Incidence of RDS Greater In Preterm ART Twins

BY TIMOTHY F. KIRN
Sacramento Bureau

RENO, NEV. — Preterm twins conceived through assisted reproductive techniques are more likely than twins conceived naturally to have respiratory distress syndrome and patent ductus arteriosus at delivery, investigators reported in a poster presentation at the annual meeting of the Society for Maternal-Fetal Medicine.

Nils Stenman, M.D., of the University of Pennsylvania, Philadelphia, and his colleagues compared neonatal outcomes of 238 preterm twins conceived using assisted reproductive techniques (ART) with those of 718 preterm twins that were naturally conceived. All twins were born at 24-35 weeks' gestation at one hospital over a 5-year period.

Mean birth weight and mean gestational age at delivery were the same for both groups of twins, as were rates of sepsis, necrotizing enterocolitis, intraventricular hemorrhage rates, and neonatal mortality.

However, the ART-conceived twins had a higher incidence of respiratory distress syndrome (70% versus 45%) and patent ductus arteriosus (63% versus 38%).

Mothers of the ART-conceived twins were more likely to be older, nulliparous, and white. However, there is no explanation for why the ART-conceived neonates would have a higher incidence of respiratory distress syndrome or patent ductus arteriosus, the researchers said.

A recent metaanalysis of studies of neonatal outcome in ART concluded that while singleton neonates conceived with ART tend to be born earlier and with lower birth weight and have worse outcomes, the same is not true for twins (BMJ [online] 2004;328:261). The studies in the analysis tended not to look as specifically at different neonatal outcomes in preterm twins as did the current study, or they looked at different outcomes, Dr. Stenman and colleagues said.

The neonatal mortality in the current study was 2% for both groups of twins. ■

Prenatal Exposure to Pollution May Result in Chromosomal Damage

Prenatal exposure to combustion-related air pollution may cause chromosomal abnormalities in fetal tissue, according to a study of 60 New York City newborns.

In other populations, such abnormalities have been linked to an increased risk of leukemia and other cancers, said Kirsti A. Bocskay of the department of environmental health sciences at Columbia University, New York, and her colleagues.

The investigators monitored exposure to polycyclic aromatic hydrocarbons (PAHs)—found in emissions from vehicles, residential heating, power generation, and tobacco smoke—among nonsmoking African American and Dominican mothers in three low-income neighborhoods.

The mothers filled out questionnaires and wore air monitors for 48 hours in the third trimester. Chromosomal abnormalities were measured in umbilical cord blood at delivery.

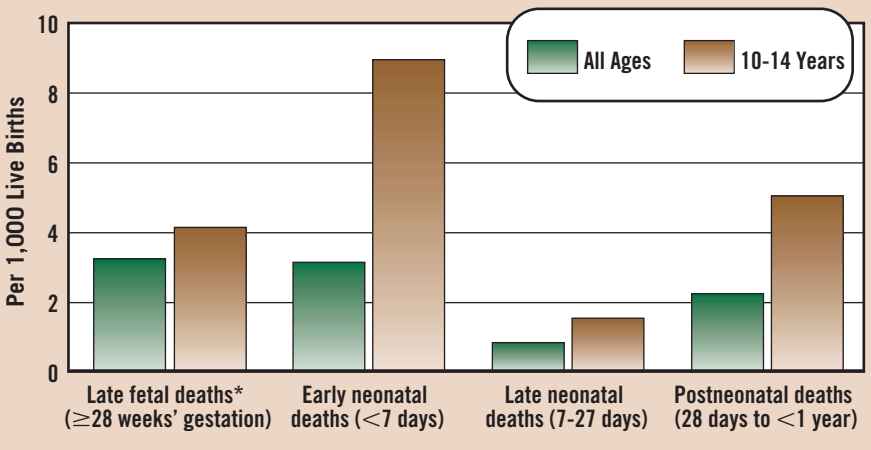
The investigators found 4.7 chromosome abnormalities per 1,000 white blood cells in newborns from mothers with low exposure to PAHs and 7.2 abnormalities per 1,000 white blood cells in newborns from mothers with high exposure to PAHs.

