PREDICTION OF POST-PARTUM ABNORMAL GLUCOSE TOLERANCE IN WOMEN WITH GESTATIONAL DIABETES MELLITUS.
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\textbf{Background}: UK NICE Guidelines suggest follow-up assessment with fasting BGL (FBGL) but not a Glucose Tolerance Test (oGTT)\textsuperscript{1} in women with gestational diabetes(GDM). We previously published data indicating this would miss a substantial number with post-partum glucose tolerance abnormalities\textsuperscript{2}. A recent UK abstract reported good sensitivity and specificity for FBGL $\geq$4.7mmol/L and HbA1c $\geq$5.7\% cut-offs in predicting post-partum dysglycaemia\textsuperscript{3}.

\textbf{Aims}: To assess prediction of 6-8 weeks post-partum dysglycaemia based on findings of post-partum oGTT results and concomitant HbA1c levels, in a large GDM cohort in South-Western Sydney.

\textbf{Methods}: Retrospective analysis of prospectively collected data, (1993-2012), from our GDM database. Selected women had attended a post-partum oGTT with concomitant HbA1c collection. Glycaemic status was classified according to oGTT results, (not HbA1c), with IFG being FBGL $>6.1$mmol/L. Receiver operating characteristic (ROC) curves of sensitivity plotted against 1-specificity were constructed for postnatal fasting glucose and HbA1c to detect post-partum dysglycaemia.

\textbf{Results}: There were 2024 women with available data, with oGTT (mean±SD) 9.7±2.6 weeks after delivery. Post-partum dysglycaemia (27.7\%) was: 5.6\% IFG, 15.0\% IGT, 2.9\% both IFG and IGT, and 4.2\% Type2DM. The area under the ROC curve (AUC) for any abnormality of glucose tolerance was higher for FBGL (AUC 0.732, 95\%CI 0.703–0.762) than HbA1c (AUC 0.620, 95\%CI 0.591–0.649)(Fig 1). This pattern was the same amongst the four major ethnic groups represented [South-East Asian (41.3\%), Middle Eastern (24.1\%) European (22.8\%), and Indian/Pakistani (8.2\%)], although AUC was greater for FBGL for Middle Eastern women (AUC 0.809, 95\% CI 0.749–0.868)(Fig 2). Despite these findings, relying on both FBGL plus HbA1c would have missed 4 of 85 women with Type2DM and 23 of 303 with IGT, and 1357/1464 with Normal Glucose Tolerance would still have required an oGTT.
**Conclusions:** Even using low cut-offs of FBGL≥4.7mmol/L and HbA1c≥5.7%, data from this cohort of GDM women still support the use of oGTT to detect abnormalities of glucose tolerance post-partum.

**References:**

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