HYPERGLYCEMIA IN PREGNANCY IN SOUTH AFRICA: CLOSING THE GAPS

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Maternal health, Non-communicable disease

Background

- Obesity-related diseases such as Type 2 Diabetes (T2D) are the leading cause of death in women in South Africa (SA)
- Reproductive-aged women are disproportionately affected by overweight and obesity, the precursor of T2D
- Access to preconception screening is limited, and T2D is often detected during antenatal screening for gestational diabetes mellitus (GDM), a condition that first arises in pregnancy
- T2D can be asymptomatic, has a greater degree of hyperglycemia in pregnancy (HIP) compared to GDM and persists after delivery
- The degree of HIP parallels the risk of antenatal, perinatal, and future adverse outcomes including cardiovascular disease
- The most extreme form of hyperglycemia, diabetic ketoacidosis (DKA), can occur in women with auto-immune (Type 1), Type 2, and GDM, and is often catastrophic for both mother and child
- The postpartum/interpregnancy period has been earmarked as a window of opportunity to define the glucose abnormality, delineate the contributing factors and optimise management to reduce maternal morbidity and mortality
- Globally, timeous postpartum/interpregnancy metabolic assessment is the norm but has not been achieved in South Africa
- We recently established a multidisciplinary postpartum/interpregnancy clinic for women with HIP at Tygerberg Hospital, Cape Town, South Africa where glucose homeostasis is assessed, and treatment optimised
- Women with any degree of HIP now have access to post-delivery metabolic evaluation and management

Problem statement : The factors that contribute to hyperglycemia during and after pregnancy are heterogenous and have not been well defined in SA

Hypotheses

1. Antenatal HbA1c predicts postpartum T2D and is an alternative to postpartum OGTT following delivery (Aim1, published)
2. Point of care testing (POCT) and HbA1c are alternatives to laboratory testing (Aim 2a, published; Aim 2b under investigation)
3. DKA in pregnancy have various contributors, including auto-immune diabetes in women presumed to have T2D (Aim 3)
4. A subset of women with HFDP have auto-immune diabetes (AID) (Aim4)

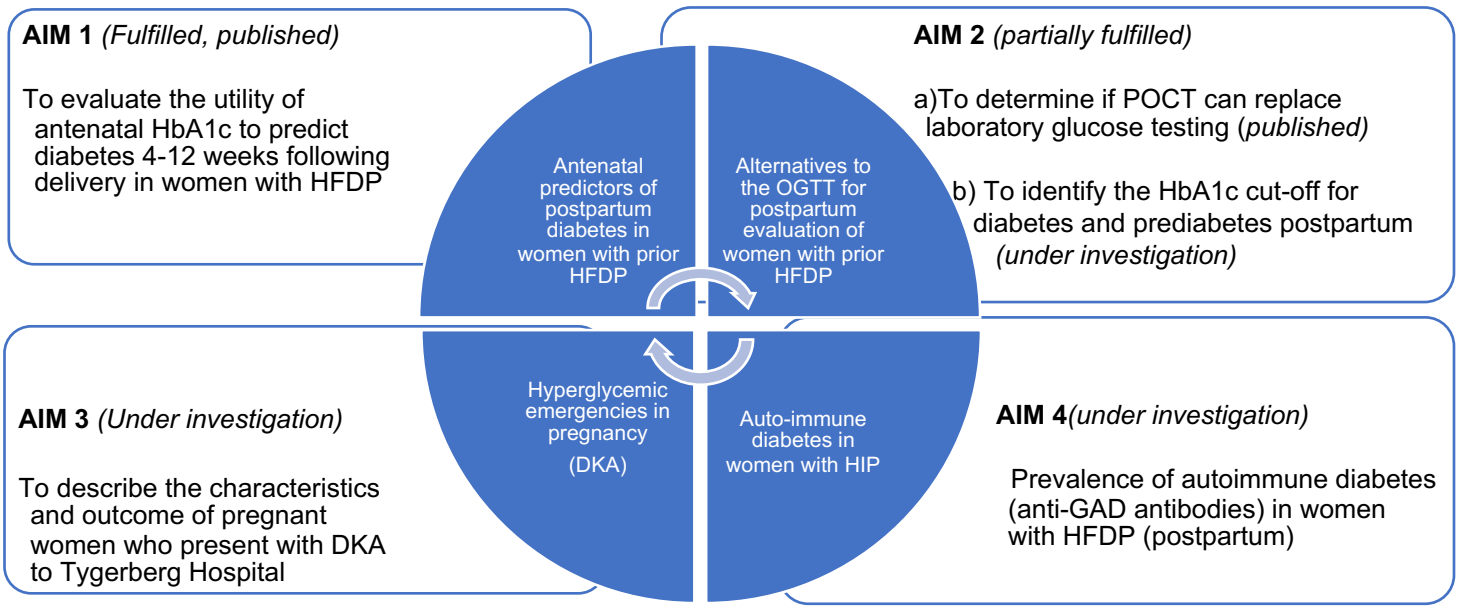

Figure 1. Overview of the study theme and aims across the pregnancy continuum

Study design & Setting

A pragmatic, single-center prospective observational trial

Participants

Consecutive women with HFDP attending our postpartum clinic
Women with DKA in pregnancy

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