

Risks Called Manageable for the Mature Gravida

Consider treating every visit as a preconception visit because many later pregnancies are unintended.

BY ALICIA AULT

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ASHEVILLE, N.C. — The potential pitfalls around conception and childbirth can be daunting—and more so in women over age 35—but the physician can help ensure better outcomes by addressing concerns head-on and being supportive, said Dr. James E. Ferguson II at the Southern Obstetric and Gynecologic Seminar.

Patients would be better served if physicians approached the situation with optimism rather than pessimism, despite increasing odds against successful conception and complication-free childbirth as women age, he said.

It's no secret that pregnancies are being delayed, said Dr. Ferguson, chairman of the obstetrics and gynecology department at the University of Kentucky.

Data on older mothers generally show that postpartum and intrapartum compli-

cations—such as obstructed labor, prolonged labor, preeclampsia, and prematurity—are much higher in women over age 40, compared with those aged 20-29, he said.

But there are some contradictions. For instance, the First and Second Trimester Evaluation of Risk of Aneuploidy (FASTER) study, conducted from 1999 to 2002, found no difference in gestational hypertension or preeclampsia between the under- and over-35 groups (*Obstet. Gynecol.* 2005;105:983-90). One caveat: The study population was mostly healthy, wealthy, and white, said Dr. Ferguson. The risk of spontaneous abortion was higher in the over-40 group, as were chromosomal abnormalities, low birth weight, and perinatal loss.

The likelihood of both maternal and fetal death also increases with age, Dr. Ferguson noted. But it doesn't have to be all bad news, he said. For instance, a mid-

1990s study found that there were 4 fetal deaths per 1,000 live births in 34-year-old mothers, compared with 6-9 per 1,000 in 39-year-old mothers (*N. Engl. J. Med.* 1995;333:1,002-4). Viewed from an individual's perspective, those aren't such bad odds, said Dr. Ferguson. "I personally find this very reassuring rather than very frightening," he said.

Similarly, though maternal deaths increase significantly after age 39, the rate per 100,000 live births overall is still fairly low, said Dr. Ferguson. Compared with 25- to 29-year-olds, the relative risk of death is 2.3 for the 35- to 39-year-olds and 5.0 for women over 40, according to one study (*Obstet. Gynecol.* 2003;101:1,015-21). "It's much less significant than it is in the patient's mind," he said, adding, "You can reassure her."

Causes of death include pulmonary embolism, pregnancy-induced hypertension, and hemorrhage, either related or not related to ectopic pregnancy. Women over age 40 are at risk because of increased incidence of underlying medical conditions, more postpartum complications, and a

higher likelihood of cesarean section. There have been few studies in women over 45, but the few conducted have shown that about half the pregnancies involved complications, and that the risk was much greater for first-time mothers.

Because of the common tendency to put off childbearing—and because almost half of pregnancies are unintended—gynecologists might consider treating every patient office visit as a preconception visit, said Dr. Ferguson.

Patients should be quizzed about medical and immunization histories, and counseled on risks and genetic testing. Physicians should also offer help with reducing risky behavior like smoking and alcohol use.

Women should also be made aware of the latest research on birth spacing—a child born less than 18 months or more than 50 months after the previous birth has a greater risk of bad perinatal outcome, he noted (*JAMA* 2006;295:1809-23).

For the older mother, "there are some special risks, but I think they are manageable," Dr. Ferguson said. ■

CPAP May Benefit Women At Risk for Preeclampsia

BY SHARON WORCESTER
Southeast Bureau

SALT LAKE CITY — Use of continuous positive airway pressure may help prevent preeclampsia in pregnant women at risk for the condition, a study suggests.

In 9 of 12 women with risk factors for preeclampsia who used continuous positive airway pressure (CPAP) and medical therapy beginning before 9 weeks' gestation, blood pressure remained stable and pregnancy was normal, Dr. Christian Guilleminault reported in a poster at the annual meeting of the Associated Professional Sleep Societies.

Sleep-disordered breathing has been suggested by several studies as a possible contributor to preeclampsia. In one study, snoring was linked with preeclampsia, with the disorder occurring in 10% of snorers compared with 4% of nonsnorers. In another study, snoring was shown to be a significant predictor of hypertension and fetal growth retardation, even after controlling for maternal weight, age, and smoking status.

