Postpartum Pertussis Vaccine Has Potential

BY HEIDI SPLETE
Senior Writer

WASHINGTON — A majority of new mothers at high risk for pertussis were receptive to a postpartum pertussis vaccine before leaving the hospital, based on data from more than 1,000 women after implementation of a new hospital protocol.

"Most pertussis deaths occur in infants less than 6 months," who are too young to have completed their primary vaccination series, Dr. C. Mary Healy said at the jointly held Interscience Conference on Antimicrobial Agents and Chemotherapy and the annual meeting of the Infectious Diseases Society of America.

Pertussis rates in Texas have risen in recent years, especially among Hispanic infants, said Dr. Healy of Baylor College of Medicine, Houston. Hispanic infants have a 74% higher incidence of pertussis compared with infants of other ethnicities, for reasons that are poorly understood. In 2007, approximately 70% of pertussis-related deaths in the United States occurred among Hispanic infants.

In more than 75% of infant pertussis cases, the infants are infected by someone in the household. In 2006, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices recommended a targeted immunization strategy called "cocooning." This plan calls for a booster dose of the tetanus, diphtheria, acellular pertussis (Tdap) vaccine for postpartum women, contacts of infants younger than 1 year, and health care providers who treat infants aged younger than 1 year.

But cocooning poses challenges, Dr. Healy said. "The cornerstone to the success of cocooning is immunizing postpartum women. This puts the onus on obstetricians to both recommend and potentially administer vaccine."

To improve protection against pertussis in a high-risk, medically underserved and uninsured Hispanic population, Dr. Healy and her colleagues implemented a protocol of postpartum Tdap vaccination at a hospital in Houston and presented preliminary results at the meeting.

The investigators instructed hospital personnel through grand rounds, small group in-service programs, and educational materials. They initiated a standing order for postpartum Tdap immunization (barring medical contraindications) and provided information about the vaccine to all postpartum women.

From Jan. 7 to April 30, 2008, 1,127 (73%) of 1,553 postpartum women received Tdap before leaving the hospital. The median age of the mothers was 26 years, and approximately 55% were aged 20-30 years.

"But let me draw your attention to the group aged 10-19 years," Dr. Healy said. "Not only are they at particularly high risk for transmitting pertussis to their infants, but they are eligible for free vaccines under the Vaccines for Children Program, so cost should not be a barrier." Approximately 11% of the mothers in the study were aged 10-19 years.

A total of 93% of the study group was Hispanic, 4% were black, and the rest were white or another ethnicity.

"In general, Tdap vaccine was well, and even enthusiastically, accepted by mothers and health care providers alike," Dr. Healy said. "Wherever possible, Td [tetanus-diphtheria toxoids vaccine] during pregnancy is now deferred in favor of postpartum Tdap," she added.

The investigators reviewed data from 426 mothers who were not immunized, and found that they were more likely to be black and older, compared with the immunized women. In a subset of 117 women who refused Tdap, more than 80% claimed that they had received Td during pregnancy. But a review of patient records found that 32% of women who reported receiving Td had received another medication, usually a flu vaccine.

In this study, postpartum immunization was successfully implemented through a standing order protocol that may be a model for protecting infants against pertussis and other vaccine-preventable diseases, said Dr. Healy. Education of health care providers was critical in ensuring the success of the program.

The Tdap vaccine for the study was donated by Sanofi Pasteur. Dr. Healy stated that she had no personal financial conflicts to disclose. ■