Bariatric Surgery Cuts Pregnancy Hypertension

BY JENNIE SMITH

FROM BMJ

Women who have had bariatric surgery are far less likely to experience serious hypertensive disorders during pregnancy, including preeclampsia and eclampsia, than are women who have yet to undergo the surgery, according to new research.

Investigators found a 75% reduction in the odds of being diagnosed with a hypertensive disorder in pregnancy in those who had undergone the surgery, compared with their counterparts.

For their study, Dr. Wendy L. Bennett and her colleagues at Johns Hopkins University, Baltimore, evaluated claims data from seven private insurance plans to find 585 U.S. women between the ages of 16 and 45 who had undergone bariatric surgery for weight loss and had at least one prior pregnancy and delivery (BMJ 2010;340:c1662).

A total of 269 of the women delivered their babies before gastric bypass surgery or another weight-loss surgery, and 316 delivered afterward. For the first group, the mean time from delivery to surgery was 17.9 months, and for the second, the mean time from surgery to delivery was 23.6 months.

Gastric bypass surgery accounted for 81.5% of procedures overall, with other surgeries, such as adjustable gastric banding, making up the rest.

The mean age of the women was 31.9 years at delivery and 31.5 years at surgery.

In the group that delivered before having surgery, 31.2% of the women were diagnosed with a hypertensive disorder—from chronic and gestational hypertension to preeclampsia and eclampsia alone or superimposed on hypertension—between the start of pregnancy and 2 weeks after birth, while only 9.8% of the postsurgery group did, even after adjusting for factors such as age at delivery, multiple pregnancy, the type of surgery, and preexisting diabetes.

VITALS

Major Finding: Hypertensive disorders were seen in nearly 10% of 316 women who became pregnant after bariatric surgery and in 31% of 269 women who delivered before having surgery.

Data Source: A study of claims data from 585 women in seven private insurance plans who had undergone bariatric surgery for weight loss and had at least one prior pregnancy and delivery.

Disclosures: No conflicts were reported.

Preeclampsia or eclampsia was diagnosed in 14.5% of women in the presurgery group and 2.5% in the postsurgery group. "We went 2 weeks post partum, because we wanted to make sure we got all the diagnoses," Dr. Bennett said in an interview. "Women can get postpartum preeclampsia."

The Hopkins findings confirm those from an earlier Israeli study of similar design (Int. J. Gynecol. Obstet. 2008;103:246-51), which found the rate of a composite of hypertensive disorders during pregnancy to be more than halved after bariatric surgery.

The Hopkins team saw an even more dramatic reduction—about 75%—in the odds of all hypertensive disorders in pregnancy, and was able to isolate all severities of hypertensive disorders by analyzing outpatient and inpatient codes for each.

Further, Dr. Bennett and her colleagues wrote that they were "able to describe outcomes of chronic hypertension complicating a pregnancy and preeclampsia superimposed on chronic hypertension among women who have had bariatric surgery." Chronic hypertension in pregnancy and preeclampsia, the authors noted, can increase the long-term risk of chronic disease in the mother, including cardiovascular and renal disease.

Dr. Bennett noted that her team reviewed relatively new and geographically diverse data (the claims were dated from 2002 to 2006, from more than one region of the United States), compared with other recent studies on bariatric surgery and pregnancy. This afforded the authors an up-to-date picture reflecting outcomes from surgeries currently performed, she said.

The team's dataset lacked height and weight information for the subjects before and after surgeries, though all had been diagnosed as obese (having a body mass index of 35 kg/m^2 or higher) before being scheduled for surgery. However, Dr. Bennett said, "we certainly believe it's the weight loss leading to reduced hypertension risk."

