Diabetes Boosts Risk Of Atrial Septal Defect

BY MITCHEL L. ZOLER
Philadelphia Bureau

SAN FRANCISCO — Women with either gestational or established diabetes were much more likely to give birth to a child with an atrial septal defect than were those with normal glucose control, based on the results of a retrospective, case control study that included almost 5,000 women.

Women with established diabetes before they became pregnant were nearly 11-fold more likely to give birth to a child with an atrial septal defect (ASD), compared with women without diabetes. Dr. Creighton W. Don and his associates reported in a poster presentation at the annual meeting of the American Society of Anesthesiologists.

Don and his coinvestigators. Dr. Don, a cardiologist at the University of Washington, Seattle, and his coinvestigators. They used January 1987–December 2005 birth certificate–hospital discharge data from all nondenial hospitals in the Comprehensive Hospital Abstract Reporting System in Washington state. Cases were live-born singleton infants diagnosed with an ASD. Controls were infants born without ASD in the same year.

The incidence of ASD reports in hospitals from eastern Washington seemed unusually high, so those hospitals were matched with hospitals in western Washington. The analysis also excluded infants born at less than 32 weeks’ gestation or less than 2,500 g. This left about 800 cases and 4,000 control infants who were included in a logistic regression analysis. The analysis controlled for several variables, including gestational age, birth weight, maternal age, maternal body mass index, race, and hospital location.

The analysis showed that women with established diabetes were 10.6-fold more likely to give birth to an infant with an ASD than were mothers without diabetes, and that mothers who developed gestational diabetes were 3.5-fold more likely to have a child with ASD. The differences between the case and control rates for both subgroups were statistically significant.

Other factors linked with significant increases in ASD were non-Hispanic black race, which raised the risk 3.9-fold, and maternal age of 35 years or older, which raised the risk 2.5-fold.

Increasing Folic Acid Supplementation

BY SIDONIA GOREN, M.D.

 Increasing Folic Acid Supplementation

The Society of Obstetricians and Gynecologists of Canada has new guidelines on folic acid supplementation in pregnant women, recommending prenatal vitamins that include daily doses of 4 mg of folic acid. These guidelines are based on an increased risk of neural tube defects (NTDs) in women who consume at least 400 mcg of folic acid per day.

The recommendation for folate supplementation is based on studies suggesting that women who take a daily dose of folic acid between 4 and 8 mg per day are more likely to have a live-born child without an NTD. The recommendation is also based on the observation that women who consume at least 4 mg of folic acid per day are less likely to have a child with an NTD than women who consume less than 1 mg of folic acid per day.

One of the two main arguments against an increase in folic acid is that an excess in the diet may mask or mask neural tube defects caused by vitamin B12 deficiency. However, since flour was fortified, there has been no evidence of an increasing problem with pernicious anemia.

Dr. Karen is a professor of pediatrics, pharmacology, pharmacy, medicine, and medical genetics at the University of Toronto. She leads the Research Leadership in Better Pharmacotherapy During Pregnancy and Lactation at the Motherisk Program at Sick Children, Toronto, where she is director of the Motherisk Program, a teratogen information service. (www.motherisk.on.ca) She is also the Key Chair in Molecular Toxicology at the University of Western Ontario.