A Practical Approach to Fetal Growth Restriction

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(Obstet Gynecol 2014;123:1057–69)

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Question 1:
While fetal growth restriction (FGR) is commonly defined as an estimated fetal weight less than the 10th percentile, do you see a role for customized or population-specific growth charts in the future?

Response from Drs. Copel and Bahtiyar:
Development of customized or population-specific fetal growth charts has been studied in the past. As such charts would be based on constantly changing demographics, they would need to be continuously updated. Creating individual growth charts for each ethnic and racial group might not be possible. However, growth charts for singleton gestations, twins, and triplets might be beneficial. Many of the customized growth charts require several scans to create the individual profile, so unless there are prior scans at the right gestational ages, they can be difficult to apply.

Question 2:
Does gestational age at the time of FGR diagnosis (ie, midtrimester compared with third trimester) influence your evaluation for potential causes?

Response from Drs. Copel and Bahtiyar:
Gestational age at which FGR is noted factors into our differential diagnosis. Earlier diagnosis, at less than 32 weeks of gestation, might point toward genetic problems. Fetal growth restriction diagnosed later in pregnancy might point toward medical complications of the mother or even skeletal dysplasias. Fetal growth restriction noted close to term or at term is often constitutional.
Question 3:

When FGR is diagnosed, is universal assessment of TORCH (toxoplasmosis, other viruses, rubella, cytomegalovirus, herpes simplex viruses) perinatal infections clinically useful if there is no fetal ultrasonographic evidence and no maternal history concerning for congenital infections?

Response from Drs. Copel and Bahtiyar:

We often obtain TORCH titers in patients with a new diagnosis of FGR, especially if there are other suggestive findings such as hepatic calcifications.

Question 4:

For obstetrician–gynecologists without available experts to perform additional Doppler velocimetry (ie, precordial venous system), is prenatal monitoring via umbilical artery Doppler assessment with standard antenatal testing sufficient to determine optimal delivery timing in the preterm fetus?

Response from Drs. Copel and Bahtiyar:

While Doppler ultrasound of the fetal venous system (ie, ductus venosus) appears to provide significant information about the status of a growth-restricted fetus, it is not required and careful monitoring with umbilical artery Doppler and standard tests of fetal well-being (nonstress test, biophysical profile) remain the standard at present.

Question 5:

How do you define inadequate interval growth over 14 days for the purpose of considering delivery?

Response from Drs. Copel and Bahtiyar:

To our knowledge there are no absolute criteria to assess adequacy of interval fetal growth. When adequacy of growth needs to be assessed, we simply plot the growth of the fetus against a standard growth chart and visually assess the slope of the growth. One simple rule of thumb is that the abdominal circumference grows approximately a centimeter a week throughout the second and third trimester.

We should also acknowledge that the gestational age at which the fetus is being evaluated is very important. There could be times when growth might be assessed as inadequate, but the rest of the fetal testing might be reassuring. In these cases, especially if the fetus is less than 32 weeks of gestation despite inadequate growth, we might still chose to observe the pregnancy.
Question 6:

The American College of Obstetricians and Gynecologists suggests two timing strategies when fetal growth restriction has been diagnosed. The first has to do with delivery of those women with isolated FGR, with a suggestion to deliver at 38 0/7 weeks to 39 6/7 weeks of gestation. The second suggestion is for delivery at 34 0/7 weeks to 37 6/7 weeks of gestation in cases of FGR with additional risk factors for adverse outcomes, which include maternal risk factors and other comorbidities. How do maternal risk factors and comorbidities influence your delivery timing recommendations for the preterm and early term fetus?

Response from Drs. Copel and Bahtiyar:

Once the diagnosis of FGR is confirmed we initially look at the whole pregnancy—that is, the mother and the fetus together—and assess whether there is any indication to deliver the pregnancy immediately. Every subsequent visit becomes an opportunity to revisit this decision, with a gradual shift toward deliver as the pregnancy progresses toward term. The gestational age at which this evaluation is done is very important. If we are dealing with a preterm fetus, we evaluate the mother carefully to reassess to see if her condition can be managed expectantly without compromising her health. We attempt to manage the mother expectantly as long as the fetal testing is reassuring.

Question 7:

Do you currently recommend any therapies, such as aspirin, for risk reduction of recurrent FGR in subsequent pregnancies? If so, what clinical circumstances determine a patient’s candidacy for preventive therapy?

Response from Drs. Copel and Bahtiyar:

We do not routinely recommend aspirin for risk reduction unless the FGR was part of severe preeclampsia prior to 37 weeks of gestation when patients would be eligible for low-dose aspirin during their subsequent pregnancy. In these patients, low-dose aspirin should be started before 16 weeks of gestation in order for the patient to benefit from risk reduction.

References