COLLEGE OF MEDICINE
DEPT. OF OBSTETRICS AND GYNECOLOGY

Malpositions and Malpresentations

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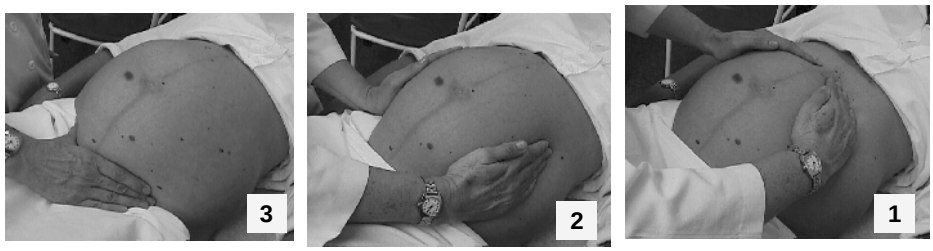
Contents of the Lecture

- Diagnosis of Malposition /Malpresentation
- Malposition: Occiptoposterior
- Malpresentations

I. Breech
II. Face
III. Brow
IV. Shoulder
V. Compound
VI. Cord presentation

Diagnosis of Malposition and Malpresentation



- Leopold's maneuver (abdominal palpation)
- P/V examination (Denominators as occiput, mentum, sacrum , scapula and Fontanelles as anterior or posterior)
- Imaging – ultrasound, rarely plain X-ray of abdomen

Malpositions

Occiptoposterior

- Definition: where the fetus is lying longitudinally, cephalic and the vertex is presenting, but it is not in the OA
- Incidence:20% of cephalic presentations.
- Malposition
  - OT (LOT, ROT)
  - OP (ROP,LOP,DOP)
  - Commonest Types: R.O.P. 18 %
  - Common cause of non engagement

  In primigravida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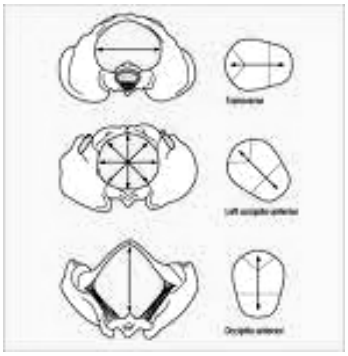
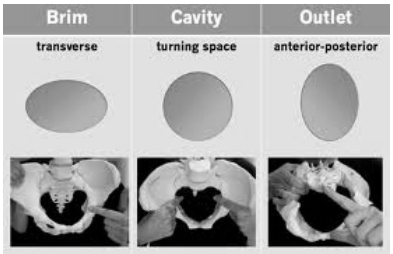
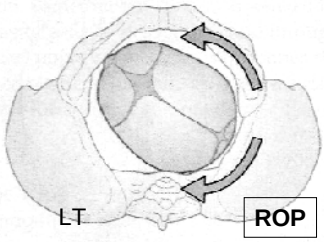
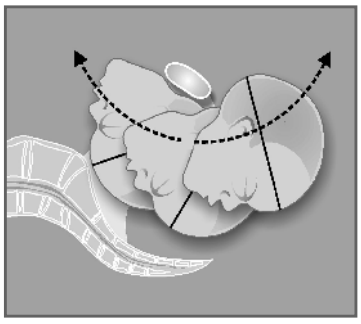
Long Anterior Rotation of OP and SVD in EXTENSION







Long anterior rotation – short posterior rotation

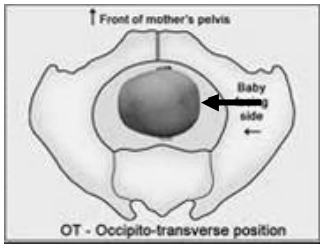


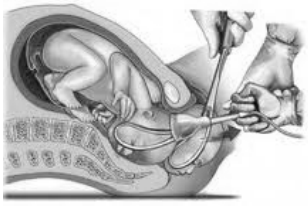
Mechanisms of delivery of ROP

1. Long Anterior Rotation of 3/8th of circle anteriorly to direct occipitoanterior….SVD in 60%.
2. Anterior Rotation of 1/8th of circle (45º) → Deep transverse arrest……(rotation with ventouse or with Kielland forceps may end with delivery otherwise Cesarean section.)
3. Rotation of 1/8th of circle posteriorly to be direct occipitoposterior…may deliver as face to pubis (generous episiotomy as the diameter of delivery is occipitipofrontal =11.5cm) or need Cesarean section.
4. It may persists as occipitoposterior, to be delivered by Cesarean section.

