolves a 40-year controversy in women's health and should be immediately helpful to both pregnant women and the clinicians caring for them."

The study is published in the Oct. 1 issue of the New England Journal of Medicine. The lead author and principal investigator is Mark B. Landon, M.D. of Ohio State University. It was conducted at 14 sites that are part of the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network.

About 4 percent of all pregnant women in the U.S. develop gestational diabetes, resulting in about 135,000 cases each year, Thorp said. Because these women have high blood sugar levels, their babies receive more blood glucose than they need, and the extra energy is stored as fat. These babies tend to be larger and fatter than average at birth and thus are

more likely to be affected by problems associated with larger babies, such as the need for cesarean delivery, damage to their shoulders during birth and a greater risk of becoming obese as children and developing type 2 diabetes as adults.

There has been a longstanding controversy among physicians on the question of whether treating pregnant women with gestational diabetes for their high blood sugar levels would provide worthwhile benefits. Several professional organizations advocate screening, but the 2008 guidelines of the U.S. Preventive Services Task Force concluded there is insufficient evidence to support screening for and treatment of gestational diabetes.

Against this background, the MFMU Network launched a clinical trial to determine if treating mothers for mild gestational diabetes would reduce infant deaths and birth-related complications. A total of 958 women between 24 and 31 weeks of pregnancy were randomized, with 485 receiving treatment (including dietary changes, self blood glucose monitoring and insulin if necessary) and 473 in the untreated group.

There were no infant deaths in the study and no significant differences between the two groups in terms of babies born with problems such as hypoglycemia, hyperbilirubinemia, neonatal hyperinsulinemia and birth trauma.

However, there were significantly fewer babies in the treatment group to experience unusually large size (7.1 percent vs. 14.5 percent), high birth weight (5.9 percent vs. 14.3 percent), shoulder damage during birth (1.5 percent vs. 4.0 percent) or to require cesarean delivery (26.9 percent vs. 33.8 percent).

In addition, Thorp said, "It's especially intriguing that mothers in the treatment arm gained less weight during pregnancy, experienced fewer

preterm births and had fewer cases of preeclampsia than mothers in the untreated group." Preeclampsia is a syndrome marked by a sudden increase in the blood pressure of a pregnant woman after the 20th week of pregnancy, which can be fatal or lead to long-term health problems for mother and baby.

The study concludes that "these findings confirm a benefit to the identification and treatment of women with mild carbohydrate intolerance during pregnancy."

Source: University of North Carolina School of Medicine (news : web)