Third Trimester Abnormal Oral Glucose Tolerance Test and Adverse Perinatal Outcome

Helen Schneider Hospital for Women, Rabin Medical Center, Petach-Tikva, Petach-Tikva, Israel

Objective
To describe perinatal outcomes of women who performed an oral glucose tolerance test (GTT) in the third trimester after a normal glucose tolerance test (GCT).

Methods
A retrospective cohort study of all women who delivered in a tertiary, university affiliated medical center between 2007 and 2012. Inclusion criteria were women with a normal 50g GCT (<140 mg/dL) followed by GTT, who delivered a live-born fetus beyond 28 weeks of gestation, without anatomical or chromosomal malformation. Perinatal outcome was stratified by results of GTT according to Carpenter and Coustan's criteria. Logistic regression analysis was utilized to adjust outcome to potential confounders.

Results
Overall, 323 women underwent a GTT following a normal GCT. Of them, 277 (85.8%) had all 4 normal values, 32 (9.9%) had a single pathological value and 14 had 2 or more pathological values. Our results demonstrate that the incidence of late-onset GDM is 14/323 (4.3%). Infants of mothers diagnosed and treated as GDM during the 3rd trimester had lower birthweights, compared to non-diabetics and those with a single pathological value GTT. Mothers with an abnormal GTT - either one or two and more pathological values, had higher rates of cesarean delivery.

Conclusion
Third trimester GTT can diagnose late-onset GDM. This may lead to a lower birthweight, presumably due to glucose control. No association was found to cesarean delivery rate or neonatal outcome.