EDITORIAL

Gestational diabetes in the Cook Islands: universal screening needed on ‘booking’

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Gestational diabetes mellitus (GDM) presents many risks to both new-born and mother. Risks for the new-born child include low blood glucose level soon after birth, prolonged jaundice, and low levels of blood calcium as well as higher risk of developing respiratory distress syndrome, and greater likelihood of becoming obese and developing type 2 diabetes in adulthood.

Mothers that have developed GDM are more likely to need a caesarean section delivery, are more likely to develop pregnancy-induced hypertension and protein in the urine and are also have greater risk of urinary tract infection following delivery and are more likely to develop type 2 diabetes.\(^1,2\)

In the Cook Islands, universal screening for GDM is offered at 24–28 weeks gestation where an initial test (50 gram glucose challenge test (GCT)) is presented to all expectant mothers. If positive, a 75 gram oral glucose tolerance test (OGTT) is then administered to determine GDM.

Aung and colleagues, in this issue of the New Zealand Medical Journal (NZMJ), studied the Cook Islands Gestational Diabetes Screening Programme from January 2009 to December 2014, and found that GDM was present in 15% of expectant mothers.\(^3\) Of these mothers, one-third (5%) acquired type 2 diabetes post-delivery.

The level of GDM observed in the Cook Islands (15%) is internationally high, with usual accounts of GDM ranging from 5 to 9%.\(^4\) Furthermore, international trends show a steady increase of GDM over time thus adding to the concern.\(^5\)

The authors of the NZMJ paper (Aung et al) propose an upgraded universal screening programme be adopted in the Cook Islands. Key changes include: screening started in the first trimester by measuring HbA1c at booking of antenatal blood tests of expectant mothers; providing treatment as required; and offering an oral glucose tolerance test (OGTT) at 16–20 weeks gestation to those identified as high risk.

I wholeheartedly agree that this approach is more appropriate and considering the prevalence of GDM in this population should be adopted urgently. Furthermore, Pacific people (including Cook Islanders) in New Zealand are 3.6 times more likely to report having previously diagnosed type 2 diabetes mellitus which warrants a more rigorous screening approach.\(^6\) It is likely that earlier identification of need and more timely treatment will mean better outcomes for both mother and infant on delivery.

In many parts of the world there is a steady increase of overweight and obese women of child-bearing ages\(^6\) which has repercussions for increasing rates of GDM. The article by Aung et al showed that Cook Islands mothers categorised as ‘Normal’, ‘pIGT’ (pregnancy impaired glucose tolerance) and ‘GDM’ (gestational diabetes mellitus) had body mass index (BMI) scores of 31 kg/m\(^2\), 32 kg/m\(^2\), and 34 kg/m\(^2\) respectively. Clinical practice guidelines highlight that a BMI of \(\geq\)30 presents significant increased risk for expectant mothers to develop GDM.\(^7\)

The link between BMI and the increased risk of diabetes should be given particular attention. For instance, a study of 4045 New Zealanders (1011 of whom were Pacific people) found that diabetes prevalence was 5.7% for NZ European, 15.8% for Māori and 23.5% for Pacific people.\(^8\) However, after adjusting for BMI, all ethnic difference in the prevalence of diabetes was eliminated. This highlights the importance of a targeted strategy to address obesity in the prevention of diabetes.
A failure to address the drivers of population overweight and obesity is likely to result in an increasing occurrence of GDM that will negatively impact on the health and development of mother and child.

Gestational diabetes mellitus presents an invisible threat to the health of mothers and new-born children. In populations where GDM is prevalent, more robust screening protocols are necessary. Considering the high prevalence of GDM in the Cook Islands population, as described by Aung et al in this issue of the New Zealand Medical Journal, the proposition of a more robust screening protocol is absolutely needed.

Competing interests: Nil.

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References