The study finds a significant association between prenatal exposure to airborne carcinogenic PAHs and stable aberrations in cord blood at the relatively low environmental concentrations in New York, the researchers said (Cancer Epidemiol. Biomarkers Prev. 2005;14:506-11).

—Christine Kilgore

DATA WATCH

Complications in Pregnant 10- to 14-Year-Olds



*Per 1,000 live births plus late fetal deaths.
Source: 1999-2001 data, Centers for Disease Control and Prevention

KEVIN FOLEY, RESEARCH/ANGIE RIES, DESIGN

DRUGS, PREGNANCY, AND LACTATION

Neonatal Withdrawal Syndrome and SSRIs

BY LEE COHEN, M.D.

Multiple articles over the past several years have cited perinatal symptoms in newborns whose mothers were taking an antidepressant late in pregnancy, including transient restlessness, jitteriness, tremulousness, and difficulty feeding.

There have now been enough reports to suggest certain vulnerable children or subgroups of newborns who were exposed in utero may be at a slightly increased risk for this syndrome.

Last year the Food and Drug Administration required the addition of related information to the labels of selective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs).

The results of a recent study of 93 cases worldwide (including 64 associated with paroxetine) from a World Health Organization adverse event reporting database do not represent new findings. The reports include descriptions of nervousness, agitation, abnormal crying, and tremors, which the authors consider a "signal" for perinatal or neonatal toxicity. The study also refers to 11 reports of neonatal convulsions and two grand mal seizures, with no further description of the cases (Lancet 2005;365:482-7).

Although the report of neonatal convulsions is relatively new, the study itself has several notable limitations. It is difficult to interpret these results because they are from a spontaneous adverse event reporting system, where typically adverse outcomes are overreported and do not provide adequate information on when the drug was used, the duration of illness, or whether the woman was depressed during pregnancy. And the absence of a controlled sample makes it difficult to estimate the incidence, which likely is very low, considering the wide use of these medications among reproductive age women Moreover, depression in the mother has been associated with many of the newborn symptoms reported.

The use of the term "withdrawal" syndrome is a dicey clinical call at best. Based on what we know about the kinetics and placental passage of these medications, certainly what we're seeing is not acute withdrawal, like we see with heroin or methadone use during pregnancy. The main metabolites of the drugs remain in the baby's circulation for at least days to weeks, so to see something so early and so transient, even for paroxetine (which has a shorter half-life than the other SSRIs), is not consistent with the pharmacokinetics of the compounds being described.

I don't disagree with these findings. Acknowledging the probable biases involved with collecting and reporting these cases, the report provides another data set that calls attention to the possibility of some type of perinatal syndrome associated with SSRI exposure later in pregnancy, which may not necessarily be a causal relationship. The authors suggest their findings are more of a "signal" that a problem may exist.

When considered with other case series, this study may indicate the potential risk for some type of perinatal syndrome associated with the use of these medications, particularly around the acute peripartum period.

What is of concern, however, is the impact this report may have on appropriate prescribing of these drugs to pregnant women, and that patients, as well as physicians, will uniformly and arbitrarily avoid these drugs during pregnancy.

The article falls profoundly short in terms of helping the clinician. While the results indicate that more vigilance is necessary during the peripartum period in cases of SSRI use, the data do not imply any particular SSRI should be avoided in women of reproductive age. The authors conclude that the signal is stronger for paroxetine, which they say should either not be used during pregnancy or used at the lowest effective dose. I certainly would not rule out using paroxetine in women of reproductive age on the basis of this report, with the possible exception of a woman with immediate plans to become pregnant or a woman with recurrent disease.

A reduction in the appropriate use of these drugs in depressed pregnant women would be a serious problem because relapse of recurrent depression during pregnancy is exceedingly common, and depression during pregnancy is the strongest predictor of risk for postpartum depression. Reducing the dose or discontinuing the antidepressant around the time of labor and delivery increases the risk of relapse, although some women may tolerate this approach, particularly if the drug is reinstituted immediately post partum.

Physicians should remain vigilant and carefully plan their treatment approach in pregnant patients with depression. The data may, in fact, be a signal that a problem exists. But a signal should be a beacon that guides the clinician. In this case, we have more fog than we have clarification of an already complicated situation.

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