Early Fetal Growth Rate Helps Predict Macrosomia

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — Accelerated fetal growth in the midtrimester, as assessed by standardized growth potentials and ultrasound imaging, helped predict macrosomia in a study of 70 women who developed gestational diabetes.

Early suggestion of accelerated fetal growth offers a window of opportunity to optimize glycemic management” of the mother and potentially prevent macrosomic stillbirth and perinatal morbidity, Dr. Anita Manogura reported in a poster presentation at the annual meeting of the Society for Maternal-Fetal Medicine.

She and her colleagues prospectively followed 70 women who went on to develop gestational diabetes. The women underwent serial assessments, including standardized ultrasound exams for nuchal translucency screening (11-14 weeks gestation), detailed evaluation of anatomy (18-20 weeks’ gestation), and formal fetal echocardiogram (22-24 weeks’ gestation) and then every 4 weeks thereafter, wrote Dr. Manogura of the University of Maryland, Baltimore, and her associates.

They used the Gardosi method to predict individual fetal growth potentials based on fetal gender and the mother’s height, weight, parity, ethnicity, and other characteristics. Estimated fetal weights from imaging were converted to percentiles, with large for gestational age (LGA) defined as above the 90th percentile.

Early differences were seen between the 27 LGA infants and infants born at normal weights. By 24 weeks’ gestation, LGA infants had a median estimated fetal weight in the 54th percentile, significantly higher than for normal-weight neonates.

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“The potential to interrupt this progression by intensive midtrimester glycemic management deserves further study,” the investigators concluded.

Elevated estimated fetal weight percentiles on ultrasound did not predict adverse perinatal outcomes such as shoulder dystocia, cesarean delivery, or neonatal complications.

Outcomes Improved With Low Threshold for GDM Diagnosis

BY SARAH PRESSMAN
LOVINGER
Contributing Writer

Impaired maternal glucose tolerance can lead to poor pregnancy outcomes, and clinicians should use a lower threshold to diagnose and treat gestational diabetes, according to M. Kwik of the University of Sydney in Australia.

“Untreated glucose intolerance in pregnancy is associated with larger babies, more shoulder dystocia, and higher rates of preeclampsia,” reported M. Kwik and colleagues in Diabetes Research and Clinical Practice (2007 [Epub doi: 10.1016/ j.diabres.2006.12.004]).

The researchers conducted a retrospective study of women with a singleton pregnancy who received prenatal care at their hospital between February 2000 and May 2003. They excluded women who gave birth before 34 weeks’ gestation. The researchers identified 512 women with a 2-hour glucose level of at least 7.8 mmol/L and a fasting glucose of about 5.5 mmol/L following a 75-g glucose tolerance test (GTT). They obtained information on pregnancy outcomes for 478 (93%) of these women. The treated group comprised 267 women who had 2-hour glucose levels of more than 7.8 mmol/L and were diagnosed with gestational diabetes mellitus (GDM); these patients were managed according to guidelines. Another 213 women had 2-hour glucose levels of more than 7.8 mmol/L but did not meet criteria for GDM. They constituted the untreated group.

The researchers also evaluated 197 women with GTT values of 7.8 mmol/L or less who did not receive GDM management, and these participants were the comparison group. There were no significant differences in maternal age, body mass index, or proportion of primiparous women in the three groups.

The results showed a significant increase in mean birth weight, macrosomia, and shoulder dystocia in the untreated group vs. the comparison group (5.2% vs. 1.0%). There was also a statistically significant increase in induction of labor rates in the untreated group vs. the comparison group (27.7% vs. 19.3%). Additionally, the results showed a significantly higher preeclampsia rate in the untreated group vs. the comparison group (11.7% vs. 5.1%). The two groups’ cesarean rates were similar.

Alpha Fetoprotein Adjustment in Diabetes May Be Insufficient

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — Alpha fetoprotein adjustment in diabetes may be insufficient to prevent macrosomia, a study of 70 women who developed gestational diabetes found.

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Data Watch: Gestational Diabetes Follows Its Own Road

Gestational Diabetes

<table>
<thead>
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<th>Threshold</th>
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<tbody>
<tr>
<td>0.1%-0.5%</td>
<td>1.1%</td>
</tr>
<tr>
<td>0.6%-0.7%</td>
<td>6.1%-8%</td>
</tr>
<tr>
<td>0.8%-1.0%</td>
<td>4.1%-6%</td>
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<tr>
<td>≥1.1%</td>
<td>6.1%-8%</td>
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Nongestational Diabetes

<table>
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<tr>
<th>Threshold</th>
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</thead>
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<td>8.1%-10%</td>
<td>10.1%</td>
</tr>
<tr>
<td>≥1.1%</td>
<td>10.1%</td>
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Note: Based on 2005 data from the Behavioral Risk Factor Surveillance System.

Source: Centers for Disease Control and Prevention