Malpresentation, lie and position
-shoulder dystocia

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Presentation:

- Portion of the fetus overlying the pelvic inlet.
- The most common presentation is cephalic.
- Cephalic means head presents first.
Malpresentation:

Non cephalic presentation which include:

- Breech
- Face presentation
- Brow presentation
- Shoulder / Compound / Cord
1. **Breech**

Feet or buttocks present first.

3 types:

- **Frank** breech means thighs are flexed and legs extended. This is the only kind of breech that potentially could be safely delivered vaginally. (65%)

- **Complete** breech means thighs and legs flexed. (10%)

- **Footling** breech means thighs and legs extended. (25%)
Frank Breech  Complete Breech  Footling Breech
Predisposing factors for breech presentation:

**Maternal**
- Fibroids.
- Congenital uterine abnormalities (e.g. bicornuate uterus).
- Uterine surgery.

**Fetal/placental**
- Multiple gestation.
- Prematurity.
- Placenta praevia.
- Abnormality (e.g. anencephaly or hydrocephalus).
- Fetal neuromuscular condition.
- Oligohydramnios.
- Polyhydramnios.
**Diagnosis**:
If a breech presentation is clinically suspected at or after 36 weeks, this should be confirmed by ultrasound scan.

**Management**:
The three management options available at this point should be discussed with the woman. These are:

1. external cephalic version (ECV),
2. vaginal breech delivery.
3. elective caesarean section.
• reduce the number of caesarean sections due to breech presentations.
• Success rates vary according to the experience of the operator but in most units are around 50% (and are higher in multiparous women who tend to have lax abdominal musculature).
• The procedure is performed at or after 37 completed weeks’ gestation.
• ECV should be performed with a tocolytic (e.g. nifedipine) as this has been shown to improve the success rate.
• The woman is laid flat with a left lateral tilt having ensured that she has emptied her bladder and is comfortable.
• With ultrasound guidance, the breech is elevated from the pelvis and one hand is used to manipulate this upward in the direction of a forward role whilst the other hand applies gentle pressure to flex the fetal head and bring it down to the maternal pelvis
• A fetal heart rate trace must be performed before and after the procedure and it is important to administer anti-D if the woman is rhesus negative.
1. The baby is in breech position.

2. The doctor feels for the baby's head and bottom.

3. The doctor turns the baby around.

4. The baby is in position for normal delivery.
Contraindications:

Relative:
- Previous lower segment CS
- Maternal disease (hypertension, diabetes)
- IUGR or oligohydramnios
- Maternal high BMI

Absolute:
- Multiple pregnancy
- Antepartum haemorrhage (within the last 7 days)
- CS indicated for other reasons
- Ruptured membranes
- Fetal abnormality
## Risks of ECV

- Placental abruption.
- Premature rupture of the membranes.
- Cord accident.
- Transplacental haemorrhage (remember anti-D administration to rhesusnegative women).
- Fetal bradycardia.
2. Vaginal delivery of breech:

**Delivery of the buttocks**

The buttocks will lie in the anterior–posterior diameter. Once the anterior buttock is delivered and the anus is seen over the fourchette and an episiotomy can be cut.

**Delivery of the legs and lower body**

If the legs are flexed, they will deliver spontaneously. If extended, they may need to be delivered using Pinard’s manoeuvre. This entails using a finger to flex the leg at the knee and then extend at the hip.
Delivery of the shoulders

The baby will be lying with the shoulders in the transverse diameter of the pelvic midcavity. As the anterior shoulder rotates into the anterior–posterior diameter, the spine or the scapula will become visible. At this point, a finger gently placed above the shoulder will help to deliver the arm. As the posterior arm/shoulder reaches the pelvic floor, it too will rotate anteriorly (in the opposite direction).

Once the spine becomes visible, delivery of the second arm will follow. This can be imagined as a ‘rocking boat’ with one side moving upwards and then the other. Loveset’s manoeuvre.

Figure 6.5 Loveset’s manoeuvre.
**Delivery of the head**

The head is delivered using the **Mauriceau–Smellie–Veit manoeuvre**: the baby lies on the obstetrician’s arm with downward traction being levelled on the head via a finger in the mouth and one on each maxilla.
Face presentation:

• Diagnosis usually made in labour by vaginal examination confirmed by us if there is any doubt.

