Polymicrobial Urine Cultures Appear Benign

B Y K AE JOHNSON
MONTE RAL
Although bacteriuria in early pregnancy has been associated with pyelonephritis and preterm delivery, the same is not true for polymicrobial urine cultures or “mixed flora,” said Dr. Amber Naresh of Magee-Women’s Hospital, Pittsburgh.

“Urine cultures with polymicrobial growth in the first half of pregnancy are essentially the same as negative cultures as far as these pregnancy outcomes are concerned,” Dr. Naresh said at the annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology.

Her retrospective cohort study, carried out between 2004 and 2007, compared 449 women with urine cultures with negative urine cultures, all at less than 20 weeks’ gestation. Polymicrobial growth was defined as mixed flora of more than 100,000 colony forming units per milliliter.

Admissions for pyelonephritis were identified by ICD-9 codes, and gestational age at delivery was determined from a research registry.

The rates of pyelonephritis were the same in the women with polymicrobial growth and those with a negative urine culture (0.22% and 0%). Similarly, preterm delivery at less than 37 weeks’ gestation occurred in 18% of women with polymicrobial growth and 16% of those with negative urine cultures, and delivery at less than 34 weeks occurred in 6% and 5%, respectively. Dr. Naresh reported.

There were no differences between the groups in maternal age, race, socioeconomic status, or tobacco use, but women with polymicrobial growth had higher rates of group B streptococcus (GBS) infection (41% vs. 32%). “Put another way, women with GBS were more likely to have polymicrobial growth than women who were GBS negative,” she said, adding that those with vaginal GBS may “have a higher bacterial load in the ‘I believe these cultures likely represent contamination, and I feel I can safely recommend that they do not have to be repeated’ vagina and are therefore more prone to having contamination of their urine specimen.”

Women with polymicrobial growth also were more likely to have a previous preterm birth (8.7%), compared with women with negative urine cultures (1.3%). “Unfortunately, I don’t have an explanation for this, especially since there is no association between polymicrobial growth and preterm delivery in the current pregnancy,” she said.

The mean date of collection of urine was 12.3 weeks of gestation in the polymicrobial group and 11.6 weeks in those with negative cultures. “It’s a question that has any clinical significance, although it clearly has statistical significance,” Dr. Naresh said.

Practices vary among obstetric providers regarding management of polymicrobial growth in urine cultures. “Some practitioners routinely repeat the culture—at least that’s a very common practice at my institution. They feel that the polymicrobres may themselves be pathogenic, or may be covering up a monomicrobial infection. Others regard it essentially as a negative result, and still others might treat with antibiotics,” Dr. Naresh said.

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