AFP Testing Is Expensive, Now Largely Obsolete

BY DAMIAN MCNAMARA Miami Bureau

MIAMI BEACH — Maternal serum α -fetoprotein is no longer an effective or costeffective second-trimester screen for neural tube defects in an era when women routinely undergo first-trimester Down syndrome screening and subsequent ultrasound, Dr. Todd J. Rosen said at the annual meeting of the Society for Maternal-Fetal Medicine. Before ultrasound was commonplace back in the 1970s and 1980s—women got an α -fetoprotein (AFP) test for spina bifida and anencephaly. "Now more and more women are screening for Down syndrome in the first trimester, and it is routine for women to do an ultrasound screen as well," said Dr. Rosen of the division of maternal-fetal medicine, Columbia University, New York. Dr. Rosen and his associates assessed clinical and cost effectiveness of AFP testing for U.S. women who had a first-trimester Down syndrome risk assessment and second-trimester ultrasound examination. They used a decision analysis model that assumed ultrasound provides 100% detection of anencephaly and 92% detection of spina bifida (the lowest percentage reported in the literature). To put AFP testing in the most favorable light, the model assumed a 92% detection rate for spina bifida (the highest in the literature) with a 3% falsepositive rate.





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The model predicted an estimated 4,000 neural tube defects among the approximate 4 million births in the United States in 2003. Screening of all these women with ultrasound would detect 2,208 of the 2,400 cases of spina bifida. AFP testing would yield 120,000 positive results and detect 176 of the 192 cases of spina bifida missed by ultrasound.

"The AFP test induces anxiety—for every 10,000 women who screen positive, only 3 will have a baby with spina bifida," Dr. Rosen said. AFP screening in women who undergo first- and second-trimester ultrasound examinations has a poor predictive value and causes more pregnancy losses from amniocentesis than cases of spina bifida it detects, he added.

In addition, "by continuing to do AFP, we are spending all this money," Dr. Rosen said. For example, universal screening in the study cohort would cost \$184 million. Because about 40% of women terminate a pregnancy because of spina bifida (in this model, 70 of 176 women), the cost becomes \$2.6 million for each case prevented. With the assumption that 50% of women with an elevated AFP result have amniocentesis, and the procedure's loss rate is 1 fetus per 250, 245 women would lose their pregnancies, he estimated.

"As doctors we are really caught. We want to do what is right for patients, but we have a high risk of malpractice [suits]," he said. "Because we are so wary of missing anything, we err on the side of overtesting and this can do more harm than good."

Herpes Hepatitis: Timely Diagnosis Can Be Lifesaving

HONOLULU — The diagnosis of herpes simplex hepatitis in pregnancy is one that simply can't afford to be missed, Dr. Eileen Hay said at the annual meeting of the American College of Gastroenterology.

That's because treatment with acyclovir or vidarabine is lifesaving—and without it, one-half of affected mothers will die of fulminant hepatitis, stressed Dr. Hay, professor of medicine at the Mayo Medical School, Rochester, Minn.

Herpes hepatitis is a rare disorder. In pregnancy, it occurs in the third trimester. It is usually but not always preceded by a flulike viral prodrome. The typical mucocutaneous herpetic lesions aren't always present.

The characteristic features of this infection are the third-trimester presentation, marked elevation of transaminases (with levels often in the thousands) along with coagulopathy, and encephalopathy, but no jaundice.

Liver biopsy shows hepatocytes with the classic viral inclusion bodies of herpes simplex virus.

It's necessary to consider delivery only in the very rare instance where the patient shows no response to antiviral therapy, Dr. Hay said.