

CHARACTERISTICS OF WOMEN WITH SMALL FOR GESTATIONAL AGE INFANTS DIAGNOSED BY IADPSG GESTATIONAL DIABETES CRITERIA.

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Background: There is controversy surrounding adoption of the IADPSG 2010 gestational diabetes (GDM) diagnostic criteria, due to the paucity of treatment and outcome data. Of concern, some studies have emerged showing increased small for gestational age (SGA).

Aim: To identify the predictors of SGA in women diagnosed with GDM according to IADPSG 2010 criteria.

Methods: We reviewed prospectively collected data on women who were treated for GDM diagnosed by ADIPS 2014 (IADPSG 2010 criteria) at Bankstown-Lidcombe Hospital from March 2016 to July 2017. SGA (<10th percentile) was calculated by reference to customised percentile charts (www.gestation.net Bulk Centile Calculator V6.7.3-13). Variables analysed were: pre-gestational BMI (based on self-reported pre-pregnancy weight), ethnicity, family history of diabetes, maternal age, parity, smoking status, oral glucose tolerance(OGTT) results, Hba1c on GDM diagnosis, gestational weight gain(GWG) as a continuous variable and as a categorical variable (based on insufficient, appropriate and excessive GWG according to the Institute of Medicine weight gain in pregnancy target ranges per BMI category), use of insulin in pregnancy, and prematurity <37weeks gestation. Data are expressed as Odds Ratios(OR) with 95% confidence intervals(95%CI) and median values with interquartile ranges(IQR). Significance is $p<0.05$.

Results: Of 522 women, 44 (8.4%) had a SGA baby. On univariate analysis, an increased rate of SGA was associated with: lower GWG as a continuous variable ($p<0.05$), Southeast Asian ethnicity (OR=2.53, 95%CI 1.31–4.89, $p<0.01$), prematurity (OR=6.21, 95%CI 2.62–14.74, $p<0.001$). Median maternal fasting glucose levels were lower in the SGA group compared to infants of appropriate gestational birthweight, 4.95mmol/L(IQR 4.4 – 5.4) vs 5.20mmol/L(IQR 4.8 – 5.4), respectively; $p<0.05$. Smoking and insufficient GWG analysed as a categorical variable were not associated with SGA. On multivariable analysis, Southeast Asian ethnicity and preterm delivery remained significant predictors.

Conclusions: Predictors of SGA in women in this cohort were Southeast Asian ethnicity and preterm delivery.

Words 300/300