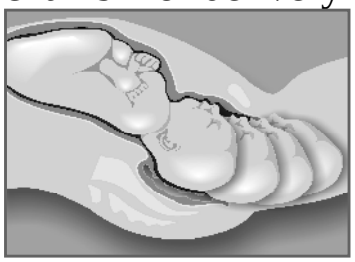
Mechanism of delivery of OT

•Occiptotransverse position develops with Short Anterior Rotation of the head 1/8th of circle (45º)→Deep transverse arrest [ROT or LOT]
•Trial of Delivery with ventouse or with Kielland forceps may end with delivery.
•Otherwise Cesarean section.

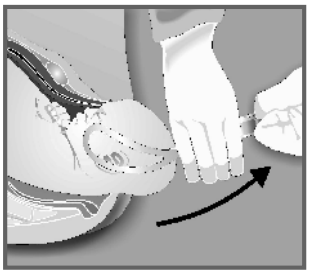




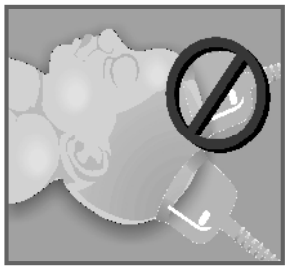
Mechanism of delivery of DOP



Delivery of the head in DOP in FLEXION



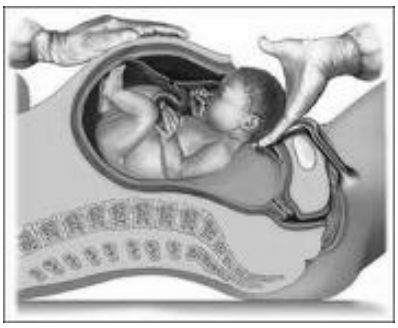
Forceps Delivery



Vacuum Extraction

Cesarean section in case of occipitoposterior:

1. If active management of labor fails as in : failure of descent of the head or failure of full dilatation of the cervix.
2. Failure of rotation , spontaneous OR with forceps or ventouse.
3. Maternal or fetal distress.
4. Elderly primigravida.
5. Contracted or android pelvis



Malpresentations

I-Breech Presentation

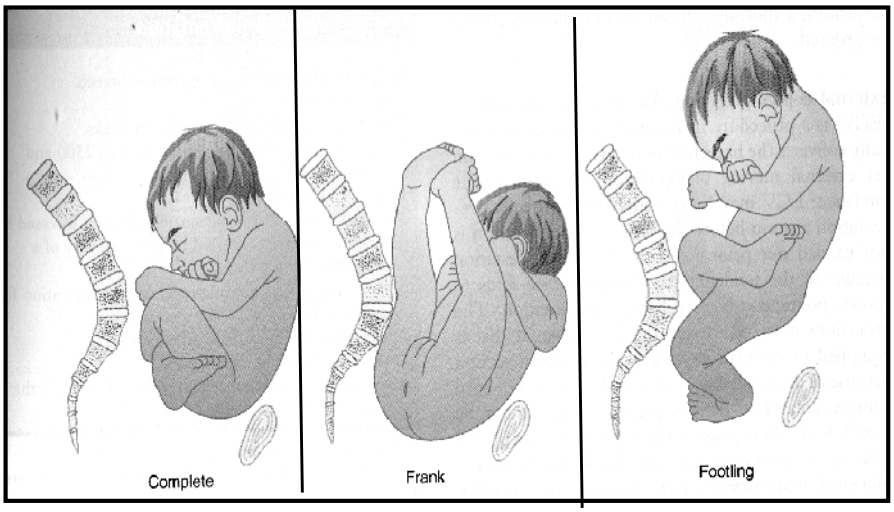
Definition

- Fetal buttocks or lower extremity is the presenting part
- Complete (10%): flexion at hips and knees
- Frank (60%): flexion at hips, extension at knees most common type of breech presentation, most common breech presentation to be delivered vaginally
- Footling (30%): may be single or double with extension at hip(s) and knee(s) so that foot is the presenting part

