L07: Preterm Labour

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Introduction

A preterm birth occurs when an infant is delivered between 20 and 37 weeks of gestation. It may, or may not, be preceded by preterm labor. Up to 80 precent of preterm births are spontaneous, resulting from preterm labor, or premature rupture of membranes; rarely, cervical insuffiency can be responsible for a preterm birth. Other causes involve maternal or fetal issues that jeopardize the health of either (or both), such as pre-eclampsia, placenta previa, abruption placentae, and fetal growth restrictions. The four main factors that lead to preterm labor are intrauterine infection, decidual hemorrhage, excessive uterine stretch, and maternal or fetal stress.

Essentials

- The clinical findings that define true labor are the same regardless of whether the labor occurs at term or not. Signs and symptoms may be present for several hours:
  - Menstrual-like cramping
  - Mild, irregular contractions
  - Low back ache
  - Pressure sensation in the vagina or pelvis
  - Vaginal discharge of mucus, which may be clear, pink, or slightly bloody (ie, mucus plug, bloody show)
  - Spotting, light bleeding
- Preterm premature rupture of membranes (PPROM) presents a significant risk for preterm labour, but does not necessarily signify that delivery is imminent, though most pregnancies with PROM deliver within one week of rupture. Another common complication associated with PPROM is chorioamnionitis, an infection of the membrane and amniotic fluid. This poses a serious threat to both mother and infant.
- Care for preterm infants is challenging at best in the prehospital field. An emphasis must be placed on maintaining warmth while attempting to properly assess the infant. Low APGAR scores are often expected for preterm infants.
- For interfacility transfers: Patients with pain or possible labour should have documentation of duration and severity of contractions, frequency of contractions, progress, cervical dilatation, and fetal fibronectin testing results if available. In general, transport should not be initiated with patients with cervical dilation greater than 4-6 cm; however, the decision to transport is based on labour progression, parity, obstetrical and labour history, gestational age and transport time.

Referral Information

- Any pregnant women presenting with signs of preterm labour should be transported to the closest most appropriate facility. Receiving centre should have NICU capabilities.
- Patients who are more than 34 weeks pregnant and in true labour will likely be admitted for delivery. Patients who are less than 34 weeks pregnant will likely receive care attempting to delay delivery.

General Information

There is a high probability of malpresentation with preterm labour. Consider reviewing CPG L08: Delivery Complications (breech, limb presentation, cord prolapse and shoulder dystocia).

Interventions

Emergency Medical Responder – All FR interventions, plus:

- Assess the patient - including vital signs and details pregnancy assessment

- Determine if birth is imminent
  - If birth is imminent, seek additional assistance urgently
  - Prepare for delivery and resuscitation

Primary Care Paramedic – All FR and EMR interventions, plus:

- Consider vascular access when appropriate
  - → D03: Vascular Access

Critical Care Paramedic – All FR, EMR, PCP, and ACP interventions, plus:

- Consider tocolytics
  - For patients in preterm labour, the goal is to avoid delivery during transport. Tocolytics should be strongly considered in order to minimize risk of delivery outside the hospital environment. Indomethacin or niFEDIPine can be considered for the tocolytic.
- Sending facilities may have initated some or all of the following:
  - Steroids if < 34 +6/7 weeks for lung maturation
  - Magnesium if < 33 +6/7 weeks for neuroprotection
  - Antibiotics for Group B Strep + patients

References

1. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [Link]
2. Lockwood CJ. Preterm labor: Clinical findings, diagnostic evaluation, and initial treatment. In UpToDate. 2020. [Link]
3. Robinson JN. Preterm birth: Risk factors, interventions for risk reduction, and maternal prognosis. In UpToDate. 2020. [Link]