Abnormalities of presentation position and lie

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Outline

Malpresentation
- Breech
- Face presentation
- Brow presentation
- Shoulder / Compound / Cord

Malposition
- Occipitoposterior

Abnormal lies
- Unstable / transverse
- Oblique lies
Definitions

- **Presentation**: the part of the fetus that is lowermost in the pelvis

- **Malpresentation**: any presentation other than vertex

- **Position**: the relationship of the part of the fetus that presents in the pelvis to the four quadrants of the maternal pelvis

- **Malpositions**:
  - Abnormal positions of vertex relative to maternal pelvis
  - Any position other than occipito-anterior

- **Lie**: the relationship between the longitudinal axis of the fetus and the longitudinal axis of the mother
Abnormalities of presentation position and lie

• Associations

Maternal morbidity
  o Anaesthetic risks
  o Surgical risks “Obstructed labour”

Fetal morbidity
  o Intrapartum : hypoxia (prolonged labour or cord prolapse)
  o Morbidity related to CS
  o Morbidity related to instrumental vaginal deliveries
Malpresentations

- Breech
- Face
- Brow
- Cord presentation and prolapse
- Shoulder / Compound
Breech

Incidence

28 % at 20 weeks, 15 % at 28 weeks, 3 % at term

Associations

- Uterine anomalies (bicorunate uterus......)
- Pelvic abnormality / masses (cervical fibroid, ovarian cyst)
- Intrauterine growth restriction
- Fetal CNS anomalies (hydrocephalus)
- Aneuploidy/trisomy (? Polyhydramnios)
- Prematurity
- Placenta praevia
- Previous breech presentation at term
- Multiple pregnancy
- Oligohydramnios or polyhydramnios
Types of breech

Frank Breech (65%)
Footling Breech (25%)
Complete Breech (10%)
Frank Breech (65%)
Footling Breech (25%)
Complete Breech (10%)
Breech: Antenatal management
External cephalic version (ECV)

- Reduces incidence of non-cephalic presentation at delivery
- Reduces incidence of CS rate
- Recommended to all women with an uncomplicated breech presentation from **36 weeks**
- Should not be offered routinely before term, as it has not been shown to improve outcomes if performed before term
ECV

• Success rates 40 - 80%
• Following successful ECV, 97% remain cephalic

Factors that may increase the likelihood of success
  o Multiparity
  o Adequate liquor volume
  o Breech above the pelvic brim
  o Fetal head easy to feel
  o Placenta not anterior
  o ? Low BMI
ECV: 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
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.
ECV: Complications

- Pre-term labour
- Abruptio Placentae
- Cord accident (FHR Bradycardia up to 8%)
- Uterine rupture
ECV: the aftercare

- Rate of CS may be higher than average for babies successfully turned when compared to ‘genuine’ cephalic presentations
- Non cephalic-presenting fetuses are more likely to display signs of fetal compromise
- Should be regarded as a high-risk group
- Rh alloimmunisation prophylaxis
Breech: Mode of delivery at term

Planned c section (Term Breech Trial)

- Reduces: perinatal or neonatal morbidity and death
- Reduces combined complications

Recommendation

- Elective c section for breech at term for PG
Breech delivery
Preterm

• Controversial
• RCOG guidelines do not advise routine CS
• The Term Breech Trial findings cannot be extrapolated to preterm breech delivery
• Decisions should be individualised
First twin breech
• Theoretical risk of interlocked twins (1/817)
• Recommend elective CS

Second twin breech
• RCOG does not recommend elective CS
• Second twin’s position may change following delivery of the first in 20% of cases
Head related abnormal presentations

Face

Brow
Head attitude

- Flexed Suboccipitobregmatic
- Deflexed Occipitofrontal
- Brow Mentovertical
- Face Submentobregmatic
Submentobregmatic (face)

Verticomental (brow)

Occipitofrontal (vertex, military)

Suboccipitobregmatic (vertex, flexed)
Face presentation

Incidence and aetiology

1/500

Associated with

- Prematurity
- Fetal goitre
- Uterine anomalies
- Polyhydramnios
- Placenta praevia
Face: clinical finding

• Diagnosis usually made in labour by vaginal examination
• Landmarks: mandible, mouth, nose and orbital ridges
• Avoid damage to the eyes on examination
• Facial oedema: distinction between face and breech? difficult
• Ultrasound: if there is any doubt
• Delay in the first or second stage of labour may occur
Face: management

- **Ultrasound:** exclude fetal or pelvic abnormalities
- **Vaginal delivery:** possible with the mento-anterior position
- **In the second stage:**
  - Mento-anterior: head may deliver by flexion
  - Mento-posterior: may rotate during the second stage
- **Fetal risks:** facial soft tissue trauma, causes feeding difficulties
- **Maternal risks:** perineal injury, sphincter damage, CS
- **Augmentation:** not advised
- **Lack of progress:** prompt delivery by CS
- **Vacuum delivery:** contra-indicated
Why mentoposterior does not deliver vaginally?

