

GDM & DM PARTUM/POSTPARTUM MANAGEMENT

FLAME LECTURE: 29B

LO/STELLER 6.21.19

LEARNING OBJECTIVES

- ▶ To describe the different diabetic classifications
- ▶ To understand how gestational diabetes complicates a pregnancy
- ▶ To describe the diagnosis and treatment of gestational diabetes
- ▶ Prerequisites:
 - ▶ NONE
- ▶ See also – for closely related topics
 - ▶ FLAME LECTURE 26A/B: GDM/DM Epidemiology & Screening
 - ▶ FLAME LECTURE 29A: GDM/DM Antepartum Mgmt

TIMING/ROUTE OF DELIVERY

- ▶ Patients with well-controlled GDM/DM can be induced at 39-39 6/7 weeks
 - ▶ If poor control, history of vasculopathy, nephropathy, or stillbirth, consider delivery between 36-38 6/7 weeks
- ▶ Cesarean delivery can be considered for estimated fetal weight (EFW) >4500 grams for patients with GDM (>5000 grams for non-diabetic patients)
 - ▶ Notably, it would take 588 cesareans to prevent a single case of brachial plexus injury at 4500 grams
- ▶ GDM and fetal macrosomia are not contraindications for a trial of labor after cesarean (TOLAC)

LABOR NOTES

- ▶ If there is concern that a shoulder dystocia may occur, there should be judicious use of operative assisted techniques (vacuum/forceps)
- ▶ Pts who require an insulin drip in labor should be delivered at a hospital that can provide such care
 - ▶ The goal of an insulin drip is to maintain glucose levels <110 mg/dL in that avoiding maternal hyperglycemia will decrease risk of neonatal hypoglycemia
- ▶ A patient's insulin pump may be used if hospital and practitioner experience allow

INSULIN IN LABOR

- ▶ PM basal insulin is recommended the night before delivery/induction
- ▶ AM basal insulin is typically held or halved the day of delivery/induction
- ▶ IV normal saline or lactated ringers is administered during early labor
- ▶ Once active labor begins, or glucose levels are <70 mg/dL, the IV infusion should change to 5% dextrose at a rate of 100-150cc/hr with a target glucose level of 100 mg/dL
- ▶ The next slide displays common labor protocols

INTRAPARTUM BG & INSULIN

Diet-Controlled GDM

- **Early Labor**
 - Monitor fasting & 1-hr post-prandials
- **Active Labor**
 - NPO
 - Check BG q2 hrs
 - If BG < 100, use D5 at 100 mL/hr
 - If BG > 100, use LR at 100 mL/hr

Medication-Controlled GDM

- **Early Labor**
 - D/C oral agents on admission
 - Monitor fasting & 1-hr post-prandials
- **Active Labor**
 - NPO
 - Check BG q1-2 hrs
 - If BG < 100 use D5 at 100 mL/hr
 - If BG > 100 use LR at 100 mL/hr
 - If BG > 110 start IV insulin & check BG q1 hr

Poorly-Controlled GDM

- **Early & Active Labor**
 - D/C home dosing insulin upon admission
 - Start LR at 50-100 mL/hr
 - Monitor BG q1hr
 - NPO or non-caloric clear liquids
 - If BG > 110 start IV insulin

BG (mg/dL)	Insulin Rate
< 70	Drip Off
71-90	0.5 mL/hr
91-110	1 mL/hr
111-130	2 mL/hr
131-150	3 mL/hr
151-170	4 mL/hr
171-190	5 mL/hr
> 190	Continue titrating as necessary (assess for urine ketones)

Upon delivery of placenta cut the insulin rate in half!

POSTPARTUM MANAGEMENT

- ▶ Patients can resume a normal healthy diet
- ▶ Diet-controlled GDM patients should get 1 fasting and 1 postprandial blood glucose level prior to discharge
- ▶ Medication-controlled GDM should have 1 fasting and 24 hours worth of postprandial levels prior to discharge
- ▶ Postpartum blood glucose targets:
 - ▶ Fasting: <100 mg/dL
 - ▶ 1-hr postprandial: <140 mg/dL
- ▶ Patients with GDM should see their BG levels decrease in the postpartum period. If BG remains elevated, consider a diagnosis of type 2 diabetes and start Metformin while breastfeeding

POSTPARTUM MANAGEMENT

- ▶ Breastfeeding should be encouraged
- ▶ Small snacks during breastfeeding may reduce the risks of hypoglycemia
- ▶ Consider a lactation specialist given patients with GDM/DM may have greater difficulty
- ▶ LARCS are recommended for contraception, however estrogen-containing methods are relatively contraindicated in patients with hypertensive and vascular disease

POSTPARTUM FOLLOW-UP

- ▶ In GDM pts, screen for Type 2 DM:
 - ▶ **4-12 weeks postpartum:** 75g, 2-hour OGTT
 - ▶ **>12 weeks postpartum:** Hemoglobin A1c
 - ▶ If normal results, repeat testing one year after delivery and every three years thereafter
- ▶ Conversion rate from GDM to Type 2 Diabetes is approximately 50-70%
- ▶ Counsel patients to attempt to space future pregnancies by at least 18-24 months

RESOURCES

- ▶ [ACOG Practice Bulletin #190: Gestational Diabetes Mellitus \(2018\)](#)
- ▶ [ACOG Practice Bulletin #201: Diabetes Mellitus \(2018\)](#)