The authors noted a further limitation to their study, which was the possibility of selection bias and confounding by indication. For example, they wrote, "an obese woman with gestational hypertension might have been more likely to subsequently undergo bariatric surgery if she developed chronic hypertension after her pregnancy or had other comorbidities associated with obesity making her eligible for bariatric surgery. If this occurred, the number of diagnoses of hypertensive disorder in pregnancy in the women who delivered before surgery could be increased and bias our results." ■

In Utero Alcohol Exposure Linked With Childhood AML

BY ELIZABETH MECHCATIE

FROM CANCER EPIDEMIOLOGY, BIOMARKERS & PREVENTION

Alcohol intake during pregnancy was associated with a significant increase in the risk of acute myeloid leukemia in children who were exposed during pregnancy, but not with an increased risk of acute lymphoblastic leukemia, in a review and meta-analysis of case-control studies from numerous countries.

The results "indicate that the risk of childhood AML increases with maternal alcohol consumption during pregnancy," reported Dr. Paule Latino-Martel of the University of Paris XIII and associates (Cancer Epidemiol. Biomarkers Prev. 2010;19:OF1-23).

This was the first meta-analysis the authors were aware of that investigated the role of in utero exposure to alcohol in relation to childhood leukemia. The studies had limitations, they said, and more studies with detailed information on alcohol exposure are needed.

The 21 studies included in the review comprised 20 different study populations, for a total of 8,128 cases and 10,207 controls. Because data collection varied among the studies, only relevant studies were included in categorical and dose-response meta-analyses.

A meta-analysis of nine studies found the significant positive association between maternal alcohol consumption during pregnancy and the risk of childhood acute myeloid leukemia (AML), with an odds ratio of 1.56. Maternal consumption of alcohol during pregnancy was not significantly associated with an increased risk of acute lymphoblastic leukemia (ALL), compared with no exposure.

VITALS

Major Finding: A significant association between in utero exposure to alcohol and childhood acute myeloid leukemia was noted in five studies of children diagnosed at age 0-4 years (OR 2.68) when compared with nonexposed controls.

Data Source: Meta-analysis of 21 case-control studies.

Disclosures: The authors had no disclosures to report. The study was funded with a grant from the World Cancer Research Fund.

A few studies included data that made it possible to do a dose-response analysis, which was "consistent with a stronger association with AML compared with ALL."

For each increase of one drink per week, the increase in odds ratios was 1.04 for ALL and 1.24 for AML, but the authors said that the results were heterogeneous, and no conclusions could be made about the amount of alcohol intake that was associated with an increased risk. More studies with more details on alcohol exposure are needed, they added.

Examining the data on childhood age, the authors found no association between maternal alcohol intake during pregnancy and ALL that was diagnosed at age 0-4 years.

But the association between in utero exposure to alcohol and AML that was diagnosed in children aged 0-4 years was significant in five studies (OR 2.68), which the authors said was "consistent with the potential role of prenatal exposure to alcohol in the etiology of AML."

"The biological plausibility of this association is supported by the fact that alcoholic beverages are recognized as carcinogenic for humans and are involved in several fetal alcohol-related diseases," they said.

But the reason why in utero exposure to alcohol "may specifically modify the risk of AML in young children is unknown," the authors said. They pointed out that the peak of AML cases in children is earlier than that of ALL, which suggests "a stronger association or shorter latency of AML with prenatal exposures."

With little information in the studies on the type of alcohol consumed, the authors were not able to determine whether maternal consumption of one type of alcohol over another (beer vs. wine vs. spirits) was associated with a greater risk of leukemia.

The data available did not suggest, however, that one type of alcohol posed a greater risk than did another type, they wrote.

Based on a meta-analysis of those studies that provided information on alcohol intake by trimester, the authors found no association between childhood ALL and alcohol consumption during any trimester.

For AML, the data were limited, but in the two studies that included this information, the odds ratio "tended to be slightly higher when alcohol was consumed in the second and third trimesters compared with the first trimester," they said.

The association between maternal alcohol intake and the risk of childhood leukemia—particularly AML—should be studied further and in large birth cohort studies, they recommended.

Noting that an estimated 12% of pregnant women in the United States drink alcohol during pregnancy (and 30% in Sweden, 52% in France, 59% in Australia, and 60% in Russia), they urged that efforts to reduce alcohol use be directed toward women during pregnancy as well as before they become pregnant, which might help "contribute to reduce the occurrence of harmful effects including AML in young children," they said. ■