Pregnancy Outcomes Not Marred by H1N1 Flu

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CHICAGO – H1N1 influenza infection during the 2009 pandemic did not impact pregnancy outcomes in a retrospective cohort study of 887 women.

Subtle differences were observed, however, among women with severe infection or delayed treatment, Dr. Amber Naresh reported at the meeting.

She presented a retrospective cohort study performed at three tertiary care medical centers of all inpatient and outpatient cases of pregnant women with laboratory-confirmed 2009 H1N1 influenza. For each case, five pregnant women who tested negative for H1N1 influenza or were untested were randomly chosen from each site’s database and matched by estimated date of confinement and site.

Based on a preliminary analysis, the 147 H1N1 cases and 740 controls had nearly identical birth weights (average 3,208 g vs. 3,219 g) and gestational ages at delivery (average 38.5 vs. 38.7 weeks).

After the investigators controlled for study site, age, race, multiplicity, parity, medical conditions, and smoking, the cases and controls also had similar rates of the following:

- Term low birth weight (5.6% vs. 3.6%; odds ratio, 1.45).
- Preterm delivery less than 37 weeks' gestation (13.3% vs. 11.6%; OR, 1.10).
- Premature rupture of membranes (1.7% vs. 2.6%; OR, 0.61).
- Abruption (0.9% vs. 1.2%; OR, 0.49).
- Cesarean section (27.5% vs. 30%; OR, 0.82).
- Induction (36% vs. 39%; OR, 0.83).
- Fetal anomalies (4.7% vs. 4.9%; OR, 1.24).
- Hypertensive disorders of pregnancy (14.3% vs. 13.2%; OR, 0.98).
- Neonatal ICU admission (13% vs. 11%; OR, 1.21).

“There did not appear to be any significant differences in pregnancy outcomes between cases and controls,” said Dr. Naresh of Magee-Women’s Hospital of the University of Pittsburgh.

Pregnancy outcomes also did not differ when stratified by trimester, although more infections occurred in the second trimester, followed by the third and first trimesters, she said.

Previous case series have suggested an increased rate of preterm delivery, reaching 30% in an early report of H1N1 influenza in pregnancy and 60% among critically ill women. A recent study also reported lower birth weights among 16 women with proven H1N1 infection, compared with 25 women with influenza-like illness (Am. J. Obstet. Gynecol. 2011;204[Suppl. 1]:S18-63), she said.

A subgroup analysis of women in the current study with severe disease, defined as requiring hospitalization, identified a nonsignificant trend for lower birth weight, compared with controls (3,013 g vs. 3,219 g), and lower gestational age (37.9 weeks vs. 38.7 weeks).

The combined outcome of term low birth weight, preterm birth, and abruptio was significantly more common among the severe H1N1 cases than controls after study site, age, race, multiplicity, primiparity, medical conditions, and smoking were controlled for (31.4% vs. 15.7%; OR, 2.45). In addition, more than 30% of women in the severe group had complications, compared with only 15% in the control group.

All cases of H1N1 influenza were significantly more likely than controls to be black (27% vs. 19%), and to have prepregnancy diabetes (4% vs. 1%), seizure disorder (3.4% vs. 0.8%), and asthma (17% vs. 9%). The average age of the cohort was 28 years.

Major Finding: Cases and controls had nearly identical birth weights (3,208 g vs. 3,219 g) and gestational ages at delivery (38.5 weeks vs. 38.7 weeks).

Data Source: Retrospective cohort analysis of 147 pregnant patients with 2009 H1N1 influenza and 740 pregnant controls.

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