Epidemiology

- • occurs in 3-4% (at term)
- BUT in 25-30% before 28 weeks

Types of Breech Presentations



Clinical Features

• Diagnosis by Leopold's maneuvers (PPV of Le?pold's maneuvers is only 30%)

Risk Factors

I- Maternal risk factors:

- Pelvis (contracted)
- Uterus (shape abnormalities, intrauterine tumours, fibroids)
- Extrauterine tumours causing compression
- Grand multiparity

II- Placental-fetal risk factors:

- Placenta (previa)
- Amniotic fluid (poly/oligohydramnios)
- Fetal prematurity (Commonest ≥ 30%)
- Multiple gestation

1. Congenital malformations (6% of breeches; 2-3x incidence in vertex)
   most common malformation: congenital dislocation of the hip
2. Abnormalities in fetal tone and movement (IUFD)
3. Fetal aneuploidy

FLUPP: Fetus, Liquor, Uterus, Placenta and Pelvis

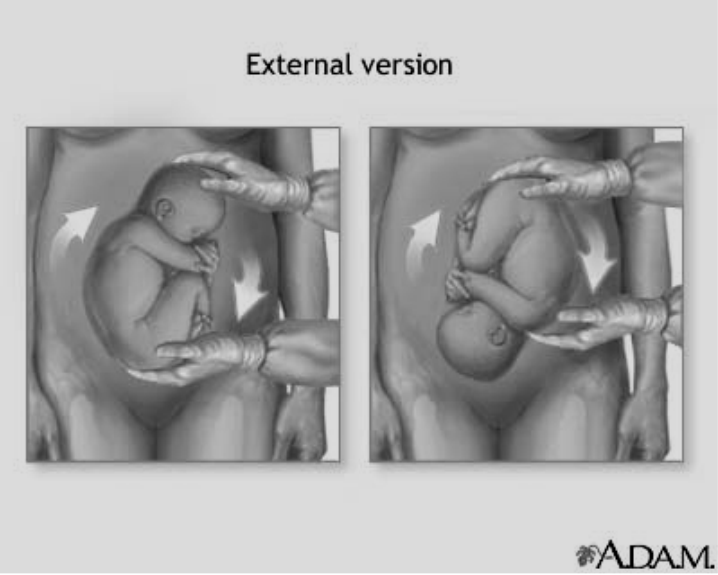
Management of Breech During Pregnancy

External cephalic version

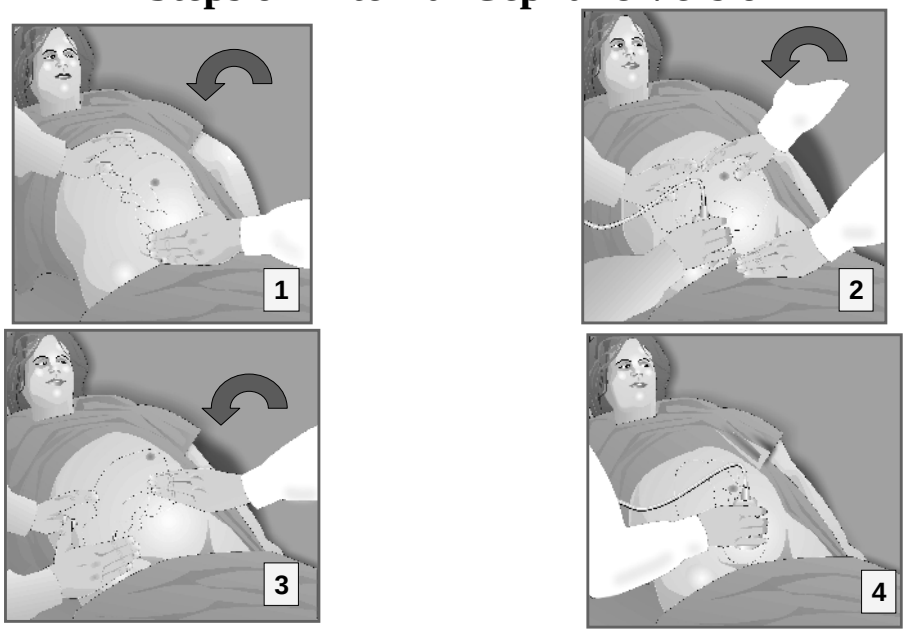
- Repositioning of fetus within uterus
- Overall success rate of 65%
- Criteria: >37 weeks, singleton, unengaged presenting part, reactive NST
- Contraindications: previous T3 bleed, prior classical C/S, previous myomectomy, oligohydramnios, PROM, placenta previa, abnormal US, suspected IUGR, hypertension, uteroplacental insufficiency, nuchal cord
- Risks: abruption, cord compression, PTL, PROM, bleeding, uterine rupture
- Method: tocometry, followed by ultrasound guided transabdominal manipulation of fetus with consistent fetal heart monitoring via real-time USS
- If patient Rh negative, give Rhogarn™ prior to procedure
- Good prognostic factors (for a successful version 65% or more)