• Landmarks: mandible, mouth, nose and orbital ridges

Associated with

• Prematurity
• Fetal goitre
• Uterine anomalies
• Polyhydramnios
• Placenta praevia
Management

• The reference point for position in face presentation is the fetal chin (mentum).

• If the mentum is facing the symphysis pubis (mento-anterior), vaginal delivery should be expected.

• Forceps, but not vacuum, can be applied to assist.

• Mentum posterior cases and those with persistent mentum transverse must be delivered by cesarean delivery.

Complications

- Prolonged labor is common.

- When spontaneous vaginal delivery or forceps delivery occurs, perinatal morbidity and mortality for face presentations are similar to those for vertex presentations.
*the extension of the fetal head such that it is midway between flexion (vertex presentation) and hyperextension (face presentation).

* The presenting diameter is the supra-occipitomental diameter, which is the longest anterior-posterior fetal diameter (13.5 cm).

*Diagnosis:
- By vaginal examination during labor where anterior fontanelle, supraorbital ridge and nose can be palpated.
* **Management:**
- Brow presentation is unstable.
- 50-75% will convert to either a face presentation or vertex and will subsequently deliver vaginally.
- With a persistent brow presentation, the large presenting diameter makes vaginal delivery impossible and cesarean section is required.

* **Complications:**
- There is an increased incidence of both prolonged labor (30-50%) and dysfunctional labor (30%).
- Perinatal morbidity and mortality are similar to those for vertex presentations.
Cord presentation and prolapse

• **Cord presentation:**
  Cord below presenting part, with the membranes intact.

• **Cord prolapse:**
  Cord descending through the cervix into the vagina with ruptured membranes

• May follow fetal scalp electrode placement, stabilizing induction of labour, external cephalic version or internal podalic version.
**Diagnosis:**
- P/E: Presence of a ‘high’ presenting part in early labour
  /The cord may be felt pulsating
- Ultrasound: the presence of a cord presentation
- Abnormal cardiotocography, should raise the possibility

**management:**
- Emergent delivery if prolapse, fetal hypoxia monitoring
- Cord presentation
- May be seen by USS in preterm fetuses: No intervention
- Usually diagnosed in labour by VE
- If in labour: CS
Shoulder presentation:
If in labour: C/S
Compound presentation:
More than one fetal part presenting.
Position

Refers to position of presenting part of the fetus relative to the maternal pelvis.

Occipitoanterior (OA): most common position; normal. Occiput of fetus towards symphysis pubis (occiput at anterior of pelvis, hence, occipitoanterior). Any other position is considered malposition.

** Left OA (LOA) is most common.
Malpositions

“Occipito-Posterior” (OP)

most OP rotate spontaneously to OA.
May cause prolonged second stage of labor.
Arrested labor may occur when the head does not rotate and/or descend.
Delivery may be complicated by perineal tears or extension of an episiotomy.

Risk factors:
- multipara women or those with a lax abdominal wall.
- Anthropoid and android pelvis types.
- A flat sacrum-transverse position.
- The placenta on the anterior uterine wall.
**Diagnosis**

Fetal malpositions are assessed during labor.

**Abdominal examination:**
- Lower part of the abdomen is flattened
- Difficult to palpate fetal back.
- Fetal limbs are palpable anteriorly.
- Fetal heart may be heard in the flanks.

**Vaginal examination:**
- Posterior fontanelle towards the sacral-iliac joint.
- Fetal head may be markedly molded with caput, making diagnosing correct station and position difficult.
Management

- Spontaneous rotation to occipitanteior position occur in 90% of cases.

- Course of labor usually normal, except for prolonged second stage (>2 hours)

- If arrest of labor occurs in the second stage of labor: Cesarean section or vacuum is used.

- As was previously referred to in face presentation, reference point for position in face presentation is mentum (chin) (vs. occiput in vertex presentation).
Lie:

the orientation of the long axis of the fetus with respect to the long axis of the uterus.

Lie can be transverse, longitudinal or oblique.

