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Relationship between gestational diabetes mellitus and incidence of post-delivery dysglycaemia
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Background

Gestational diabetes mellitus (GDM) is defined as glucose intolerance resulting in hyperglycaemia of variable severity, with onset or first recognition during pregnancy. GDM is a risk factor for dysglycaemia in later life. The objective of the study was to determine the impact of GDM on glucose tolerance in the short term post-delivery in a cohort of women who attended the Lagos University Teaching Hospital (LUTH)

Study Design

This was a prospective observational study. Methods One hundred and twenty-eight pregnant women who attended LUTH antenatal clinics and who had no history of pre-gestational glucose intolerance were recruited in the first trimester of pregnancy. Pertinent data were collected via a questionnaire. The participants underwent a 75g oral glucose tolerance test (OGTT) at 24-28 weeks gestational age. Venous plasma glucose was measured via the glucose oxidase method. GDM was diagnosed using the World Health Organization (WHO) 2013 criteria. The participants were followed up and OGTT repeated at 6-12 weeks post-delivery.

Statistical Analysis

Descriptive statistics were presented using mean and standard deviation. P-value ≤ 0.05 was considered statistically significant. Results Among the participants with GDM, the incidence rate of dysglycaemia at 6-12 weeks post-delivery, was 333 per 1000 person-years. Impaired glucose tolerance (IGT) was the most common (77.8%) dysglycaemia observed. Presence of hypertension ($P=0.004$) and use of insulin during pregnancy ($P=0.024$) were significantly associated with post-delivery dysglycaemia.

Conclusions

GDM had a significant impact on the incidence of dysglycaemia in the short-term, 6-12 weeks post-delivery, in women who accessed care at LUTH. Hypertension and requirement of insulin for glucose control increased the likelihood of abnormal glucose metabolism following delivery, in a pregnancy complicated by GDM. Keywords: Gestational diabetes mellitus, post-delivery dysglycaemia, Lagos.

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