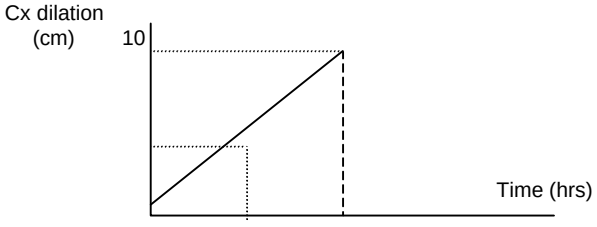
FAILURE TO PROGRESS IN LABOUR

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 occuring
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 vertx 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



        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 presenation, 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)

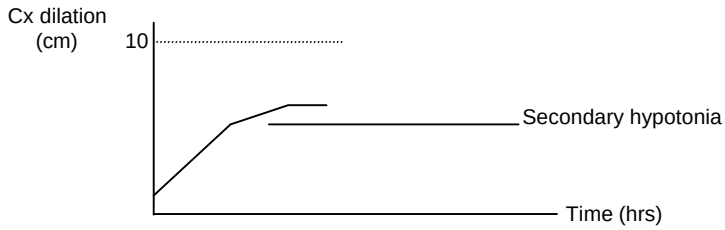
What indicates good progression in labour?

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 reasess 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