**Rapid PCR Could Cut Intrapartum Antibiotic Use**

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**WASHINGTON** — Use of real-time polymerase chain reaction to screen for group B Streptococcus in the delivery room could reduce the use of intrapartum antibiotics by more than half compared with antenatal screening alone, the findings of a single-center study of 232 pregnant women suggest.

Current CDC guidelines call for vaginal and rectal swabs at 35-37 weeks’ gestation and for all women with cultures positive for group B Streptococcus (GBS) to receive intravenous antibiotic prophylaxis during labor and delivery (MMWR 2002;51[RR1]:1-12). This practice has greatly reduced the rates of neonatal sepsis in the United States, but it is imperfect. Women whose status is unknown at the time of labor also must receive prophylaxis, resulting in overtreatment, while cultures can fail to detect GBS in women who are lightly colonized, resulting in failure to treat.

Rapid testing at the time of delivery using real-time polymerase chain reaction (RT-PCR) has the potential to solve these problems, Dr. Stefan Gerber and his associates said in a poster presentation at the jointly held annual Interscience Conference on Antimicrobial Agents and Chemotherapy and the annual meeting of the Infectious Diseases Society of America.

Of 232 women presenting for vaginal birth at University Center Hospital, Lausanne (Switzerland) in an 8-month span, 19% (44) had positive GBS cultures at 35-37 weeks, 65% (152) had negative cultures, and 16% (36) had unknown GBS status at the time of delivery. Per the guidelines, 34% of the women (80) received prophylactic antibiotics during labor, but treatment was completed (at least two doses or at least 4 hours of intravenous antibiotics) in just 21% (17).

Lower vaginal and rectal swabs were obtained in all the women in the delivery room (the 35-37 weeks detection was performed by both culture and RT-PCR, using Cepheid’s Xpert GBS test, which runs on the GeneXpert System, a fully automated molecular testing system). Results were available in 75 minutes (compared with 2 days for cultures). By RT-PCR, just 15% (35) of the women were GBS positive, suggesting that 19% (45) of the women had received unnecessary prophylaxis, Dr. Gerber and his associates at the hospital reported.

Of the 35 PCR-positive women, 7 had negative cultures—presumably because they were only lightly colonized with GBS as outlined in the guidelines. Of the 17 PCR-negative women, all were classified as colonized at delivery.

The results were presented in a poster at the annual congress of the International Society for the Study of Hypertension in Pregnancy. Overall, there was a graded relationship between the severity of PET and the risk of cardiac disease. Women with severe PET had more than twice the risk of developing cardiovascular disease than that of women with uncomplicated pregnancies, based on results of a meta-analysis that included more than 100,000 preeclamptic women.

Results from previous studies have shown associations between preeclampsia and increased risk of stroke and hypertension later in life. To evaluate the long-term risk for cardiovascular problems in women with preeclampsia or eclampsia (referred to as PET), Dr. Sarah McDonald and her colleagues at McMaster University, Hamilton, Ont., conducted a meta-analysis of 5 case-control studies and 10 cohort studies. The studies included data from 118,990 preeclamptic women and 2.3 million women without PET. The selected studies examined the development of cardiovascular disease or mortality at more than 6 weeks postpartum in women with and without PET. Most (11 of 15) studies focused on women aged younger than 56 years. The results were presented in a poster at the annual congress of the International Society for the Study of Hypertension in Pregnancy. Overall, there was a graded relationship between the severity of PET and the risk of cardiac disease. Women with severe PET had a fivefold increase in risk compared with women who did not have PET. The risk ratios for cardiac disease for mild, moderate, and severe PET were 2.00, 2.99, and 5.36, respectively. In a pooled analysis of the case-control studies, women with a history of PET were more than twice as likely to develop cardiac disease (odds ratio 2.47). In a pooled analysis of the cohort studies, women with history of preeclampsia had a significantly increased risk of cardiac disease (relative risk 2.33), cardiovascular mortality (relative risk 2.29), cerebrovascular disease (relative risk 2.03), and peripheral artery disease (relative risk 1.47).

Despite the large numbers of patients in this meta-analysis, more research is needed to determine the mechanisms behind the association between PET and heart disease, and to develop interventions to prevent these complications, the researchers noted.

Dr. McDonald stated that she had no financial conflicts to disclose.