C-Section Increases Later Risk of Placenta Previa

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Toronto — Women whose first babies are delivered by cesarean section face an elevated risk of placenta previa and placental abruption in their second pregnancies. And with two previous cesarean deliveries the risk of placenta previa is increased further in the third pregnancy, according to a study by Dr. Darios Getahun of the Robert Wood Johnson Medical School in New Brunswick, N.J., and his colleagues.

The study, which was recently published (Obstet. Gynecol. 2006;107:771-8), was presented as a poster at the annual meeting of the Society for Gynecologic Investigation.

"Although cesarean section has previously been reported as a risk factor for placenta previa, it has not been previously associated with abruption," Dr. Getahun said in an interview at the meeting. "Cesarean section causes scarring of the uterine wall, with the result that placentation may not be optimal. That's why it may be leading to abruption," he explained.

The study included a cohort of women from the Missouri longitudinally linked live birth and fetal death data files. Singleton births were analyzed for 156,475 women whose first two consecutive births occurred in the 1989-1997 study period, and 31,102 women whose first three consecutive births occurred within that period.

Among 40,472 women whose first delivery was by cesarean section, the relative risk of placenta previa was 1.5, and that of placental abruption was 1.3 in the second pregnancy, compared with women whose first delivery was vaginal.

There was a dose response noted for the risk of placenta previa, but not for placental abruption risk. Therefore, when both the first and second deliveries were by cesarean section, the risk of placenta previa doubled in the third pregnancy, but the risk of placental abruption did not increase further, compared with women whose first two deliveries were vaginal.

The interval between pregnancies also was analyzed, and the study found that for cesarean deliveries, but not vaginal ones, an interval of less than 1 year was associated with a relative risk of 1.7 for placenta previa and 1.5 for placental abruption. ■

Neonate Benefit

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before randomization, all the women received a 500- mL saline bolus (0.9%) to offset the potentially dehydrating effects of GTN, according to Dr. Smith. The GTN patch delivered a dose of 0.4 mg/hr and was replaced once after 24 hours.

GTN is a smooth muscle relaxant, but the improvement in neonatal outcome may have resulted from improved blood flow to the placenta or uterus.

Among the 153 women left in the final analysis, neonatal outcome was significantly improved in those receiving the GTN patch, with a composite score of 3, compared with a score of 11 among the placebo group, for a relative risk of 0.29. This effect was limited to those women who were at 28 weeks' gestation or less. There was one case of chronic lung disease in the GTN group, compared with seven in the placebo group; two cases of IVH in the GTN group, compared with one in the placebo group; and no cases of NEC, PVL, or perinatal mortality in the GTN group, compared with two, two, and three cases, respectively, in the placebo group.

Although there was no significant effect of GTN on time to delivery, the medication resulted in a nonsignificant 7-day prolongation of pregnancy, said Dr. Smith, suggesting that the effect might have reached significance with higher numbers.

GTN is a smooth muscle relaxant and thus might relax the smooth muscle of the uterus, he explained. Since this effect was not observed, he suggested that the improvement in neonatal outcome might possibly result from improved blood flow to the placenta or uterus. Side effects were seen more commonly in the GTN group, with a relative risk of 1.41, headache being the most common. ■