

VLBW Multiples Face Greater Mortality Risk

BY DAMIAN McNAMARA
Miami Bureau

MIAMI BEACH — Contrary to prior reports, very-low-birth-weight multiples have significantly greater morbidity and mortality than weight-matched singleton fetuses, according to a study presented at the annual meeting of the Society for Maternal-Fetal Medicine.

Researchers assessed outcomes for 1,779 infants born between July 1993 and July 2004 who weighed less than 1,500 g at birth.

They compared risk of death and severe intraventricular hemorrhage (IVH) among 475 infants from multiple gestations and 1,304 singletons.

When the researchers examined the data for multiple fetuses, “we saw increased neonatal death and/or severe IVH,” Dr. Edward Hayes, of Thomas Jefferson University Hospital in Philadelphia, said during a poster presentation. The risk of death for a VLBW infant born as part of a multiple pregnancy was higher than that of a VLBW singleton (odds ratio 1.3).

The risk increased as birth weights decreased, Dr. Hayes said. The multiples group included 206 infants born weighing less than 1,000 g and 86 weighing less than 750 g.

Mortality risk among multiples below 1,000 g carried an odds ratio of 1.5, and below 750 g the odds ratio was 1.9, compared with weight-matched singletons. “The risk was twice as high when you’re a multiple [below 750 g],” Dr. Hayes said. The singletons group included 578 born weighing less than 1,000 g and 262 weighing less than 750 g.

The mean gestational age at birth was 28 weeks in both groups; the mean birth weight was 1,039 g in the multiple group

and 1,035 g among singletons. There were no significant differences between the groups in mean gestational age or mean birth weight.

However, significant differences existed between mothers in the two groups. For example, the percentage who were white differed (68% of mothers of multiples vs. 43% of mothers of singletons); as did mean maternal age (29 years vs. 26 years); birth at the facility (95% vs. 86%); use of prenatal steroids (74% vs. 58%); preeclampsia (14% vs. 24%), and preterm labor (74% vs. 62%). The investigators used a multivariate analysis to control for these differences and then compared groups for neonatal morbidity and mortality.

The risk of severe, grade 3-4 intraventricular hemorrhage was higher among VLBW infants born as part of a multiple pregnancy (odds ratio 1.2) versus similar singletons. The risk of this outcome was similar for neonates in the multiple groups below 1,000 g or 750 g (odds ratio 1.1 for both).

The etiology of the higher risk among multiple gestation VLBW infants remains unknown, Dr. Hayes said. Researchers have theorized that multiples are more stressed than singletons because they share the same space in utero. “But I don’t agree,” he said. He instead proposed that prenatal steroids play a role. “More data are coming out showing it’s just the number of fetuses—you’re giving the same dose of medicine to more. It’s 12 mg of betamethasone whether you have one or more fetuses.”

The practice of giving the same dosage of prenatal steroids despite the number of fetuses is not likely to change soon, Dr. Hayes said. “There is no evidence in the literature for giving multiples a higher dose of steroids.” ■

Rapid Fetal Fibronectin Test

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contractions, intact membranes, and gestations of fewer than 37 weeks. The researchers assessed safety and efficacy over 2 years following the adoption of a standard protocol for administering the test in April 2000 at Sutter Memorial Hospital in Sacramento.

Physicians collected a fetal fibronectin sample during sterile speculum examinations. Results were available within 1 hour. A total of 80 women (16%) tested positive. Positive results indicate an increased chance of delivering within the next 14 days.

In fact, of the women whose tests were positive, 14 (18%) delivered within 7 days and another 8 (10%) delivered within 14 days. This accuracy mirrors preterm delivery rates reported with the test in the research-setting studies, said Dr. Gilbert, the medical director of women’s services at Sutter Health, Sacramento Sierra Region.

The test’s true value might be for those women with a negative result. Of the 422 women who tested negative, only a few delivered within the subsequent 14 days. “Of the five women who did deliver, three delivered for reasons besides premature labor,” Dr. Gilbert said. The reasons included preeclampsia; fetal distress; and hemolysis, elevated liver enzymes, and low platelet count (HELLP syndrome). The false-negative rate, based on 5 women out of 422, is 1.2%.

The researchers also compared the length of stay for women with a primary diagnosis of preterm labor 6 months before and after adoption of the standard test protocol. There was a statistically significant decrease from 3.5 days to 1.5 days. They also looked at average evaluation time for these women. “The length of time in the triage area decreased from 6 hours to 1 hour,” Dr. Gilbert said. “So you save money.” ■

Training, Disclosures Are Key to Lowering Ultrasound Legal Risks

BY SHERRY BOSCHERT
San Francisco Bureau

KAILUA KONA, HAWAII — Clinicians who offer fetal ultrasounds in their offices should ensure that those performing the scans are properly trained and that they explain to patients the limitations of the technology, to reduce the risk of being sued over ultrasound results, several speakers said at a conference on obstetrics, gynecology, perinatal medicine, neonatology, and the law.

In recent years, sonographers and ultrasound technicians who used to work exclusively for radiologists have been hired by some obstetricians to do ultrasounds in their offices. Many malpractice suits arising from misinterpretation or mismanagement of fetal ultrasound derive from inadequate staffing, training, and education, said Kimberly D. Baker, J.D.

She said too many clinicians want to have a fully equipped office technologically but are unwilling to pay for the education and training needed to maximize use of the technology. Turf wars make it more common for radiologists and other experts to criticize obstetricians or general practitioners whose use of ultrasound contributes to a legal case, said Ms. Baker, a defense lawyer in Seattle who also holds a BS degree in nursing.

“If you are going to have someone in your office who does this, you need to make sure that they are adequately trained, that their status is updated, that they are educated, and that you have a quality review process for your staff,” she advised.

Dr. Dolores H. Pretorius noted during a question-and-answer session that the American Institute of Ultrasound in Medicine offers a voluntary set of credentialing mechanisms for physicians who perform ultrasound. “I think it is helpful to have that to defend yourself,” said Dr.

Pretorius, professor of radiology and director of imaging at the University of California, San Diego.

The expertise of the sonographer is especially important with multifetal pregnancies, Dr. Michael A. Belfort said in a separate presentation. “It’s not easy to scan twins and exponentially more difficult with triplets” or quadruplets. I can’t understand why some doctors, without specific experience in managing high-order multiples, will choose to follow quadruplets in their office with a small, low-tech ultrasound machine and no consultation with a maternal and fetal medicine specialist. I just don’t

think it’s worth the risk,” said Dr. Belfort, professor of obstetrics and gynecology at the University of Utah, Salt Lake City.

In particular, when scanning multifetal pregnancies, it’s important to get an early and accurate estimation of gestational age, determine amnionity and chorionity, and advise the patient of their implications.

Later in a twin pregnancy, one should consider following cervical length by ultrasound, because a woman with a cervix shorter than 25 mm at 24 weeks is more likely to deliver before 32-37 weeks than a woman with a longer cervix, Dr. Belfort advised. And definitely consider following cervical length in higher-order multiples.

An anatomic survey by a maternal-fetal medicine specialist is also advisable. It’s easy to miss an anomaly or scan the same fetus or parts of the fetus three times and think all three triplets are normal, he said.

One should reduce one’s legal risk by explaining the benefits and the limitations of ultrasound to patients, Ms. Baker said at the meeting, sponsored by Boston University. Document in the chart that you explained the technology’s limitations as they apply to the particular patient instead of relying on one-size-fits-all consent forms, she advised. ■

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MS. BAKER



A short cervix, such as this one, in a woman with a multifetal pregnancy connotes a higher risk for preterm delivery, which ultrasound could detect early on.