



Maternal and Neonatal Outcomes of Filipino Women with Elevated Postprandial Glucose Levels

Maurine Z. Manzana, MD and Maria Regina P. Manahan, MD, FPOGS, FPSUOG, FPSGE

OBJECTIVE

The maternal and neonatal outcomes associated with glucose intolerance in women who do not fulfill the criteria for gestational diabetes mellitus have seldom been explored. The primary objective of the study is to compare the maternal and neonatal outcomes of pregnant Filipino women with elevated postprandial glucose levels but without gestational diabetes mellitus to those with normal glucose levels, and to those with gestational diabetes mellitus.

DESIGN

This is a retrospective cohort study that was conducted at the Makati Medical Center, a tertiary hospital in the Philippines.

METHOD

Maternal and neonatal records from year 2015 to year 2020 were reviewed. A minimum sample size of 510 patients was calculated. Descriptive statistics, frequency and proportion, mean and standard deviation, and median and range were used. One-way ANOVA, Kruskal-Wallis test, and Fisher’s Exact test were used to check the mean, median, and frequency. The level of significance was set at 0.05.

RESULT

There were 581 participants included in the study. Data were analyzed based on the results of an oral glucose tolerance test done during the pregnancy, and divided into 3 groups: normal glucose levels, elevated postprandial glucose levels but without gestational diabetes mellitus, and gestational diabetes mellitus (GDM). The patients with GDM and those with elevated postprandial glucose levels but without GDM were significantly older (33 years old and above, $p<0.001$). These women were also multigravidas and multiparous ($p=0.002$ and $p=0.036$). The GDM group had a significantly higher proportion of early and late preterm deliveries ($p<0.001$). There were more neonates with a birthweight <2500 grams born to the GDM group (20.77%), compared to the elevated postprandial glucose level group (8.92%) and normal glucose level group (8.11%). The risk for neonatal hypoglycemia was significantly higher in the GDM group (9.29% versus 4.69% versus 2.16%, $p=0.009$).

TABLE 3: Maternal and Neonatal Outcomes

	Normal Glucose Level (n=185)	Elevated Postprandial Glucose Level (n=213)	GDM (n=183)	p-value	
Early Preterm Delivery	4	6	13	<0.001	
Birth weight	<2500 grams	15	19	38	<0.001
	≥ 2500 grams	170	194	145	<0.001
Neonatal Hypoglycemia	4	10	17	0.009	

CONCLUSION

This study demonstrates that Filipino patients with elevated postprandial glucose levels had more early preterm deliveries, lower birth weight infants, and neonatal hypoglycemia compared to patients with normal glucose levels. Although these adverse outcomes were less frequent compared to those observed in women with gestational diabetes, closer maternal and fetal surveillance may be warranted in this subset of women with glucose intolerance.