Women With Perinatal HIV Have Successful Pregnancies

BY DOUG BRUNK

SAN DIEGO — Women who acquire HIV perinatally have pregnancy outcomes that are on a par with those who acquire HIV later in life, results from a small single-center study suggest.

"This is a relatively new group of young mothers, and not much is known about how they do in pregnancy," Dr. Tania Kasdaglis said in an interview during a poster session at the annual meeting of the Society for Maternal-Fetal Medicine. Many may assume "that perinatally infected HIV patients might have poorer pregnancy outcomes because they have had HIV longer or because their immune systems have been tried since they were born, but in fact they do very well."

'Perinatally infected HIV pregnant patients have good pregnancy outcomes' in this small study.

DR. KASDAGLIS

She and her colleagues in the department of obstetrics, gynecology, and reproductive sciences at the University of Maryland, Baltimore, studied women receiving prenatal care at the university's HIV clinic between 1997 and 2008. On a 1:1 basis they matched perinatally infected women with those who acquired the disease after childhood for age, race, and prepregnancy body mass index. Both groups had access to prenatal care, were on highly active antiretroviral therapy, had their CD4 counts and viral loads monitored, and were delivered at the university's medical center.

Among these women, 11 perinatally infected patients with 13 continuing pregnancies were studied. Cases were similar to controls in terms of mean age (18.7 years vs. 19 years), prepregnancy body mass index (27.7 kg/m^2 vs. 27.3 kg/m^2); third-trimester viral load (1,688 copies/mL vs. 10,548 copies/mL); third-trimester CD4 counts (391 vs. 410 cells/mcL); gestational age at delivery (38.3 weeks vs. 39 weeks), and birth weight percentile (32.1% vs. 39.4%). Although the viral load was not significantly different between the two groups, it was lower among perinatally infected women, suggesting that this group of women may be more compliant with highly active antiretroviral therapy (HAART) compared with controls, said Dr. Kasdaglis, a first-year maternal-fetal medicine fellow at the university.

The study findings show that "perinatally infected HIV patients have good pregnancy outcomes that do not differ from [those of] women who acquire HIV later in life and have access to the same level of prenatal care," concluded Dr. Kasdaglis, who reported having no conflicts of interest. ■

Oxytocin 'Reasonable' for Placental Management

BY DOUG BRUNK

SAN DIEGO — A single dose of intramuscular oxytocin achieved a significant reduction in the rate of placental retention in second-trimester medical termination, and was associated with a significant reduction in postpartum blood loss, results from a randomized, single-center study showed.

"Intramuscular oxytocin is a reasonable choice as a prophylactic ecbolic for the third stage [of labor] following second-trimester medical pregnancy termination," Dr. Jan E. Dickinson said at the annual meeting of the Society for Maternal-Fetal Medicine.

Placental retention is a frequent complication of prostaglandin pregnancy termination, occurring 30%-40% of the time, said Dr. Dickinson, associate professor of maternal-fetal medicine at the University of Western Australia School of Women's and Infants' Health, Crawley. Potential complications of placental retention include increased blood loss, infectious morbidity, operative complications, and increased requirement for blood transfusion.

However, current protocols for third-stage management vary, so she and her associates conducted a study intended to develop a third-stage management protocol that would minimize the incidence of placental retention and associated complications among 251 women undergoing pregnancy termination at the university with intravaginal misoprostol at 14-24 weeks. They randomized the women to one of three management strategies: 83 women to receive 10 units of intramuscular oxytocin after delivery of the fetus (group 1); 83 women to receive 600 mcg oral misoprostol after delivery of the fetus (group 2); and 85 women to receive no additional medication after delivery of the fetus (group 3).

The primary outcome was incidence of failure of placental expulsion within 60 minutes of fetal delivery, with the need for operative removal.

Dr. Dickinson, who had no conflicts to disclose, reported that there were no significant differences between the three groups in terms of maternal age (mean, 31 years), race (93% white), parity (mean, one), prior uterine surgery (mean, 20%), median gestational age at study recruitment (19 weeks), or duration of termination (mean, 17 hours). The researchers did observe a significant difference between the groups in the incidence of placental retention (10% in group 1, 29% in group 2, and 31% in group 3). Logistic regression analysis of placental retention rates revealed that the odds ratio between groups 1 and 3 was significant (OR, 0.24), but between groups 2 and 3 it was not (OR, 0.92). Calculated blood loss was significantly lower in group 1 compared with the other groups (100 mL vs. 200 mL in groups 2 and 3). There were no significant differences among groups 1, 2, and 3 in terms of duration of hospital stay (30 hours, 33 hours, and 29 hours, respectively), readmission (7%, 4%, and 9%), or need for curettage (4%, 2%, and 6%).

