Born large for gestational age: not just bigger

TO THE EDITORS: A large-for-gestational-age (LGA) birthweight, defined as a birthweight above the 90th percentile, is associated with remarkable maternal and neonatal morbidity.1 LGA increases the risk of low neonatal Apgar score at 5 minutes, shoulder dystocia, and neonatal intensive care unit (NICU) admission. Maternal risks include higher cesarean delivery rates, postpartum hemorrhage, and third- and fourth-degree perineal lacerations. Recently, Bommarito et al2 identified and described trajectories of fetal growth among LGA births in the LIFECODES Fetal Growth Study based on prenatal ultrasound measurements of head circumference, abdominal circumference (AC), and femur length (FL). They differentiated 4 multivariate trajectories of fetal growth: catch-up growth, proportional AC-to-FL growth, disproportional AC-to-FL growth, and consistently large. The “catch-up growth” group was more likely to have maternal pregestational diabetes mellitus and macrosomia and be admitted to the NICU than other LGA subgroups. Therefore, it seems that several trajectories of fetal growth among LGA births exist, and different LGA groups are related to different pregestational exposures and risks of adverse outcomes.

However, this study has raised some important issues that should be addressed. All 4 LGA groups had both patients with pregestational diabetes mellitus and those with normal glucose homeostasis. This means that maternal glucose levels or controls are not the main factor for fetal overgrowth. Was there any difference in the effect of maternal glucose control among participants with pregestational diabetes mellitus in the 4 groups? Was there any difference in the gestational weight gain among patients in the 4 groups? Did those with pregestational diabetes mellitus and those with normal glucose homeostasis in the total LGA participants have different NICU admission rates? What were the reasons for neonatal NICU stay among the 4 groups, and was there any difference?

LGA poses both short-term risk of birth trauma and newborn morbidity and long-term risk of morbidity, such as overweight or obesity, diabetes mellitus, and cardiovascular disease.3 The prevention of LGA birthweight may decrease the risk of multiple complications (Figure). We agree with Bommarito et al2 that considering the overall trajectory of fetal growth may be more important than focusing on birthweight alone as some LGA categories might be caused by specific maternal health problems, which are at-risk aspects for developing fetuses. For example, 1 study found that random glucose and no regular physical activity at 20 weeks of gestation were associated with an increased risk of morbidity for LGA infants.4 Regular physical activity in midpregnancy can offer protection against the increased risk associated with higher maternal glucose levels.

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