Planned C-Section Found Risky in Low-Risk Women

BY DOUG BRUNK

SAN DIEGO — Planned primary cesarean delivery was associated with increased morbidity, compared with vaginal delivery, among low-risk primiparous women at term, results from a large population-based study showed.

Clinicians have debated the role of planned primary cesarean delivery over the last decade in particular, yet "there is little evidence to help guide us in how to counsel patients on the risks and benefits" of the procedure, Dr. Lisa May Olson reported at the annual meeting of the Society for Maternal-Fetal Medicine.

Dr. Olson, a recent graduate of the MD/MPH program at Oregon Health and Science University, Portland, noted that the rate of planned primary cesarean delivery in the United States has been increasing in the last decade, with a high of 20% in 2006, up from 17% in 2002.

Using administrative discharge data for low-risk primiparous women who gave birth to a term singleton infant in California, Dr. Olson and her associates compared maternal and neonatal outcomes of planned primary cesarean, with and without labor, to maternal and neonatal outcomes of vaginal delivery.

The average age of the 122,578 women studied was 25 years. Of these, 111,486 (90.9%) had a vaginal delivery, 5,603 (4.6%) had a planned primary cesarean delivery with labor, and 5,489 (4.4%) had a planned primary cesarean delivery without labor.

Dr. Olson reported that the planned primary cesarean delivery with and without labor groups were associated with higher maternal morbidities, compared with the vaginal delivery group, including a 10- to 20-fold increased risk of cardiac complications, a 4- to 8-fold increased risk of major infection, and a 3-fold increased risk of anesthetic complications. On the other hand, planned primary cesarean delivery with and without labor had a protective effect on hemorrhage and the need for transfusion, reducing the risk of those outcomes by 1.5- to 3-fold.

Compared with neonates in the planned primary cesarean delivery without labor group, their counterparts delivered by planned primary cesarean in the presence of labor were 5 times more likely to have CNS complications, 2.3 times more likely to require NICU admission, 1.9 times more likely to have respiratory distress syndrome, and 1.6 times more likely to develop sepsis, Dr. Olson said.

The study was supported in part by a Tartar Fellowship and Greenlick Grant at the university. ■

Birth Events Unexpectedly Common in Cerebral Palsy

BY DOUG BRUNK

SAN DIEGO — The development of cerebral palsy is associated with adverse intrapartum events in about 27% of term infants and 38% of preterm infants with the condition, according to findings from a large, retrospective population-based cohort analysis.

Previous studies have indicated that intrapartum events were a factor in only 10% of infants with cerebral palsy. "Our data would suggest that 10% estimate is a little bit low," Dr. William M. Gilbert said in an interview during a poster session at the annual meeting of the Society for Maternal-Fetal Medicine.

For the study, which is the largest of its kind, Dr. Gilbert and his associates analyzed maternal/infant discharge and birth records in California for 1991-2001.

Of the more than 6,000,000 births that occurred over the 10-year period, 8,946 children with cerebral palsy were identified. Of these, 5,478 were delivered at term and 3,468 were delivered preterm. All cases of cerebral palsy were then compared with the population without cerebral palsy, said Dr. Gilbert, codirector of the Center for Perinatal Medicine and Law at the University of California, Davis.

Adverse obstetrical outcomes included asphyxia, placental abruption, fetal distress, and uterine rupture. Adverse neonatal outcomes included mild to severe birth asphyxia, respiratory distress syndrome, intraventricular hemorrhage, necrotizing enterocolitis, and meningitis.

The investigators reported that 38% of preterm infants and 27% of term infants with cerebral palsy had one or more of the adverse obstetrical outcomes, compared with 17% and 13% of controls, respectively. These differences are statistically significant.

Maternal or neonatal infections only modestly affected the risk of cerebral palsy in term infants (9% with cerebral palsy vs. 6% among controls), while the impact was significantly greater in preterm infants (29% with cerebral palsy vs. 11% among controls).

Adverse neonatal outcomes occurred significantly more often in infants with cerebral palsy, compared with controls—5% among term infants vs. 0.5% among controls and 59% among preterm infants vs. 6% among controls.

