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Maternal and perinatal outcome in women with pre-gestational diabetes in a tertiary maternity hospital in Qatar

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Introduction: Pregnancy in women with pre-existing Diabetes mellitus remains clinically challenging in all care settings across the world, despite advances in diagnostic and monitoring tools available. The prevalence of Diabetes continues to rise, and this is particularly true in the Gulf cooperation countries(GCC), largely fueled by the obesity epidemic. Decades after St Vincent's declaration, pregnancy outcome in pregnancy complicated by Diabetes continues to be a source of concern and remain on the critical maternity dashboards across many Obstetric units, particularly in regions with high background prevalence of Diabetes. This quality assurance audit provides an overview of the outcome of Diabetic pregnancies in a busy maternity unit in the state of Qatar.

Methods: This retrospective audit of Obstetric and perinatal outcome of Diabetic pregnancies was carried out as part of the quality improvement program at Women's Hospital, Doha, the main tertiary Obstetric unit with about 15,000 births per year. Women with pre-gestational diabetes who delivered at the study site between April 2016 and September 2017 were identified. Maternal, fetal and neonatal outcome data covering the key auditable standards for pre-gestational Diabetes was extracted; including early pregnancy HbA1c, obesity rate, rates of preterm delivery, caesarean delivery, neonatal respiratory distress syndrome as well as other pregnancy complications.

Results: A total of 496 patients with pre-gestational diabetes were identified during the study period and detailed records retrieved for 450 patients. In the study group, 76% had type 2 Diabetes whilst 24% were known Type 1 Diabetics. Among the patients with type 1 Diabetes 7% were obese whilst 61% of the patients with type 2 Diabetes were Obese. Only 113(25%) had a booking HbA1c of less than 6.0%. Pre-eclampsia complicated 10% of the pregnancies during the antenatal period and 6% of the women had confirmed urinary tract infection whilst 2% of the patients were diagnosed with ketoacidosis. Significant maternal hypoglycaemia was reported in 13% of the study group. Majority (59%) of the women had caesarean delivery and a preterm delivery rate was 27%(123/450) with 46%(57/123) of the preterm deliveries diagnosed with Respiratory distress syndrome.

Conclusion: Pregestational Diabetes carries significant maternal and fetal risks, therefore, significant improvement in the pre-pregnancy preparation is required in our population to ensure that most women with pre-gestational diabetes enter pregnancy with optimal glycaemic control to improve overall pregnancy outcome. Primary prevention strategies, such as obesity prevention should be promoted in our population to slow the epidemic of type 2 Diabetes.