LATE PRETERM AND EARLY TERM DELIVERIES

Week 94

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With SDH and .phrase slides by Chloé Altchek, MS4

Reading Assignment:
ACOG Committee Opinion 764: Medically Indicated Late-Preterm and Early-Term Deliveries (April 2013)
LEARNING OBJECTIVES

• Review common indications for late preterm/ early term deliveries

• Review what resources to use to determine appropriate timing of delivery

• Understand how to counsel patients on the risks and benefits of late-preterm/ early term deliveries
CASE VIGNETTE

• A 37 yo G2 P0010 woman at 35 weeks 3 days EGA presents for follow up OB visit. She is doing well with pregnancy notable for obesity with BMI 36.

• She has no complaints today and denies LOF, BPV, CTX, or decreased FM. She has a follow up appointment in 1 week.

• Given her obesity, she is starting weekly BPPs at 36 weeks EGA.
FOCUSED HISTORY

What elements of the patient’s history are most relevant?

• **PMH:** Obesity
• **PSH:** LSC appy 12 years ago
• **OBHx:** 8 wk sab
• **GynHx:** Denies
• **FH:** DM in father
• **SH:** No toxic habits
• **Meds:** Multivitamin
• **All:** NKDA
PERTINENT PHYSICAL EXAM FINDINGS

• What elements of the patient’s physical exam are most relevant?

VS: Wt 98 kg, Ht 165 cm, BMI 36.0; BP 120/80, P 90, T 37.0
Gen: NAD, pale
HEENT: WNL
Chest: CTAB
CVS: RRR
Abd: Gravid, Soft, NT, obese
GU: WNL
The patient tells you she is miserable. She begs you to deliver her today. How will you counsel her about the risks of delivery <39 wks?

- Increased NICU admission
- Increased TTN
- Increased RDS
- Increased need for ventilator support
- Increased rates of sepsis
- Increased feeding issues
NOMENCLATURE REVIEW

• Late preterm:
  • 34+0 - 36+6 wks

• Early term:
  • 37+0 - 38+6 wks

• Elective IOL:
  • IOL without an accepted medical or obstetrical indication for delivery

• Timing of delivery is a balance of risk and benefit of delivery for infant and mother

Summary: Non-indicated deliveries prior to 39 weeks EGA carry significant risk to the infant, with no known maternal benefit.
The next week, you receive a call from the ultrasound unit that your patient, who is currently at 36+3 weeks EGA, has an MVP of 1.9 and NST was reactive.

- What is the diagnosis?
  - **OLIGOHYDRAMNIOS**

- When should the patient be delivered?
  - **Late pre-term/ early term: 36+0/7 - 37+6/7 wks**

- What else might you consider?
  - BMZ for fetal lung maturity
  - Rule out for rupture
**MEDICALLY INDICATED LATE PRETERM/EARLY TERM DELIVERIES**

- What are other reasons for delivery prior to 39 weeks?

