DEPARTMENT OF INTERNAL MEDICINE

SECTION OF ENDOCRINOLOGY

CLINICAL PRACTICE GUIDELINES

Gestational Diabetes (GDM)

Screening

Screen between the 24th and 28th gestational weeks; with any risk factor, consider screening at first prenatal visit.

Screen with 50-grams glucose challenge test (50-grams OGCT): 1-hour plasma glucose greater than or equal to 140 mg/dl positive; greater than or equal to 130 mg/dl suspected.

Risk Factors

* Age older than 25 years old
* Family history of type 2 diabetes mellitus (especially first- degree relatives)
* Multiparity
* Pr evious gestational diabetes: Macrosomic or large for gestational age infant (e.g. >/= 9 lbs. or 4000 grams)
* Previous impaired fasting glucose with fasting plasma glucose 110 to 125 mg/dl
* Previous impaired glucose tolerance with oral glucose tolerance test 2-hour glucose value 140-199 mg/dl
* American Indian or Alaskan Native, African American, Asian Hispanic, Pacific Islander
* BMI >25 kg/m2 (especially waist-to-hip ratio >1)

Diagnosis

100 grams oral glucose tolerance test (OGTT) after 8-10 hours overnight fast:

Fasting >/= 95 mg/dl, 1 hour >/= 180 mg/dl, 2 hour >/= 155 mg/dl, 3 hour >/=140 mg/dl; two abnormal values required for diagnosis; if one abnormal, consider self-monitored blood glucose for 7 days; if average fasting blood glucose >/= 95 mg/dl or average 2-hour post-meal >/= 120 mg/dl, re-evaluate for gestational diabetes mellitus.

Symptoms:

Usually none. Rarely, increased urination, thirst, and appetite; weight loss; nocturia

Urine Ketones:

Usually negative; positive can indicate starvation ketosis.

Treatment

Medical nutrition therapy and education; initiate an insulin regimen if a patient cannot maintain glucose targets with diet alone.

Targets

Self-monitored Blood Glucose:

* Pre-meal and bedtime: 60-95 mg/dl
* Post-meal: <120 mg/dl, 2 hours after start of meal; <140 mg/dl, 1 hour after start of meal

HBA1C:

May be used to evaluate prior hyperglycemia, but is not used in gestational diabetes management, should be within normal range

Urine Ketones (Fasting):

Should be negative.

Monitoring

Self-Monitoring of Blood Glucose:

* On insulin therapy: 6-7 times/day - before each meal and 1 to 2 hours after start of meals, and at bedtime
* Diet only: 4 times/day, minimum – prebreakfast and 1 to 2 hours after start of meals

Follow-Up

Pre-natal:

* Clinic visit every 2 weeks up to 36 weeks, then, weekly, thereafter.
* With the help of the dietician and diabetes nurse educator, assess and reinforce patient understanding of gestational diabetes management including dietary needs and considerations, knowledge of glucose targets, current pharmacologic therapy, and use of self-monitoring of blood glucose (timing and interpretation of test results and appropriate response).
* Monitor frequency of hypoglycemia, weight or BMI, blood pressure

Labor and Delivery

* Maternal hyperglycemia is the main cause of neonatal hypoglycemia; therefore, intrapartum maintenance of maternal euglycemia is essential.
* Adjust intrapartum intravenous fluids and insulin administration, if necessary, with the goal of maintaining blood glucose concentrations between 70 to 90 mg/dl.
* After delivery, check fasting blood glucose and 2 hours after breakfast each day.
* At 6 to 8 weeks postpartum, screen for diabetes by performing 75 grams OGTT. If there is no evidence of diabetes, advise the patient of the high risk of future diabetes and educate the patient about preventive lifestyle measures. Advise the patient to be examined for the diabetes annually because women with history of gestational diabetes have a 50% risk of developing type 2 diabetes mellitus within 5 years (10% conversion per year).