Maine Medical
PARTNERS
Women's Health

A department of Maine Medical Center

Preterm Labor

Definition:

Labor occurring at less than 37 weeks, by the most accurate method, is considered preterm. The diagnosis of preterm labor is based upon the presence of regular uterine contractions accompanied by a change in cervical dilation, effacement, or both, or initial presentation with regular contractions and cervical dilation of at least 2 cm.[1]

As tocolytic therapy is generally effective for up to 48 hours; only women with fetuses that would benefit from this delay in delivery should receive tocolytic therapy.[1,2] Tocolytics may also give time to allow women to be transferred to a tertiary care facility. In general, tocolytics are not indicated prior to neonatal viability.

Prior to transfer and if appropriate, consider administering antenatal corticosteroids, magnesium for neuroprotection and group B strep prophylaxis.

Diagnosis:

Regular contractions
AND
Cervical dilation ≥ 2 cms
OR
Cervical effacement of >/=80%
OR
Cervical change during observation period
OR
Contractions AND cervical length:

- < 20 mm.

  OR
- 20 – 30 mm, and positive FFN

Management:

Sterile speculum exam to rule out PROM, consider obtaining/holding FFN swab if 24-34 weeks.

If the fetal fibronectin enzyme immunoassay kit is to be used the following criteria should be met:

1. Amniotic membranes are intact.
2. Cervical dilation is minimal (< 3 cm).
3. Sampling is performed no earlier than 24 weeks, 0 days and no later than 34 weeks, 6 days of gestation.

a. The test is not recommended for routine screening of the general obstetric population.

b. Although a negative test appears to be useful in ruling out preterm delivery that is imminent (ie, within 2 weeks), the clinical implications of a positive result have not been evaluated fully.

4. No bleeding, intercourse, vaginal examinations for at least 24 hours prior to sampling.

Methods:

1. Perform sterile speculum exam and rotate the provided Dacron swab across posterior fornix for 10 seconds to absorb cervicovaginal secretions. Subsequent attempts may invalidate the test. (Use only the Hologic Collection kit).
2. Remove swab and immerse Dacron tip into buffer solution. Break shaft at score mark.
3. Align shaft with cap and push down tightly.
4. Label specimen.
5. If not immediately sent to lab, specimen must be refrigerated after collection. It is ideal to transport the specimens refrigerated, however specimen integrity is maintained at room temperature for 8 hours. (4)

Evaluate for obvious labor by pelvic exam, and institute continuous fetal monitoring for 2 hours.

If contractions continue:

- Cultures/testing (beta-strep, GC/chlamydia)
- Ultrasound for fetal position, biophysical profile, EFW, anomalies
- Evaluate for Triple-I (intra-uterine infection, inflammation or both) or abruption with maternal vitals, physical exam and fetal heart rate pattern
- Urinalysis and culture and sensitivities, consider urine toxicity screen, CBC, type and screen
- Identify any patients with heart disease, diabetes, or hyperthyroidism (relative contraindications to beta-mimetics)
- Antenatal corticosteroids if appropriate (see “Corticosteroid Administration for Fetal Lung Maturity” guideline)
- Antibiotics for GBS if appropriate (see “Prevention of Early Onset GBS Disease” guideline)
- Magnesium for neuroprotection if appropriate (see “Magnesium Sulfate for Neuroprotection” guideline)

First-Line Tocolytic Agents:

1. Nifedipine
    - 20-30 mg by mouth loading dose, then 10-20 mg by mouth every 6-8 hours
    - Check BP every 15 minutes x 4 after first dose, maintaining patient in left lateral
    - Hold for BP < 90/60

2. Indomethacin
    - 50-100 mg by mouth loading dose followed by 25-50 mg by mouth every 6-8 hours, not to exceed 48 hours total treatment.
    - Particularly useful in fetuses with polyhydramnios, recent cerclage placement.
    - Should not be administered beyond 31 6/7 weeks gestation.
3. Magnesium Sulfate
    - 4-6 gm loading dose over 20 minutes followed by IV infusion at 2 gm/hr and may increase up to 4 gm/hour with MgSO4 levels every 6 hours
    - Monitor with I&O's **and** check patellar reflexes and lungs frequently

Prophylactic and Maintenance Tocolytics-:

- No evidence exists to support the use prophylactic therapy in women with preterm contractions without cervical change. Therefore, prophylactic tocolysis is not recommended.[1,3]

- Maintenance therapy with tocolytics is ineffective for preventing preterm birth and improving neonatal outcomes. Therefore, maintenance tocolysis is not recommended.[1]

References:

1. ACOG Practice Bulletin No. 171. Management of preterm labor. October 2016.

2. Neilsen JP, West HM, Dowswell T. Betamimetics for inhibiting preterm labour. Cochrane Database Syst Rev 2014 Feb 5(2):CD004352. doi: 10.1002/14651858.CD004352.pub3.

3. Crowther CA, Brown J, McKinlay CJ, Middleton P. Magnesium sulphate for preventing preterm birth in threatened preterm labour. Cochrane Database Syst Rev 2014 Aug 15;(8):CD001060. doi: 10.1002/14651858.CD001060.pub2.

4. NorDx test catalog: https://nordx.testcatalog.org/show/FETFN. Accessed 3.20.2020