1. multiparous
2. good fluid volume
3. small baby
4. skilled obstetrician

External Cephalic Version



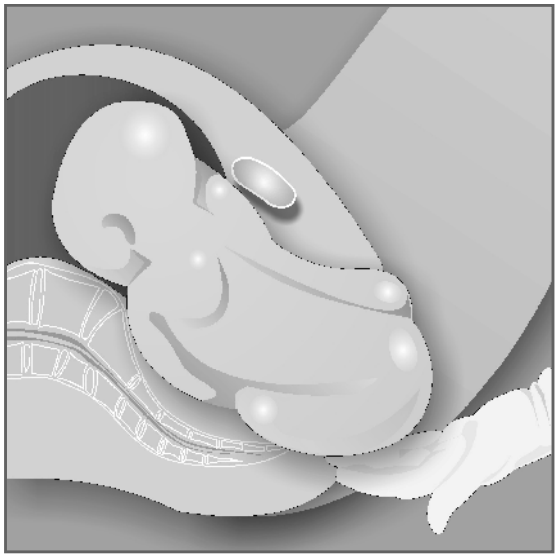
Steps of External Cephalic Version



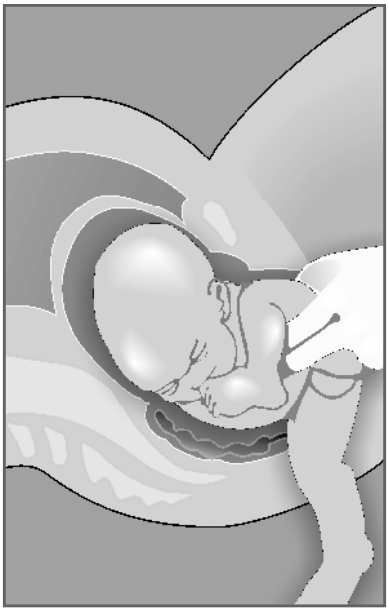
Vaginal Delivery of Breech Presentation

Criteria for vaginal delivery:

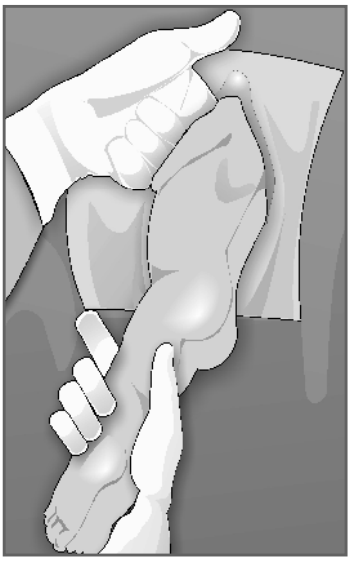
- Frank or complete breech, GA >36 weeks
- Estimated birth weight (EBW) 2500-3500 g based on clinical and U/S assessment (5.5-8.5lb)
- Fetal head flexed, by USS
- Continuous fetal monitoring
- Maternal pelvis adequately large (clinically, or "proven" by previous delivery). NO trial delivery
- 2 experienced obstetricians, assistant, anesthetist, neonatologist should be present



