THE EFFECT OF DIFFERENT FORMS OF MATERNAL DYSGLYCEMIA ON THE OCCURRENCE OF NEOnatal HYPOGLYCEMIA IN BABIES ADMITTED TO NICU

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I declare that I have no potential conflict of interest.

Objectives
We report the effect of different forms of dysglycemia on the occurrence neonatal hypoglycemia in a large cohort of pregnant women studied as a part of a PEARL-Peristat Study, funded by QNRF-Doha-Qatar

Material and Methods
Out of 12255 pregnant women screened during 2016-2017, 3027 women were identified with GDM during pregnancy (WHO criteria) and 233 were diabetic (DM) before pregnancy. All dysglycemic women were managed properly with 3 or more clinical visits during the pregnancy period.

Neonatal hypoglycemia is defined as a plasma glucose level of less than 30 mg/dL (1.65 mmol/L) in the first 24 hours of life and less than 45 mg/dL (2.5 mmol/L) thereafter.

Data on neonatal hypoglycemia for babies admitted to NICU was collected from the hospital records.

Results

Babies born to DM and GDM mothers required more admissions to NICU for various reasons (24.5%, 15.96% and 11.9% Respectively (P<0.01)

Neonatal hypoglycemia in infants admitted to NICU occurred more frequently in babies of DM and GDM compared to non-diabetic women (45.6%, 18.6% and 4.7% respectively).

Neonatal hypoglycemia occurred more in babies < 36 weeks of gestational age (GA) versus those > 37 weeks of GA in non-diabetic women.

However, neonatal hypoglycemia occurred more in babies born >37 weeks of age to DM (51.3%) and GDM (20.8%) when compared to babies born between 32 and 36 weeks of GA. Prolonged exposure to maternal hyperglycaemia appears to stimulate more insulin secretion during in-utero life and predispose more to neonatal hypoglycemia.

Conclusions
Despite the marked improvement in the prenatal diagnosis and management of dysglycemia, there is still a higher prevalence of neonatal prematurity, hypoglycemia and respiratory distress in infants born to treated mothers with DM and GDM. Hypoglycemia occurred more in babies born to dysglycemic with GA > 37 weeks compared to those born between 32 and 36 weeks of GA.

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