In a later interview, Dr. Dickinson said that for centers and countries with limited access to hospital facilities, this protocol "potentially offers a simple and effective means to management of the third stage and improved safety for women with pregnancy loss in the second trimester." ■

Pregnancy B_{12} Levels Associated With Neural Tube Defects

BY ELIZABETH MECHCATIE

A low vitamin B_{12} blood level was an independent and significant risk factor for having a pregnancy affected by a neural tube defect in a study of Irish women, in what the authors say is the first study to examine the risk of the birth defect associated with maternal B_{12} concentration.

Their results have public health implications in terms of possible fortification of grains with B_{12}, although more studies are needed to learn more about the safety of this approach and the optimal protective dose of B_{12} in food, according to Anne M. Molloy, Ph.D., of Trinity College, Dublin and her associates.

The data indicated that most of the neural tube defect (NTD) risk was limited to maternal B_{12} levels at approximately 250 ng/L or less, although the data suggested that the risk could be further lowered if the B_{12} level was above 320-350 ng/L. Based on this, they recommended that women have a vitamin B_{12} level above 300 ng/L before conceiving.

The other authors were from the Child Health Epidemiology Unit at the Health Research Board in Dublin; and the Eunice Kennedy Shriver National Institute of Child Health and Human Development at the National Institutes of Health and the National Human Genome Institute at NIH (Pediatrics 2009;123:917-23). Because the neural tube defect rate in Ireland is high, NIH and Irish researchers have worked together on NTD studies.

The study compared B_{12} levels in stored blood samples of three groups of Irish women, at a median 15 weeks' gestation, obtained between 1983 and 1990, before food was fortified with folic acid and when vitamin supplementation during pregnancy in Ireland was not common. Mandatory folic acid fortification of grains in the United States has been reported to have reduced the incidence of NTDs by as much as 78%. But folic acid cannot prevent all NTDs and low maternal B_{12} has previously been associated with a risk of NTDs, the authors wrote.

The three groups were composed as follows: 95 women with a pregnancy affected by a NTD (mean age 27 years) and 265 controls with a normal pregnancy (mean age 28 years); 107 women who had had a previous pregnancy affected by an NTD but were pregnant again with an unaffected pregnancy (mean age 32 years) and 414 controls (mean age 28 years); 76 women during an affected pregnancy (mean age 27 years); and 222 controls (mean age 28 years).

When compared with controls, the B_{12} levels were significantly lower among the women who had a pregnancy affected by a NTD, with levels below 250 ng/L associated with the greatest risk. The risk of having a pregnancy affected by an NTD was three times greater among women with B_{12} concentrations below 200 ng/L, compared with those whose levels were above 400 ng/L. The median B_{12} concentrations among the affected women in all three groups were 13%-19% lower than those with unaffected pregnancies, a significant difference.

Since B_{12} values were obtained at a median 15 weeks' gestation, at which time the level naturally would have dropped by about 20%-25%, "our data indicate that women should aim to enter pregnancy" with serum B_{12} concentrations above 300 ng/L," the authors concluded, adding that concentrations above 400 ng/L "might be desirable, although we found no statistically significant benefit," for that value.

The researchers did an analysis to determine if the effects of B_{12} and folate on NTD risk were independent, which found "little interaction between B_{12} and folate," they said. Mandatory fortification of grain products in the United States with folic acid, the synthetic version of the vitamin folate, has been reported to reduce NTD incidence by as much as 78%. But, "it is generally agreed that not all NTDs are preventable by folic acid."

In a statement issued by NICHD, Dr. James Mills, one of the authors and a senior investigator in the NICHD's division of epidemiology, statistics, and prevention research, pointed out that since dietary B_{12} is contained in milk, poultry, and other animal sources, women who are on a strict vegan diet may be at an increased risk of an NTD. He also advised that women with intestinal disorders who may not absorb an adequate amount of B_{12} should consult with physicians before pregnancy, to ensure that they are getting enough of this vitamin.

The authors had no relevant disclosures. ■