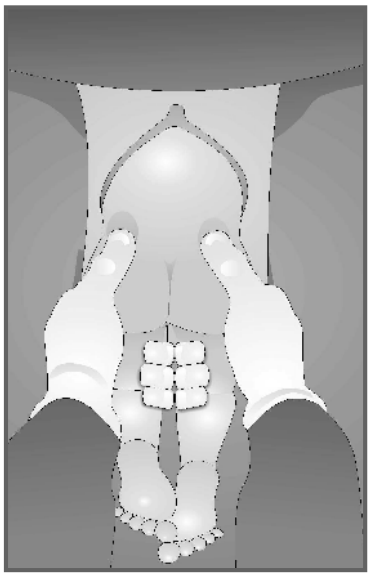
- Hand gently supporting the emerging breech
- Keep the sacrum anterior



Delivery of the Legs - Optional Maneuver

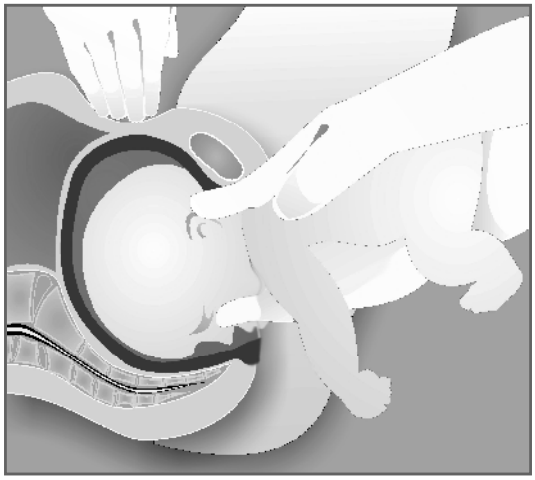


Delivery of the Anterior Arm in a Vaginal Breech Delivery

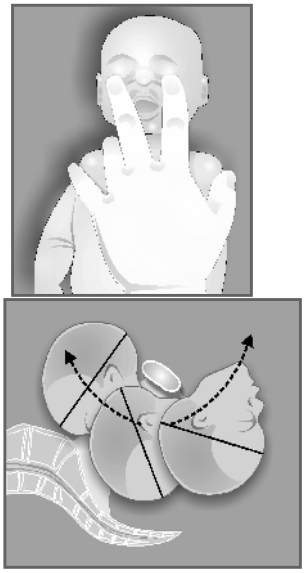


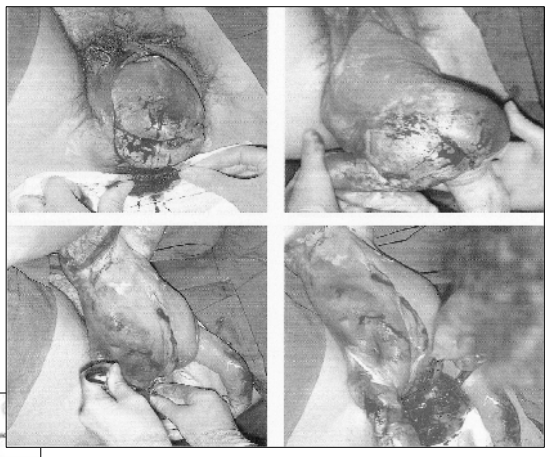
Gentle Traction on Fetal Pelvis (groin)

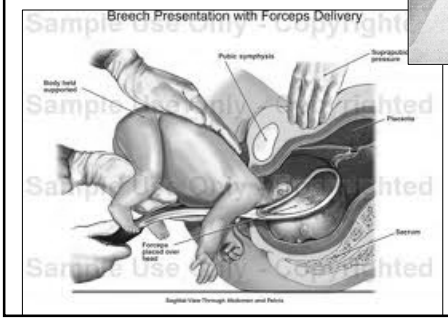
Jaw flexion Shoulder Traction for Delivery of the aftercoming head in breech presentation



Delivery of the aftercoming head in breech presentation in FLEXION





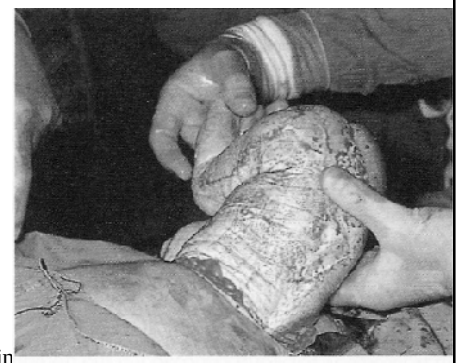


Forceps Delivery for aftercoming Head..may be better?