<table>
<thead>
<tr>
<th>Condition</th>
<th>General Timing</th>
<th>Suggested Specific Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placental/Uterine Conditions</td>
<td></td>
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<tr>
<td>Placenta previa†</td>
<td>Late preterm/early term</td>
<td>36 0/7–37 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Suspected accreta, increta, or percreta‡</td>
<td>Late preterm</td>
<td>34 0/7–35 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Vasa previa</td>
<td>Late preterm/early term</td>
<td>34 0/7–37 0/7 weeks of gestation</td>
</tr>
<tr>
<td>Prior classical cesarean</td>
<td>Late preterm/early term</td>
<td>36 0/7–37 0/7 weeks of gestation</td>
</tr>
<tr>
<td>Prior myomectomy requiring cesarean delivery‡</td>
<td>Early term (individualize)</td>
<td>37 0/7–38 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Previous uterine rupture</td>
<td>Late preterm/early term</td>
<td>36 0/7–37 0/7 weeks of gestation</td>
</tr>
<tr>
<td>Fetal Conditions</td>
<td>Gestational Age</td>
<td>Week(s) of Gestation</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>Oligohydramnios (isolated or otherwise uncomplicated [deepest vertical pocket less than 2 cm])</td>
<td>Late preterm/early term</td>
<td>36 0/7–37 6/7 weeks of gestation or at diagnosis if diagnosed later</td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>Full term</td>
<td>39 0/7–39 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Growth restriction (singleton)</td>
<td>Early term/full term</td>
<td>38 0/7–39 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Otherwise uncomplicated, no concurrent findings</td>
<td>Early term</td>
<td>Consider at 37 0/7 weeks of gestation or at diagnosis if diagnosed later</td>
</tr>
<tr>
<td>Abnormal umbilical artery dopplers: elevated S/D ratio with diastolic flow</td>
<td>Late preterm</td>
<td>Consider at 34 0/7 weeks of gestation or at diagnosis if diagnosed later</td>
</tr>
<tr>
<td>Abnormal umbilical artery dopplers: absent end diastolic flow</td>
<td>Preterm</td>
<td>Consider at 32 0/7 weeks of gestation or at diagnosis if diagnosed later</td>
</tr>
<tr>
<td>Abnormal umbilical artery dopplers: reversed end diastolic flow</td>
<td>Late preterm/early term</td>
<td>34 0/7–37 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Concurrent conditions (oligohydramnios, maternal comorbidity [eg, preeclampsia, chronic hypertension])</td>
<td></td>
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</tr>
<tr>
<td>Multiple gestations—uncomplicated</td>
<td>Early term</td>
<td>38 0/7–38 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Dichorionic-diamniotic twins</td>
<td>Late preterm/early term</td>
<td>34 0/7–37 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Monochorionic-diamniotic twins</td>
<td>Preterm/late preterm</td>
<td>32 0/7–34 0/7 weeks of gestation</td>
</tr>
<tr>
<td>Monochorionic-monoamniotic twins</td>
<td>Preterm/late preterm</td>
<td>Individualized</td>
</tr>
<tr>
<td>Triplet and higher order</td>
<td></td>
<td></td>
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<tr>
<td>Multiple gestations—complicated</td>
<td>Late preterm/early term</td>
<td>36 0/7–37 6/7 weeks of gestation</td>
</tr>
<tr>
<td>Dichorionic-diamniotic twins with isolated fetal growth restriction</td>
<td>Late preterm</td>
<td>Individualized</td>
</tr>
<tr>
<td>Dichorionic-diamniotic twins with concurrent condition</td>
<td>Late preterm/late preterm</td>
<td>32 0/7–34 6/7 weeks of gestation</td>
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<td>Monochorionic-diamniotic twins with isolated fetal growth restriction</td>
<td>Preterm/late preterm</td>
<td>Individualized</td>
</tr>
<tr>
<td>Allloimmunization</td>
<td>Early term</td>
<td>37 0/7–38 6/7 weeks of gestation</td>
</tr>
<tr>
<td>At-risk pregnancy not requiring intrauterine transfusion</td>
<td>Late preterm or early term</td>
<td>Individualized</td>
</tr>
<tr>
<td>Requiring intrauterine transfusion</td>
<td></td>
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</tbody>
</table>
### Maternal Conditions

#### Hypertensive disorders of pregnancy
- Chronic hypertension: isolated, uncomplicated, controlled, not requiring medications
  - Early term/full term
  - 38 0/7–39 6/7 weeks of gestation
- Chronic hypertension: isolated, uncomplicated, controlled on medications
  - Early term/full term
  - 37 0/7–39 6/7 weeks of gestation
- Chronic hypertension: difficult to control (requiring frequent medication adjustments)
  - Late preterm/early term
  - 36 0/7–37 6/7 weeks of gestation
- Gestational hypertension, without severe-range blood pressure
  - Early term
  - 37 0/7 weeks or at diagnosis if diagnosed later
- Gestational hypertension with severe-range blood pressures
  - Late preterm
  - 34 0/7 weeks of gestation or at diagnosis if diagnosed later
- Preeclampsia without severe features
  - Early term
  - 37 0/7 weeks of gestation or at diagnosis if diagnosed later
- Preeclampsia with severe features, stable maternal and fetal conditions, after fetal viability (includes superimposed)
  - Late preterm
  - 34 0/7 weeks of gestation or at diagnosis if diagnosed later
- Preeclampsia with severe features, unstable or complicated, after fetal viability (includes superimposed and HELLP)
  - Soon after maternal stabilization
  - Soon after maternal stabilization
- Preeclampsia with severe features, before viability
  - Soon after maternal stabilization
  - Soon after maternal stabilization