"Birth asphyxia increased the risk of cerebral palsy development in term infants (eightfold) more than in the preterm infants (twofold), possibly suggesting that term infants cannot handle asphyxiating insults as well as preterm infants," Dr. Gilbert and his associates said.

Dr. Gilbert had no conflicts of interest to disclose. ■

DRUGS, PREGNANCY & LACTATION

SSRIs and PPHN Revisited

The risks associated with selective serotonin reuptake inhibitor use in pregnancy have been addressed in previous columns because of the accumulating data suggesting that depression during pregnancy is common and that many pregnant women use SSRIs. A recent study indicated that as many as 8% of pregnant women are treated with SSRIs, so clearly delineating the spectrum of associated risks is of critical clinical importance.

BY LEE COHEN, M.D.

Although an increasing amount of data suggests that the teratogenic risks associated with fetal exposure to SSRIs are small and the potential for problems with neonatal adaptation symptoms are common (about 30%) but typically self-limited, several recent studies have evaluated the risk for persistent pulmonary hypertension of the newborn (PPHN) associated with late trimester exposure to SSRIs.

I have reviewed several studies suggesting a spectrum of risk, dating back to the case-control study using data from a birth defects database, which ascribed about a sixfold increase in risk for PPHN to late trimester exposure to SSRIs (N. Engl. J. Med. 2006;354: 579-87). This was followed by a case-control study published last year from the Swedish Medical Birth Register, which found approximately a twofold increased risk of PPHN associated with SSRI exposure late in pregnancy (Pharmacoepidemiol. Drug Saf. 2008; 17:801-6).

Recently, another study using an administrative database from four health plans in an ongoing HMO research network study of birth outcomes provided yet another estimate. The investigators retrospectively identified 1,104 full-term infants whose mothers were dispensed an antidepressant in the third trimester and 1,104 full-term infants whose mothers did not receive an antidepressant in the third trimester (Pharmacoepidemiol. Drug Saf. 2009 January 15 [doi:10.1002/pds.1710]).

Possible cases of PPHN were identified using different diagnosis and procedure codes and confirmed with reviews of hospital records. There was no difference in risk for PPHN between exposed and unexposed children: The prevalence of PPHN was 2.14 per 1,000 among infants exposed to an SSRI during the third trimester and 2.72 per 1,000 among the infants not exposed to SSRIs. Only a small number of cases of possible PPHN were confirmed—two among SSRI-exposed infants and three among those not exposed—and some cases may have been missed, hence one of the limitations of the study.

The conflicting data are not surprising because these studies are not prospective and they use various databases; each has its own respective limitations. It is noteworthy, however, that in the most recent study, the frequency of PPHN was similar to rates reported in the literature and the general population, suggesting that the methods used were comprehensive and that the results may reflect what we see in the real world. Also noteworthy is that maternal diabetes and asthma, two known risk factors for PPHN, were common in the exposed group, compared with the unexposed group, but other risk factors known to drive PPHN—increased body mass index, alcohol and cigarette smoking, or African American ethnicity—were not ascertained.

Hence, we are faced once again with studies addressing critical questions for patients that have provided different results.

One concern when counseling patients is how these data cumulatively inform the care of patients with histories of recurrent major depression treated with SSRIs during pregnancy. Given the warnings in the SSRI labels regarding PPHN, many patients—in collaboration with their doctors—may elect to discontinue antidepressants just before delivery because of concern over PPHN, an extremely serious outcome. Given the study with the sixfold increased risk, the Swedish registry data indicating a twofold increased risk, and these new data, which suggest the absence of risk, the answer regarding the true risk for PPHN may fall somewhere in the middle, with perhaps some modest increase in risk.

Even if we assume a modest increase in the risk for PPHN in this scenario, the absolute risk is extremely small and it may not justify discontinuing antidepressants close to delivery.

Clinicians and patients together will make decisions based on the available information. We make the best clinical decisions possible on a case by case basis, and we welcome more of these analyses from rich datasets so we can continue to refine risk estimates—particularly for rare but serious outcomes such as PPHN.

DR. COHEN *directs the perinatal psychiatry program at Massachusetts General Hospital, Boston, which provides information about pregnancy and mental health at www.womensmentalhealth.org. He also is a consultant to manufacturers of SSRIs.*