

Gestational diabetes

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Gestational Diabetes Mellitus Gestational Diabetes Introduction

Gestational diabetes mellitus (GDM) is a type of diabetes that develops during pregnancy. It is a condition characterized by high levels of glucose during pregnancy due to insufficiency in insulin secretion, which causes intolerance to carbohydrates. The condition commonly manifests in the first two trimesters (Perry, Marilyn & Deitra, 2011).

Epidemiology/Prevalence

GDM accounts for 90% of diabetic cases that occur during pregnancy, and causes approximately 4% of pregnancy complications. The condition is disproportionately higher among American Hispanics, Blacks and Asians in comparison to Caucasian Americans. The condition often leads to the development of glucose intolerance among women with GDM, and at least 50% of those developing the intolerance become diabetic in a period of 5-10 years (Perry et al., 2011).

GDM Risk Factors

GDM risk factors include obesity, maternal age (higher risk at > 30), family history of diabetes and a medical history of birth anomalies, miscarriage or still births. Other risk factors include glucosuria, hypertension and monilia vaginitis (Perry et al., 2011).

GDM Pathophysiology

The mechanism underlying the condition is a result of multiple factors including changes in nutrient demands by the fetus. These changes that begin in the late second trimester induce maternal sustenance of high blood glucose. Pregnancy placental hormones are responsible for the antagonism of insulin and cortisol, which results in the insulin resistance and less entry of

glucose into cells. Normal body functioning elicits higher insulin production to compensate the resistance, and when this fails GDM occurs (Perry et al., 2011).

GDM Complications

GDM often leads to further health complications including hypertension, episiotomy and perineal lacerations. The high levels of insulin stimulate faster growth, which often leads to macrosomia that necessitates caesarian births (Perry et al., 2011). The induced high insulin production among the babies born after GDM often leads to hypoglycemia.

Screening of GDM

Ideally, all women should be screened for GDM, and this can be done either through laboratory tests, clinical risk factors or medical and family history. It is essential for women with a family history of diabetes as well as obese and overweight women to undergo laboratory test. The same is recommendable for women aged above 25 and with a history of obstetric conditions associated with GDM. The laboratory tests include fasting glucose test, random glucose test and two-hour postprandial test (Perry et al., 2011).

Interventions

Antepartum Interventions: GDM treatment interventions begin immediately through insulin administration so as to control blood glucose levels. Training on self monitoring of glucose is also administered and patient made aware of possible complications, especially for women that did not initially have pre-gestational diabetes. Apart from insulin therapy the patient learns the use of exercising and diet control in controlling blood glucose levels. Fetal surveillance is also conducted regularly by the physicians (Perry et al.,

2011).

Intrapartum Interventions: Fetal surveillance and insulin therapy continuous preferably through intravenous means.

Postpartum Interventions: assessment of carbohydrate intolerance continues because of the possibility of its recurrence or continuation. Cases involving obese mothers call for education on lifestyle change as well as education of all mothers with GDM on the care of their children because of the future risk of developing diabetes (Perry et al., 2011).

References

Perry, E. S. Marilyn, J. H. & Deitra, L. L. (2011), *Maternal Child Nursing Care*, 4th edition, Elsevier Health Sciences