#### Diabetes
- Pregestational diabetes well-controlled
  - Full term
  - 39 0/7–39 6/7 weeks of gestation
- Pregestational diabetes with vascular complications, poor glucose control, or prior stillbirth
  - Late preterm/early term
  - 36 0/7–39 6/7 weeks of gestation
- Gestational: well controlled on diet and exercise
  - Full term
  - 39 0/7–40 6/7 weeks of gestation
- Gestational: well controlled on medications
  - Full term
  - 39 0/7–39 6/7 weeks of gestation
- Gestational: poorly controlled
  - Late preterm/early term
  - Individualized

#### HIV
- Intact membranes and viral load >1,000 copies/mL
  - Early-term cesarean delivery
  - 38 0/7 weeks of gestation
- Viral load ≤1,000 copies/mL with antiretroviral therapy
  - Full term (early term birth not indicated)
  - 39 0/7 weeks of gestation or later
- Intrahepatic cholestasis of pregnancy
  - Late preterm/early term
  - 36 0/7–37 0/7 weeks of gestation or at diagnosis if diagnosed later
MEDICALLY INDICATED LATE PRETERM/EARLY TERM DELIVERIES

• What are other obstetric reasons for delivery prior to 39 weeks EGA?

<table>
<thead>
<tr>
<th>Obstetric Conditions</th>
<th>Preterm PROM</th>
<th>Late preterm</th>
<th>34 0/7 weeks of gestation or at diagnosis if diagnosed later</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROM (37 0/7 weeks of gestation and beyond)</td>
<td>Generally, at diagnosis</td>
<td>Generally, at diagnosis</td>
<td></td>
</tr>
<tr>
<td>Previous stillbirth</td>
<td>Full term (early term birth not routinely recommended)</td>
<td>Individualized</td>
<td></td>
</tr>
</tbody>
</table>

Where can you find the recommendations for delivery timing?

- ACOG Committee Opinion #764: Medically indicated late preterm and early term deliveries
- ACOG Applet
- Consultation with a MFM
Infants of Black mothers have **1.5 times the risk of preterm birth** and **3.4 times the risk of preterm-related mortality**

Preterm birth is the most frequent cause of infant mortality and neurologic disabilities in children, including cerebral palsy and developmental delays

Recent increase in rate of late preterm births thought to be due to:
- improved risk assessment and timing for maternal and fetal disorders
- more elective inductions and caesarean sections to reduce adverse fetal outcomes
- increasing maternal age (>35 years), and increasing rates of multiple gestations
.BBonLatePretermEarlyTermDelivery

Description: Indications and counseling on late preterm/early term delivery

Given history of ***[placenta previa/ vasa previa/ prior classic cesarean/ previous uterine rupture/ oligohydramnios/ uncomplicated IUGR/ mono-did twins with IUGR/ alloimmunization requiring intrauterine transfusion/ poorly controlled GDM, poorly controlled HTN] patient was counseled on timing and MOD to be determined by multiple factors but general recommendation for delivery within 36+0*** and 37+6*** given increased risk of adverse outcomes thereafter.
BILLING AND CODING

• Depends on indication for delivery. Examples include:
  • O24.41: Gestational diabetes mellitus in pregnancy
  • O11.9: Pre-existing hypertension with pre-eclampsia
  • 030.049: Twin pregnancy, dichorionic/diamniotic
  • O36.5990: Maternal care for other known or suspected poor fetal growth
  • 041.0: Oligohydramnios
  • O44.0: Complete placenta previa NOS or without hemorrhage
EVIDENCE

