Accelerated Hep B Vaccine Schedule Safe, Effective for Pregnant Women

June 30, 2011

An accelerated hepatitis B virus (HBV) vaccination schedule for pregnant women was found to be effective and well tolerated by a team of researchers at University of Texas (UT) Southwestern Medical Center. The scientists suggest these findings, published in the May 2011 issue of Obstetrics & Gynecology, may serve as a potential new protocol to protect pregnant women who are at a high risk of HBV infection.

While the normal three-shot regimen of the HBV vaccine for adults given over a six-month period has long been recommended for pregnant women, that schedule often proved unmanageable in the course of a pregnancy.

The research team stepped up the process for pregnant women, using the normal three-shot dosage given to adults but compressing it into a 12-week period. That regimen is the shortest recommended schedule in non-pregnant adults that still offers protective long-term immunity.

“Now that we’ve shown it’s efficacious in pregnancy, people are interested,” said Jeanne Sheffield, MD, who heads UT Southwestern’s maternal-fetal medicine fellowship program and is the lead author of the study. “We’ve already received a number of requests for our specific protocol from physicians who see high-risk patients and are interested in starting a vaccination program.”

In the United States, nearly 1.5 million people live with chronic HBV infection, and it is the underlying cause of 3,000 deaths per year. The American College of Obstetricians and Gynecologists recommended in 1993 and in 2007 that pregnant women at risk for hepatitis B should receive vaccination.

Sheffield said, however, that health care providers seldom offer the hepatitis B vaccine series to reproductive-age women because of lack of physician and patient education, patients’ fear of vaccination and its purported side effects, and the overall reluctance to vaccinate pregnant women.

In the current study, conducted at Parkland Memorial Hospital in Dallas, Sheffield’s group enrolled high-risk women with a current diagnosis of a sexually transmitted infection, current history of injection drug use or both. Of 200 women enrolled in the six-year period, 168 received all three doses of the vaccine.
The researchers found that race, maternal age, tobacco and alcohol use, and gestational age at first vaccination did not affect seroconversion rates or the development of antibodies against HBV using the accelerated schedule. Obesity had a negative influence, however.

The accelerated schedule in pregnancy had seroconversion rates (90 percent) that were comparable to the standard schedule in healthy adults. The study also showed no increase in preterm delivery rates or neonatal intensive care admissions.

“The vaccine was well tolerated in our pregnant women, and no serious adverse events were reported,” Sheffield said. “Initial concerns about the ability of a pregnant woman to mount an effective immune response to a vaccine are largely unfounded. It’s doable.”