1. In a longitudinal lie, both axes are aligned.

This is considered the normal lie.

Abnormal lie: The absence of a fetal pole in the pelvis on abdominal or vaginal examination.

2. In a transverse lie, the long axis of the fetus lies perpendicular to the long axis of the uterus.

3. In an oblique lie, the fetal long axis is at an angle to the bony inlet. This lie usually is transitory and occurs during fetal conversion between other lies.

--Both the transverse and oblique lies predispose to shoulder malpresentation.
**Association with abnormal lie:**

- Multiparity
- Polyhydramnios
- Placenta praevia
- Pelvic tumour
- Uterine anomaly
- Contracted maternal pelvis
- Hydrocephalus and fetal neck tumours
- Fetal neuromuscular dysfunction “reduced FM”
**Ultrasound scan**

- Confirm findings
- Look for fetal-anomaly
- Measure liquor volume
- Check placental site
- Pelvic tumours or uterine anomalies may be difficult
  - to identify in late pregnancy.
In the majority of cases: spontaneous version to longitudinal lie will occur prior to membrane rupture or labour onset.

Inpatient management: from 37 weeks “risk of cord prolapse”

- Conservative Mx: Lie stabilised longitudinally for 48 H
- Active Mx: ECV

ECV for unstable lie should only be done with immediate induction ‘stabilizing induction’

Stabilizing induction requires a favourable cervix

Should the patient present in early labour, ECV can be attempted.

Caesarean section:

- Should be planned at the appropriate gestational age: 38 weeks.
Shoulder dystocia

**Definition:**
delivery of the shoulder requiring the use of procedures in addition to gentle downward traction on the fetal head or a prolongation of the head-to-body delivery interval to more than 60 seconds.

**Risk factors:**

1. Fetal macrosomia
3. obesity,
4. multiparty,
5. post term gestation
6. short stature
7. previous history of macrosomic birth
8. Previous history of shoulder dystocia.
9. labor induction
10. epidural analgesia
11. prolonged labor
12. operative vaginal delivery
Complications:

Neonatal:
The major neonatal complication of shoulder dystocia is
- **Erb palsy**: caused by excessive traction on the brachial plexus by the delivery attendant
- bells palsy
- clavicular fracture, humeral fracture
- hypoxia, brain injury, and death.

Maternal
- genital tract lacerations
- postpartum hemorrhage.

Shoulder Dystocia triad:
- Second stage of labor
- Head has delivered
- No further delivery of body
Recognition and management:
Shoulder dystocia is recognized at delivery by retraction of the fetal head, which is called the “turtle sign.”
Shoulder dystocia is not overcome by traction on the fetal head but, instead, by one or more maneuvers designed to displace the anterior shoulder from behind the symphysis pubis.
An initial maneuver that can be attempted is
1. (McRobert’s maneuver) maternal thigh flexion (keep it with all other maneuver)
2. suprapubic pressure, which involves downward or lateral pressure with the hand over the maternal suprapubic region in an effort to guide the anterior shoulder under or away from the symphysis pubis.
(McRobert’s maneuver) maternal thigh flexion.
3. Wood’s “corkscrew” maneuver. Internal rotation of the fetal shoulders then manual delivery of the posterior arm.
4. clavicle fracture /Symphysiotomy

• If none of these maneuvers is successful, one or both clavicles must be fractured, preferably by pressure
• on the clavicle directed away from the pleural cavity to prevent traumatic puncture of the lungs.
• Last-resort procedure, when all previous methods failed is **Zavanelli maneuver**: the fetal head is manually returned to its prerestitution position, and then slowly replaced into the vagina and then into the uterus by steady upward pressure against the head. Delivery is then accomplished by cesarean delivery.

• uterine relaxant may be required to carry out this procedure.
HELPERR for Shoulder Dystocia

H: Call for Help
E: Evaluate for Episiotomy
L: Legs: McRoberts Maneuver
E: External Pressure – suprapubic
P: Enter: rotational maneuvers
R: Remove the posterior arm
R: Roll the patient to her hands and knees

“Enter” maneuvers:
- Rubin III
- Rubin I + Wood’s Screw
- Reverse Wood’s Screw

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The End