A1 Gestational Diabetes

Gestational Diabetes

Nutrition consult to begin ADA diet
- Underweight (BMI <18.5): 35-40 kcal/kg/day
- Normal weight (BMI 18.5-24.9): 30 kcal/kg/day
- Overweight (BMI 25-29.9)
- Obese (BMI 30-34.9)
- Morbidly Obese (BMI >35)

Nutrition counseling on 33% caloric restriction
- 25 kcal/kg/day of ideal prepregnancy weight

Patient education regarding home glucose monitoring
- Fasting and 1-hour post prandial
- Daily testing
- Targeting Fasting <100, Target 1-hour <130

Evaluate glycemic control in one week
- Maybe managed at local health department or low risk UNC Clinic

≥ 2 of 7 fasting values between 95-105
Or
1-hour post prandial between 130-140

1st time

2nd time

Asses compliance
- Reinforce diet education
- Ensure understanding of plan
- Continue daily testing
- Reassess glycemic control in one week

≥ 2 of 7 fasting values >105
Or
1-hour post prandial >140

Referral to UNC Monday or Thursday Diabetes Clinic

Fasting values between <95
Or
1-hour post prandial <130

Encourage continued compliance
Decrease testing frequency to 3 times/week if good control maintained

<36 weeks: review glycemic control every other week
>36 weeks: review glycemic control every week

Clinically assess EFW at 38 weeks or at labor if <38 weeks
If planning vaginal delivery and BMI ≥ 30 or clinical suspicion for macrosomia, consider ultrasound

≥39 weeks by ACOG criteria or delivery otherwise indicated

Counsel patient and discuss elective cesarean section

Clinical decision to proceed with elective cesarean section

≥4500 grams

Yes

<4500 grams

≥4500 grams

Yes

Elective cesarean section

Ultrasound estimate of fetal weight

Wait until 39 weeks
Or
Consider amnio to document fetal lung maturity

≤ LBC>35,000
Or
FLM > 70
Or
+PG if LBC<35,000

Yes

Consider repeat amnio in 1 week if still <39 weeks

<4500 grams

>4500 grams

≤ 4500 grams

Yes

No

Approved
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1. Kim C, Herman WH, Vijan S. Efficacy and cost of postpartum screening strategies for diabetes among women with histories of gestational diabetes mellitus. Diabetes Care 2007; 30:1102. In a cost analysis, screening women with a history of GDM with an oral glucose tolerance test every three years resulted in the lowest cost per case of diabetes diagnosed. Q2 year fasting plasma glucose or Q3 year oral glucose tolerance testing result in equivalent cost per person screened and equivalent duration of undiagnosed diabetes.

2. Metzger BE, Coustan DR. Summary and recommendations of the Fourth International Workshop-Conference on Gestational Diabetes Mellitus: the organizing committee. Diabetes Care 1998; 21 (Suppl. 2) 161-167. Women with gestational diabetes should undergo glucose tolerance testing at least 6 weeks post partum and should be reassessed at a minimum of Q3 year intervals.

3. Gunderson EP. Breastfeeding after gestational diabetes pregnancy: subsequent obesity and type 2 diabetes in women and their offspring. Diabetes Care 2007; 30 (Suppl. 2) S161 – S168. Breastfeeding has beneficial effects for mom (decreased glucose intolerance and increased weight loss) and may decrease offspring risk for obesity in childhood and adolescence.

4. Schaefer-Graf UM, Hartmann R, Pauliczak J, Passow D, Abou-Dakn M. Association of breast-feeding and early childhood overweight in children from mothers with GDM. Diabetes Care 2006; 29:5. Study of 324 offspring of mothers with GDM had childhood overweight prevalence of 37.3% if not breastfed, 32.5% if breastfed for up to 3 mos., and 22% if breastfed for over 3 mos. (P=0.008)

5. Hale TW, Kristensen JH, Hackett LP, Kohan R, Ilett KF. Transfer of metformin into human milk. Diabetologia 2002; 45: 1509-1514. Seven women with healthy infants taking a median dose of 1500mg Metformin were studied with low concentrations of Metformin seen in breast milk. Mean infant exposure was only 0.28% of the weight normalized maternal dose, and absolute infant dose average of 0.04mg/kg/day.

6. American Diabetes Association. Diagnosis and Classification of Diabetes Mellitus. Diabetes Care 2004; 27: (Suppl. 1). A fasting plasma glucose >126 or a casual plasma glucose >200 meets the threshold for diagnosis of diabetes if confirmed on subsequent day. Confirmation precludes the need for glucose challenge. Fasting plasma glucose 100 – 125 (impaired fasting glucose or “prediabetes”) indicates significant high risk for developing diabetes as well as other cardiovascular risk. Intervention can prevent or delay development of diabetes. Either glucose tolerance testing (2hr) or fasting glucose testing can be performed.

7. Nathan DM, Davidson MB, DeFronzo RA. Impaired fasting glucose and impaired glucose tolerance: implications for care. Diabetes Care 2007; 30:753. Fasting plasma glucose 100 –125 (impaired fasting glucose or “prediabetes”) indicates significant high risk for developing diabetes as well as other cardiovascular risk. Intervention can prevent or delay development of diabetes.

NOTIFICATION TO USERS

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur in pregnancy. They should not be interpreted as standard of care but instead represent guidelines for the management of these patients. Variation in practice should be taken into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities. The algorithms remain the intellectual property of the University of North Carolina School of Medicine at Chapel Hill. They cannot be reproduced in whole or part without the expressed permission of the school.