PRETERM BIRTH - RISK ASSESSMENT/PREVENTION

Week 83

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Reading Assignment:
Practice Bulletin #130, Oct 2012
Prediction and Prevention of Preterm Birth

Also suggested:
Practice Advisory: Clinical Guidance for Integration of the Findings of the PROLONG Study: Progestin’s Role in Optimizing Neonatal Gestation
LEARNING OBJECTIVES

• To be able to identify and stratify factors that increase the risk of preterm delivery

• To gain an understanding of the role of progesterone in prevention of preterm birth

• To review the recommendations for use progesterone, cervical length screening, and cerclage placement

• To be comfortable counseling the patient about her risk factors and treatment plan
CASE VIGNETTE

• Ms. P.T. is a 36 y.o. G3P0111 woman at 8 weeks 3 days EGA by first trimester ultrasound who presents for an initial prenatal visit.

• She reports some mild nausea and vomiting, which is well-managed by modifying her diet and meal portions. She denies any pain or vaginal bleeding. This pregnancy was planned and she’s very excited.
FOCUSED HISTORY

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

- **POB:** 2015 - 1 PT NSVD 32w4d after PPROM at 30 weeks
  2018 - 1 SAB at 6w3d
- **PGYN:** Regular menses; No STI/Cysts/Fibroids; No abnormal paps
- **PMH:** Denies
- **PSH:** Denies
- **Meds:** PNV
- **All:** NKDA
- **FHx:** No significant history
- **Soc:** No toxic habits
PERTINENT PHYSICAL EXAM FINDINGS

• What will be pertinent in her physical exam?

• VS: P 76  BP 117/74  Wgt: 55kg  Hgt: 160cm  BMI: 21.5
• Cor:  Regular rhythm, no M
• Pulm:  CTAB b/l
• Abd:  Soft, NT/ND, +BS x 4Q
• Pelvic:  Vulva: Normal external female genitalia; No lesions
  Vagina: Healthy-appearing mucosa, No discharge
  Cervix: Parous os; L/C/P
  Uterus: NT, ~8wk size, antevorted
  Adnexae: No mass/tenderness b/l
• Ext:  No calf tenderness b/l
DEFINITION

• How is spontaneous preterm birth defined?

• Any birth prior to 37 completed weeks following:
  • Preterm labor
  • Preterm PROM
  • Cervical insufficiency
RISK ASSESSMENT

• What places a patient at risk for spontaneous delivery of a preterm infant?

• History
  • Prior history of preterm birth
    • Most important historical risk factor
    • Also affected by # preterm births & gestational age at prior delivery
  • Cervical/Uterine instrumentation
    • Prior LEEP or CKC
    • Associated with risk, but studies are conflicting
  • Behavioral
    • Substance abuse, Smoking

• Objective findings
  • Shortened CL on TVS  
    <2.5cm before 24 weeks
  • Low pre-pregnancy weight
  • Short IPI

History of preterm birth confers a 1.5-fold to 2-fold increased risk in subsequent pregnancies.
CERVICAL LENGTH

• What is the proper way to measure cervical length on TVS?

• Positioning
  • How should you place the probe?

• Measurement
  • How do you obtain the CL?

Place the probe in the anterior fornix of the vagina after the patient has emptied her bladder

Documented CL will be the shortest of three measurements taken between calipers at internal os and external os
EVALUATION

• Since our patient’s prior delivery meets criteria for a spontaneous preterm birth, what are the key components of her evaluation?
  
  • Detailed history of prior pregnancy
  
  • Review of risk factors
  
  • Determine if she is a candidate for prophylactic interventions
What interventions are available to prevent preterm birth for this pregnancy?

- Weekly IM Progesterone supplementation
  - Starting 16-24 weeks until 36 weeks

- Cervical length screening
  - Q 2 weeks starting at 16 weeks until 24 weeks

- Cerclage placement
  - CL <25mm before 24 weeks + prior preterm birth was <34 weeks
UNIVERSAL SCREENING

• If this patient had no risk factors, what screening modality, if any, would be appropriate?

ACOG

Reasonable to do routine screening of cervical length in second trimester

Universal screening is offered to all patients

• What CL measurement would be an indication for intervention with such a patient?

ACOG

CL < 20mm before or at 24 weeks

Columbia

CL <25mm before or at 24 weeks

• What would be the appropriate intervention for these findings?
  • Vaginal progesterone (200mg) nightly
  • CL Q1-2 weeks until 24 weeks
MULTIPLE GESTATIONS

• Does current data support progesterone or cerclage placement for the reduction of preterm birth in patient with a multifetal gestation regardless of prior preterm birth?
  • No

• Patients may be offered progesterone based on a shared decision-making model or as a study participant
PROLONG Trial

• Your patient says she Googled progesterone and read about something called the PROLONG Trial. She is concerned about taking progesterone since it may not make a difference.

• **How do you counsel her?**

  • The study showed **no difference in preterm birth** between patients who did and did not receive progesterone

  • However, the authors who did the study think it was **not as strong as it could have been**

  • At this time, the national practice guidelines **DO NOT recommend changing our practice** of offering progesterone to a patient with risk factors
KEY POINTS

• Singleton gestation with a prior spontaneous preterm birth
  • Offer IM progesterone supplementation beginning at 16-24 weeks

• Singleton gestation with NO prior spontaneous preterm birth + incidental finding of CL <25mm at or before 24 weeks
  • Offer vaginal progesterone

• Multifetal gestation
  • Progesterone or cerclage are NOT recommended as an intervention regardless of prior history of preterm birth

• PROLONG Trial
  • ACOG is not changing clinical recommendations at this time
SOCIAL DETERMINANTS OF HEALTH

Women living in neighborhoods with a low SES are significantly more at risk for SPTB, independent of their young age or non-Western background.

Significant disparities in birth outcomes exist based on race and/or ethnicity. Rates of preterm birth, low birthweight and infant mortality are significantly greater for black non-Hispanic infants than for white non-Hispanic or Hispanic infants.

Efforts should be made by governmental and medical professionals to address this issue and develop intervention programs to reduce SPTB in low SES communities.
Description: Preterm birth risk counseling and management

Patient has a history of a prior preterm birth at *** weeks. A prior preterm birth at an early gestational age is a strong risk factor for recurrent preterm delivery, including the possibility of earlier delivery. The patient will be referred to perinatal clinic for consult and evaluation for 17-OHP injections. We discussed the potential benefit for weekly 17-hydroxyprogesterone therapy starting at 16 weeks to decrease this risk. The patient was counseled that if she chooses to have 17-OHP injections, we will initiate therapy between 16 and 18 weeks and continue weekly injections through 36 weeks.
## CODING AND BILLING

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EVIDENCE

• References