Cesarean Section in Breech Presentation

- **C/S is indicated for :**
- **(**Contraindications for Breech Delivery)

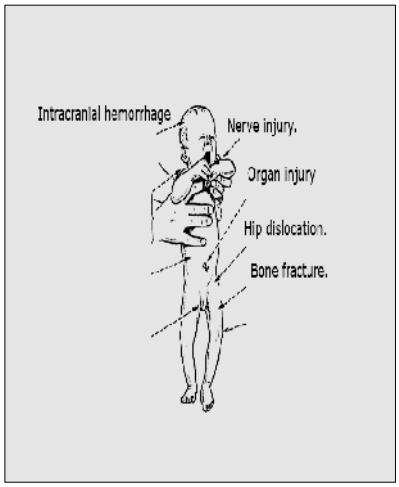
1. Unfavourable pelvis
2. Footling breech
3. Hyperextension of fetal head, nuchal arm
4. Macrosomia
5. Severe prematurity
6. Severe IUGR ,
7. placental insufficiency
8. Fetal anomalies
9. Lack of birth attendant skills
10. *if* the breech has not descended to the perineum in the second stage of labour after 2 hours, in the absence of active pushing, or if vaginal delivery is not imminent after 1 hour of active pushing
11. ?? all PG breech



Out come & Risks of breech Vaginal Delivery

Increased perinatal mortality and Morbidity due to:

1) Intracranial hag.
2) cord prolapse, birth sphyxia
3) entrapment of the fetal head through partly dilated cervix or unrecognized disproportion
4) traumatic injuries
   CNS, intra-abdominal, nerve palsies, muscle injuries
5) extension of fetal arms (nuchal arms)



II- Face presentation (0.2%)

Types and Etiology of face presentation:

A. Primary face presentation: i.e. it is present before labor.

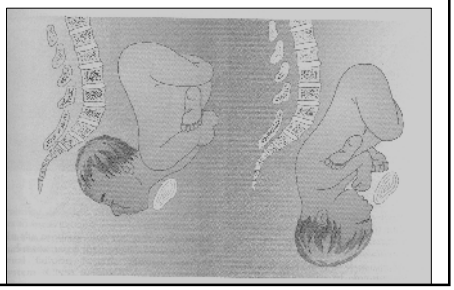
1. **Congenital malformations**: 15% of cases.
   - o Anencephaly: It is one of the commonest causes of face,
   - o Fetal neck tumors as goitre or cystic hygroma.
   - o Dolicocephaly : Long antero- posterior diameter of the head

2. Spasm of the muscles of the back of the neck.

3 . Loops of cord around the neck.

4. Flat pelvis.

B. Secondary face presentation ,
in case of transient brow,
full extension turns into face



Management of face presentation.

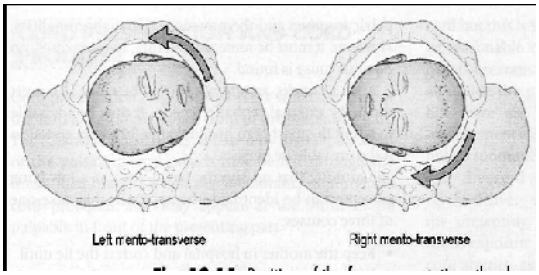
- Ultrasound is of value to exclude congenital malformation.
- **Mentoanterior** :has a chance for SVD after long anterior rotation (BUT in FEXION) , if no progression , trial forceps or Cesarean section.
- **Mentoposterior** :

  1. If rotates 3/8th of the circle anteriorly → SVD.

  2.Persistant Mentoposterior or direct Mentposterior has no chance for SVD and should be delivered by Cesarean section.

