195. Emergency Delivery

Etiology & Pathophysiology

- Labor is defined as the presence of contractions, cervical dilatation and effacement, and fetal descent preceding delivery
- Preterm labor begins before 37 weeks gestational age; risk factors include dehydration, multiple gestations, and infections
- Breech presentation occurs in 4% of term deliveries, may preclude vaginal delivery, and increases the risk of fetal distress
- Rupture of membranes usually occurs during labor; however, it may abnormally precede labor (premature rupture of membranes)
- Meconium is potentially infectious amniotic fluid
- Shoulder dystocia: Shoulder entrapment at the pubis during delivery
- Prolapsed cord: Umbilical cord protrudes into the vagina, where it may be compressed by the presenting fetus and cause fetal hypoxia
- Nuccal cord: Umbilical cord becomes wrapped around the neck of the fetus

Differential Dx

- UTI
- Vulvovaginitis
- Braxton-Hicks contractions/ "false labor" (short, irregular contractions without cervical changes or fetal descent)
- Placental abruption
- Placenta previa

Presentation

- Change or increase in vaginal discharge
- Bloody show (small volume of bloody fluid)
- Contractions increasing in frequency, intensity, and duration
- Low back pain
- Rupture of membranes may be described as "a gush of fluid" from vagina
- Pelvic pressure

Diagnosis

- Monitor maternal vital signs and fetal heart rate
- Monitor uterine contractions to rule out Braxton-Hicks contractions
- Sterile speculum exam to confirm rupture of membranes
  - –Rupture is associated with pooling of fluid in the vagina, positive nitrazine test (paper turns blue due to pH >7.0), and ferning on a glass slide
  - –Consider cultures to rule out infectious causes of preterm labor and chorioamnionitis (e.g., Group B strep, STDs)
  - –Note the presence of meconium (thick, greenish fluid)
  - –May see cord prolapse, fetal foot, or fetal breech
- Sterile digital exams to check cervix for dilatation, effacement (thinning), and fetal station
- Speculum or digital exam is *contraindicated* if any bleeding is present—must first rule out placenta previa by ultrasound
- Ultrasound may be used to determine presenting part and fetal position

Treatment

- Uncomplicated delivery
  - –Extend and deliver the head; suction nose and mouth
  - –Check for nuchal cord and reduce if present
  - –Rotate the head by 90° and deliver shoulders
  - –Double clamp and cut cord; care for infant as necessary
  - –Deliver placenta by applying gentle traction
- Breech delivery
  - –Deliver buttocks and then each leg one at a time
  - –Allow torso to freely slide out (traction may entrap arms)
  - –Rotate, deliver anterior arm, then repeat for other arm
  - –Keep body parallel to floor (prevent neck extension and airway obstruction); deliver head via suprapubic pressure
- Shoulder dystocia: May require episiotomy, bladder drainage, maternal knee-to-chest, suprapubic pressure, corkscrew maneuver, or posterior shoulder delivery
- Prolapsed cord: Push presenting part off cord back into the cervix; hold in place until emergent C-section is performed
- Preterm labor: Steroids for fetal lung maturity and consider tocolytics (Mg^{3+} or β-agonists) to delay labor if <35 weeks

Disposition

- If possible, emergent transfer to labor and delivery is preferred; however, fetal distress may require emergent delivery in the ED
- Admit all patients
- Infant resuscitation must be performed as needed; consult the NICU for premature infants
- C-section is required for incomplete breech or footling presentations, prolapsed cord, placenta previa, and placental abruption
- Tocolysis in preterm labor should only be undertaken after consulting with OB/Gyn