Based on such findings, some researchers have recommended polysomnography and/or CPAP use in pregnant women with risk factors—including snoring—for preeclampsia. In the current study, all 12 participants had risk factors for preeclampsia: All were snorers; seven had hypertension; two had prior preeclampsia; and three

were obese, with a body mass index (kg/m²) greater than 30.

The women, who had a mean age of 29 years, underwent polysomnography at a mean of 7.5 weeks' gestation, and all had flow limitations at the nasal cannula without apnea or hypopnea. Nasal CPAP was used in all participants at an initial pressure of 5-6 cm H₂O, and in eight women the pressure was increased to 6-9 cm H₂O at between 5 and 6 months' gestation.

Of the seven women with hypertension at baseline, diastolic blood pressure below 90 mm Hg was maintained without a change in medication. All seven delivered healthy, full-term infants, as did one of the women with a history of preeclampsia, reported Dr. Guilleminault, of the department of psychiatry at Stanford (Calif.) University. One of the obese women miscarried at near 14 weeks' gestation and the other delivered at 34 weeks, but did not develop preeclampsia.

The third obese patient and the second woman with prior preeclampsia developed clinical features of preeclampsia, and both underwent cesarean section at 7.5 months' gestation.

Systematic treatment with nasal CPAP initiated prior to 9 weeks' gestation was associated with stable blood pressure and normal pregnancy in most women with risk factors for preeclampsia, Dr. Guilleminault concluded. ■

New Test 'Aces' Preeclampsia Diagnosis

BY MITCHEL L. ZOLER
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LISBON — A triple test for diagnosing preeclampsia during the third trimester was correct about 90% of the time in a pilot study with 46 women.

"The generalizability of this test needs to be confirmed by using it on more women and on varied populations," Dr. Brendan J. Smyth said at 15th World Congress of the International Society for the Study of Hypertension in Pregnancy.

A diagnostic test for preeclampsia during the third trimester would aid the management of these women by both making diagnosis during pregnancy more reliable and by paving the way for studies aimed at developing new interventions, said Dr. Smyth, a researcher at Abbott Laboratories in Abbott Park, Ill.

Currently, the only reliable way to distinguish preeclampsia from other blood pressure disorders of pregnancy is retrospectively. The appearance of new-onset hypertension during the final 20 weeks of pregnancy may be preeclampsia, but only if it resolves 12-24 weeks post partum. If it doesn't resolve, then it's chronic hypertension. Preeclampsia can also be hard to distinguish from gestational hypertension because proteinuria might lag behind the rise in blood pressure.

The three-tiered test developed by Dr. Smyth and his associates used serum tests for two biomarkers, body mass index (BMI), and supine systolic blood pressure.

The serum tests measured levels of soluble fms-like tyrosine kinase 1 (sFlt-1) and placental growth factor (PlGF). Both factors are produced by the vascular endothelium during the growth of new blood vessels. The assays were run by Abbott Diagnostics, which is developing the tests; the tests are not yet commercially available. The specimens were collected in a study directed by Dr. Jason

Umans, associate director of the General Clinical Research Center at Georgetown University in Washington, supported in part by a grant from the National Institutes of Health.

The diagnostic criterion was the ratio of these two analytes. If the ratio of sFlt-1/PlGF was less than 1.9, women were diagnosed as not having preeclampsia. If the ratio was 1.9 or greater, preeclampsia was diagnosed.

BMI was used to diagnose chronic hypertension. Women with a BMI of at least 34 kg/m² were judged to have either chronic hypertension alone, or superimposed on preeclampsia. Among the women leaner than 34 kg/m², supine systolic blood pressure was a second means to diagnose chronic hypertension if the pressure was at least 135 mm Hg.

These diagnostic criteria were tested on 46 women and 85 of their serum specimens that were collected in the labor and delivery suites of two hospitals in Washington. The subjects included women with preeclampsia, chronic hypertension, superimposed preeclampsia on chronic hypertension, and healthy controls. All of the preeclampsia diagnoses were confirmed by following the patients postpartum.

At least one specimen was collected from each woman in the study. Second, and in some cases third, specimens were collected at weekly intervals from women who remained in the labor and delivery suites for longer periods.

The serum tests correctly classified 83 of the 85 specimens (98%) based on whether they came from preeclamptic or nonpreeclamptic patients. BMI then correctly classified 37 of 43 patients (86%) for the diagnosis of chronic hypertension. Among 42 women without preeclampsia and a BMI of less than 34 kg/m², a systolic blood pressure cutoff of 135 mm Hg enabled the correct diagnosis of chronic hypertension in another 38 patients (90%). ■

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