LABOUR AND DELIVERY

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Overview
Identification of risks and subsequent management are essential in ensuring an uncomplicated delivery and postpartum period.

History

ID:
- Age
- GTPAL status
- Estimated Date of Birth (EDB)
- Gestational Age
- GBS status
- Rh status
- Rubella status

HPI:
1) Contractions
   - When did they start?
   - How frequent?
   - Duration?
   - Severity?
2) Bleeding
   - When did it occur?
   - How much?
   - Colour?
   - Associated with pain?
   - Associated with intercourse/trauma?
   - Last U/S? History of placenta previa?
3) Fluid/Spontaneous rupture of membrane (SROM)
   - When did patient first notice fluid?
   - Gush vs trickle?
   - Colour?
4) Fetal movement (FM)
   - Last FM
   - Kick count (6 in 2 hrs)

PMHx
- Meds
- Allergies

ROS:
1) Infectious symptoms
   - If GBS+, needs intrapartum antibiotic to prevent early-onset neonatal infection: Penicillin G 5 million units IV initial dose, then 2.5 million units IV q4hrs until delivery
   - If GBS+ and penicillin allergy: clindamycin 900 mg IV q8hrs until delivery
2) Increased BP:
   - When was BP first noted as being elevated?
   - last few readings
   - H/A, Visual change, RUQ pain, N/V
   - Medications? Or Lifestyle?
3) Planned IOL for what indication?
4) Planned C/S for what indication?

Hx of Current Pregnancy:
- Complications: HTN, GDM, infections
- FTS/IPS screening
- Last U/S: BPP score, growth restriction, presentation
- Last vaginal exam: dilation of cervix

PObHx:
- Year
- Outcome (SVD vs CS vs SA vs TA)
- Baby size
- Length of labour
- Use of vacuum or forceps
- Any complication during/after delivery
- Location of delivery

Physical Exam/Investigations

Maternal vitals

NST/FHR tracing
1) Baseline
   - Normal = 120 – 160
2) Variability:
   - minimal vs. moderate vs. marked
3) Presence of acceleration
   - Normal = 2 accels in 20 mins
4) Any deceleration
   - Early: head compression
   - Variable: cord compression
   - Late: uteroplacental insufficiency
5) Reassuring vs Non-reassuring
   - reassuring = normal baseline, moderate variability, accel present, no late/variable decels
   - non-reassuring = bradycardia, absent or minimal variability, presence of late/variable decels, requires immediate intervention!

Leopold's maneuver
presentation, lie and position (breech larger and less clearly defined than head)
#1: feel fundus
#2: feel spine vs. hands and feet
#3: suprapubic palpation for presentation (head mobile alone, breech moves body) and station
#4: if cephalic prominence palpable, head not engaged

Speculum exam
Sterile spec exam if SROM suspected

Bimanual exam
- Dilation in cm
- Effacement in % (original 2cm)
- Presentation: part of the fetus at the cervical opening
- Position: relation of the presenting part to the pelvis
- Station - 0 at ischial spines (suggests BPD passed pelvis inlet), +3 at introitus
- Membrane intact vs ruptured
- Do not perform if vaginal bleeding present until placental location is determined

Urine dip
For protein

F/U exam
- on admission
- at 1-4 hour intervals in the first stage
- at 1 hour interval in the second stage
- prior to administration of analgesia
- when patient feels the urge to push
- if FHR abnormalities to r/o cord prolapse or uterine rupture


Abnormal labour/Dystocia/Failure to progress
= abnormal progression of cervical dilation and/or abnormal fetal descent

- Diagnosis:
  - 1
  - 2
  - active phase of 1st stage: < 2 cm dilation in 4 hrs
  - 2nd stage: > 3 hr in nulliparous with anesthesia, > 2 hr in nulliparous without anesthesia, > 2 hr in multiparous with anesthesia, > 1 hr in multiparous without anesthesia

- Evaluation:
  - review labour record
  - assess maternal status:
    - vitals, pain management, contraction pattern, membrane status
    - partogram = serial cervical dilation and effacement
  - assess fetal status
    - fetal heart, station, presentation and position
  - Management:
    - Offer pain relief
    - Ensure adequate hydration (NS 100-125 cc/h)
    - Augmentation:

- Oxytocin infusion
  - (low dose regimen = start at 2 milliU/min and titrate rate by 2 milliU/min q30 min)

- Amniotomy/artificial rupture of membrane (AROM)
  - If all fails, assisted vaginal birth or operative delivery

### Indications for Induction of Labour (IOL) and Cesarean (C/S) delivery

<table>
<thead>
<tr>
<th>IOL indications</th>
<th>C/S indications</th>
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<tbody>
<tr>
<td>Post term</td>
<td>Failure to progress</td>
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<tr>
<td>PROM</td>
<td>Malpresentation</td>
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<td>Chorioamnionitis</td>
<td>Cord prolapse</td>
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<td>Placenta abruption</td>
<td>Placenta previa</td>
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<td>Fetal compromise (IUGR)</td>
<td>Fetal distress (non reassuring FHR)</td>
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<td>Gestational HTN, pre-eclampsia, eclampsia</td>
<td>Maternal infection</td>
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<tr>
<td>Poorly controlled GDM</td>
<td>(HIV, Hep C, genital herpes simplex)</td>
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### Methods of IOL
1. Induction alone if cervix favourable (open, soft, head well applied)
   - Oxytocin infusion
     - (low dose regimen = start at 2 milliU/min and titrate rate by 2 milliU/min q30 min)
   - AROM + oxytocin infusion
2. Cervical ripening + induction if cervix not favourable (long, closed, firm, posterior)
   - cervical ripening:
     - prostaglandin e.g. Prepidil gel, Cervidil insert, Misoprostol (Cytotec)
     - foley catheter balloon

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<thead>
<tr>
<th>Oxytocin S/E</th>
<th>Prostaglandin S/E</th>
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<tbody>
<tr>
<td>Hypercontraction</td>
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<tr>
<td>Uterine rupture</td>
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<td>Amniotic fluid embolism</td>
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<td>HypoNa</td>
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<td>Hypotension</td>
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References can be found online at http://www.dfcm.utoronto.ca/programs/postgraduateprograme/One_Pager_Project References.htm