Abnormal Labour: Prolonged Second Stage

Prolonged second stage:

Failure to deliver the baby for at least 2 hours in primigravida or 1 hour in multigravida in a woman with normal and regular uterine contraction and fully dilated cervix.

Causes: due to abnormalities in any of the following

- Power.
- Passenger.
- Passage.

Power:

- Dysfunctional or inadequate uterine contraction:
  - Hypotonic contraction.
  - Hypertonic contraction.
  - Disturbed polarity.
  - Reversed polarity.
  - Incoordinated contraction.

Management:

- Hypotonic Uterus: give oxytocin.
- Hypertonic: give sedatives, morphine, anti-spasmodics, inhaled or subdural anesthesia if needed.

Passenger:

- Large baby size.
- Fetal anomalies e.g., hydrocephalus.
- Malpositions.
- Abnormal attitude.

Malpositions of the fetal head:

- Occipitoposterior (ROP, LOP).
- Occipitotransverse (ROT, LOT).
- The commonest one is ROP.
**Management of malposition was discussed in a lecture.**

**Passage:**

- Narrow pelvis (android): due to either:
  - Bony factors.
  - Soft tissue: e.g, tumor or vaginal septum.
- Management: C/S.

**Umbilical Cord Prolapse**

It is the descend of the cord to a level adjacent or below the presenting parts causing cord compression between the presenting part and the pelvis.

**Risk factors:**

- The incidence increases with:
  - Prematurity and PROM.
  - Malpresentation (50% of cases)
  - Nuchal cord.
  - Long cord >80 cm.
  - Short cord <35 cm.
  - Torsion.
  - Low lying placenta.
  - Polyhydramnios.
  - Multiple gestation.
  - Cephalopelvic disproportion.

**Clinical Features:**

- Visible or palpable cord.
- CTG:
  - Mostly, variable deceleration.
  - Sometimes, bradycardia.
  - Sometimes both.
Management of Cord Prolapse:

- Emergency C/S.
- O₂ to mother and monitor fetal heart.
- Alleviate the pressure of the presenting part on the cord by placing digit in the vagina – maintain position until C/S.
- Keep the cord warm and moist by replacing it into the vagina ± apply warm saline soak.
- Position the mother in Trendelenburg or knee-to-chest position.
- If fetal demise or too premature (<22 weeks), allow labour and delivery.

Shoulder Dystocia

Definition:

- It is impaction of the fetal anterior shoulder against symphysis pubis after the fetal head has been delivered.
- It is a life threatening emergency.
- It occurs when the breadth of the shoulder is greater than the biparietal diameter of the head.

Risk Factors:

Mother:
- Obesity.
- Diabetes.
- Mutiparity.

Fetus:
- Macrosmia.
- Prolonged gestation.

Labour:
- Prolonged 2\textsuperscript{nd} stage.
- Prolonged deceleration phase.
- Instrumental multipelvic delivery.
Clinical features:

- **Turtle sign**: the fetal head suddenly retracts back against the inferior portion of the symphysis pubis after it has been delivered.

Complications of Shoulder Dystocia:

- Fetal chest compression by the vagina → hypoxia.
- Cord compression by the pelvis → hypoxia.
- Brachial plexus injury:
  - Erb's palsy: C5-7.
  - Klumpke's palsy: C8–T1.
  - 90% of brachial plexus injuries resolve within 6 months.
- Fetal bone fractures: clavicle, humorous and cervical spines.
- Maternal perineal injury. (may result in postpartum hemorrhage).
- Intrapartum fetal hypoxia or trauma.

Management:

- **GOAL**: to displace the anterior shoulder from behind the symphysis pubis.

  **McRobert's maneuver and suprapubic pressure**

  1. Legs are in full flexion (McRobert maneuver): to make the pubis and pelvis more horizontally.
  2. Apply a suprapublic pressure to free the anterior shoulder.
  3. Internal rotation: to release the posterior shoulder by rotating the posterior shoulder anteriorly by placing a hand in the vagina under adequate anesthesia.

Other options:

- Cleidotomy: deliberate fracture of the neonatal clavicle.
- Zavanelli maneuver: replacement of the fetus in the uterine cavity again and do an emergency C/S.
- Symphysiotomy.
- Abdominal incision to make a hystrotomy then disimpact the shoulder for a subsequent vaginal delivery.

90% of cases resolve with **McRobert's maneuver and suprapubic pressure**.
McRobert's Maneuver and Suprapubic Pressure

SHOULDER DYSTOCIA

Anterior shoulder impacted against the pubis

McRoberts maneuver tilts pelvis and pubis more horizontally to facilitate shoulder delivery

“Turling” indicates dystocia

Suprapubic pressure is applied to free the shoulder

Internal rotation is attempted to turn the body and free the shoulder
**Instrumental Delivery**

It includes forceps and vacuum (ventouse) extraction.

**Forceps:**
- **Indications:**
  - Delivery of after coming head in breech.
  - Face presentation.
  - Delivery before 34 weeks.
  - Bleeding from fetal sampling site.
- **Contraindications:**
  - Head is not fully engaged.
  - Cervix is not fully dilated.
- **Complications:**
  - Maternal complications:
    - Anesthesia risk.
    - Lacerations.
    - Bladder injury.
    - Damage to the uterus, bony pelvis, nerves.
    - Bleeding (postpartum hemorrhage).
    - Infection.
  - Fetal Complications:
    - Fractures.
    - Nerve palsy.
    - Trauma to scalp & face.
    - Intracerebral hemorrhage.
    - Cephalohematoma.
    - Cord compression.

**Vacuum Extractors:**
- **Indications:**
  - Prolonged second stage.
  - Fetal distress in the second stage.
  - Maternal conditions requiring short second stage.
- **Contraindications:**
  - Face presentation.
  - Delivery before 34 weeks (preterm), or fetal wt. <2500g.
  - Marked active bleeding from a fetal blood sampling site.
  - Fetus at risk for coagulation.

<table>
<thead>
<tr>
<th>Advantages of Ventouse</th>
<th>Disadvantages of Ventouse</th>
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<tbody>
<tr>
<td>- Easier to apply.</td>
<td>- Suitable only for vertex presentation.</td>
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<tr>
<td>- Less anesthesia is required.</td>
<td>- Maternal pushing effort is required.</td>
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<tr>
<td>- Less soft tissue injury</td>
<td>- Risk for hematoma and retinal h'ge.</td>
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- **Complications:**
  - Soft tissue trauma.  
  - Cephalohematoma.
  - Retinal hemorrhage.

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- **GOOD LUCK** — Your Brother: Ibrahim Tawhari.