FAILURE TO PROGRESS IN LABOUR

**Definition of labour**
- Regular contractions of increasing strength and frequency radiating from fundus (fundal dominance) with evidence of cervical dilation

**Initial assessment in labour**
1. Diagnose that labour is actually occurring
2. Assessment of the foetus
   - Foetal size
   - Presentation
   - Degree of descent
     - Has engagement occurred?
     - Engagement is when the maximum diameter of the presenting part has entered the pelvic brim
     - For a vertex presentation, this is determined by feeling 1/5 of the head palpable above the pelvic brim on abdominal examination
   - Foetal heart sounds
3. Assessment of uterine activity
   - Frequency – should be 1 every 2 or 3 min
   - Duration – last 60 sec
   - Intensity of contraction – uterus should feel hard
4. Vaginal examination
   - During labour, a vaginal examination is usually done every 4 hours (more often if complicated)
   - Assessment of
     A. Size of bony pelvis
     B. Station
       - How far the presenting part has descended in relation to the ischial spines
       - For a vertex presentation, when the vertex is at the spines (0 station) the fetus is considered engaged
     C. Presenting part
       - What you can feel through the dilating cervix
       - Cephalic presentation can be
         - Vertex (sub occipital – bregmatic diameter 9.5cm)
         - Deflexed vertex (occipital frontal diameter 11.5 cm)
         - Brow (vertico mental diameter 13.5 cm)
         - Face (cervico bregmatic 9.5 cm)
       - Breech presentation can be
         - Frank (hips flexed, knees extended)
         - Complete (hips and knees flexed)
         - Footling
     D. Degree of dilation and effacement of the cervix
       - The cervical dilation in cm can be plotted on a partogram
       - In a primigravida, progress of dilation should be approximately 1cm/hr

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<th>Cx dilation (cm)</th>
<th>Time (hrs)</th>
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E. Application of the presenting part to the cervix
- If poor application - obstruction
F. Position of presenting part
- Rotational relationship of a defined area on the presenting part (denominator) to the maternal pelvis
- For a vertex presentation, the denominator is the occiput. The position is usually
LOL/T (left occipital lateral/trasverse) → LOA → OA

- For face presentation, the denominator is the mentum
- For breech, denominator is sacrum

G. Attitude
- How well flexed is the baby

H. Caput/moulding
- Degree of overlap of the flat bones of the skull

I. May do an artificial rupture of membranes
- This will augment the labour as well as allow assessment of the liquor (should be clear, not meconium stained – if so, fetal distress)

**Progress in labour determined by:**

1. **Powers**
   - Strength and frequency of contractions
2. **Passages**
   - Pelvic size and shape
3. **Passenger**
   - Fetal size, position (best is OA) and attitude (best is flexed)

**What indicates good progression in labour?**

1. Amount of cervical dilation – plot on partogram
2. Descent of the presenting part

Can assess by doing 4 hourly vaginal examinations

**The powers**

- Initially the power is via uterine contractions
- As labour progresses, abdominal and pelvic muscle contractions augment the uterine contractions
- Uterine contractions may be less forceful and frequent at the onset of labour
  - This is termed Primary hypotonic uterine contractions
- However, initially good uterine contractions may die down and fizzle out
  - This is termed Secondary hypotonic contractions
  - Can be due to
    - Obstruction in labour → uterine exhaustion
      - Big baby, small pelvis
    - Maternal exhaustion (mentally, physically and metabolically)
  - The result is a slowed progression of labour, as can be seen on partogram

**The passages**

- Pelvis may not be suitable for child birth due to
- Small stature
- Pelvic deformity
  - From fracture or osteomalacia
- Pelvic shape – e.g. android
- Assessment of pelvic size
- Digitally
- The pelvis can be assessed via X ray pelvimetry
  - X ray pelvimetry is not usually required if there is a cephalic presentation
    - This is because X ray pelvimetry does not take into account the ability of the head to mould, and hence the ability to pass through a narrow space
  - It is only used if there is a breech presentation and a vaginal breech delivery is planned
The passengers
- Macrosomic fetus
- Abnormal position
  - Persistent occipito-posterior or occipito-transverse
- Deflexed cephalic presentation
  - Brow or face presentation
- Hydrocephalus with ↑ in biparietal diameter

How to detect cephalopelvic disproportion
- High head not descending
- Prolonged latent phase of labour
- Excessive caput and moulding
- Cervical dilation slows or ceases (flattening of the curve on partogram)
- Cervix becomes oedematous
- Cervix poorly applied to presenting part
- Fetal distress due to hypoxia from prolonged uterine contractions in S2
  - Detect acidosis on scalp pH
  - Continuous CTG monitoring
- Maternal fever, haematuria, tachycardia

Management of CPD in primigravida
1. If suspect before labour, consider an elective CS
   - Consider an elective CS also if an arduous labour is not desirable
     - Advanced maternal age
     - History of infertility
     - Diabetes
     - Previous shoulder dystocia
2. Alternatively, can consider a “trial of labour”
   - Induced or spontaneous
   - Require vigilant monitoring of progress (more frequent vaginal exams) and fetal well being
   - If uterus contracting poorly, give syntocinon infusion
   - Provide comfort with an epidural
   - Maternal hydration with fluids
   - If everything goes well – good
   - If progression of labour slows, consider optimisation with syntocinon and reassess in 2 hours
   - If still no progress, convert to CS

Management of CPD in multigravida
- Need to be very careful because the risk of uterine rupture is increased by giving syntocinon
- The above protocol can be used but require extreme care and vigilance
  - If labour is not progressing, consider CS earlier