- In vertex: delivery of fetal head occurs by extension
- In face: head is already in maximum extension
- In mentoposterior: the head, neck and shoulders enter the pelvis at the same time
- The length of the sacrum is 10 cm
- The length of neck is 5 cm
- The shoulders get impacted
- Labour is obstructed
Brow presentation

Incidence and aetiology

• 1/1000 deliveries
• Due to a deflexed head
• Associated with
  o Prematurity
  o Fetal neck tumours
Brow: Clinical findings

• **In labour:** failure to progress in first or second stage

• **Vaginal examination:** forehead is the leading part

• The anteroposterior diameter of the head is ‘mento-vertical’: about **13.5 cm** at term

• The average anteroposterior and lateral diameters of the female mid-pelvis are **12 × 12 cm**
Brow: management

Diagnosis in the early first stage:

• Expectant management for a short time (2–3 hours)
• May flex into a vertex or extend to face

Diagnosis often made in late first or second stage:

• Caesarean delivery is advised

Augmentation with syntocinon: not advised “uterine Rupture”

Mento-vertical dimensions may be smaller in a preterm fetus, allowing vaginal delivery
Cord presentation and prolapse

Incidence and aetiology

- Cord presentation/cord prolapse: 0.1–0.6 % of all births
- **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
Cord Presentation
Membranes Intact

Cord Prolapse
Membranes Ruptured
Clinical findings

• Presence of a ‘high’ presenting part in early labour
• Ultrasound: the presence of a cord presentation
• In advanced labour, the findings are self-explanatory
• The cord may be felt pulsating
• Abnormal cardiotocography, should raise the possibility
Management

Cord prolapse

• An emergency delivery

• Fetal hypoxia:
  ○ Pressure from the presenting part
  ○ Arterial spasm

• The presenting part should be elevated (various methods)
• The cord should be replaced in the vaginal with minimal handling
• In the presence of viable fetus: Immediate delivery

Cord presentation

• May be seen by USS in preterm fetuses: No intervention
• Usually diagnosed in labour by VE
• If in labour: CS
Shoulder / compound presentation

Compound presentation:
• More than one fetal part presenting

Shoulder presentation
• Shoulder is presenting

Both
• Associated with prematurity
• Complicate unstable, ‘high’ head or breech

Delivery:
• Shoulder: CS if in labour
• Compound: depends on the combination
Shoulder presentation
Malpositions
“Occipito-Posterior” (OP)
Prevalence

- 15 to 32% at the onset of labour
- 10 to 20% early in the second stage
- 5 to 8% at delivery
OP: Consequences in Labour

- Membranes rupture early
- The forces push the head posteriorly: backache and urge to push before full dilatation
- The occipito-frontal diameter reaches 10 cm; passage through the pelvis may be more difficult
- The 1st and 2nd stages of labour may be prolonged
- May rotate to OA or persists

- If persistent OP in labour:
  - May deliver spontaneously:
  - If not: consider assisted delivery
    Rotation to OA by: Ventouse, Kielland Forceps or manual
Abnormal lie
Unstable/ transverse/ Oblique lies

Incidence and aetiology

• 1/320

Association

- Multiparity
- Polyhydramnios
- Placenta praevia
- Pelvic tumour
- Uterine anomaly
- Contracted maternal pelvis
- Hydrocephalus and fetal neck tumours
- Fetal neuromuscular dysfunction “reduced FM”
Abnormal lies / Clinical findings

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

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
Abnormal lie: management

- 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
Abnormal lies: management

Caesarean section:
• Should be planned at the appropriate gestational age? 38 weeks

Risk of cord prolapse in the event of contractions or rupture of membranes
Summary

Abnormal presentation / position / lie

Associated with maternal/ fetal morbidity and mortality

• In labour, suspicions raised in the presence of delayed progress
• Ultrasound: may help in Dx & Mx
• Senior obstetrician should be involved in Mx
• Regular ‘skills drills’ to keep trained
• Many malpresentations require CS which can be difficult
• ECV offered for breech presentation from 36-37 weeks