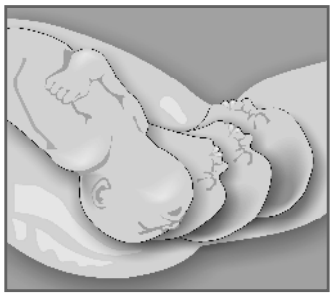
At diagnosis:

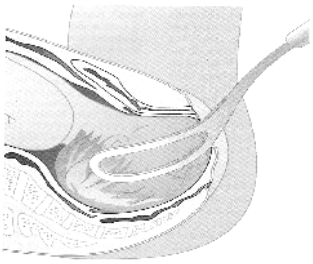
60% mentoanterior
15% mentotransverse
25% mentoposterior



Mechanism of Delivery of Mento-anterior

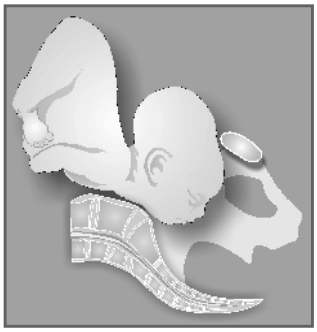
- LMA, RMA, MT
- The engaging diameters in a face presentation are the Submento-bregmatic (9.5cm) and biparital diameter.
- In case of face engagement is considered when the chin is 2cm below the ischial spine (station 2+).
- The submento-vertical diameter (11.5 cm) distends the perineum during vaginal deliver
- Forceps can be used to help anterior rotation and delivery if 2nd. Stage is prolonged. But cervical spine injury is a serious complication
- **(Never try Vacuum)**

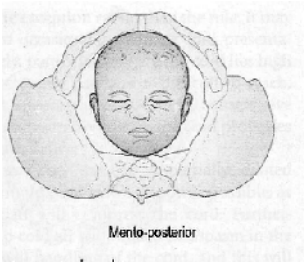




Direct Mentoposterior (DMP)

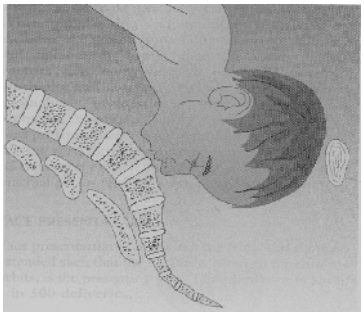
- NO mechanism of delivery (obstructed labor)
- Cesarean section is always indicated.





III- Brow Presentation

- **Incidence**: 1:1400
- **Mechanics of presentation:**
  - Head is extended such that attitude is halfway between flexion (vertex) and hyperextension (face)
  - Presenting part is between the facial orbits and anterior fontanelle (brow)



- Usually *transitional*- when the head is in the process of converting from a vertex to a face or vice versa
- Supraoccipitomental (mentovertical) diameter is presenting 13.5cm; [9.5cm for suboccipitobregmatic (vertex) or submentobregmatic (face)]

Management of Brow presentation in labour

- **Initially expectant;**
  - 50-75% will either flex to a vertex, or extend to a face with contractions from behind meeting soft tissue and bony resistance below and will therefore deliver vaginally
- High incidence of prolonged labour and dysfunctional labour
- **Persistent brow**
  - the diameter is undeliverable vaginally
  - deliver by caesarean section

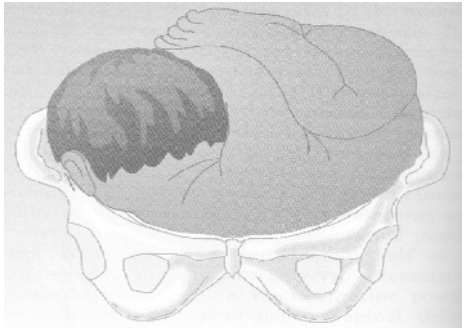
IV-Shoulder Presentation (Transverse lie)

•Incidence: 0.3%

•Mechanics of presentation:

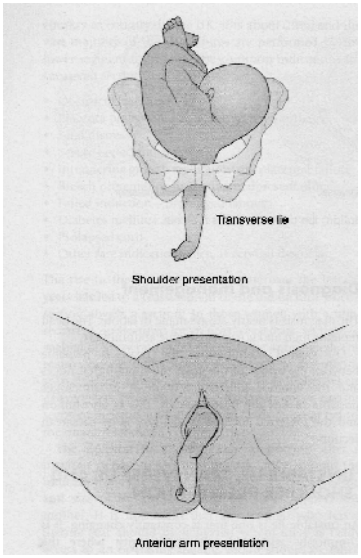
long axis of the fetus is perpendicular to long axis of mother (ie occurs in transverse lie)

•Mostly the shoulder presents in a transverse lie, but alternative presentations are hand and arm (may be prolapsed into the



Aetiology:

- Fetal: prematurity, multiple
- Liquor: polyhydramnios
- Uterine: anomaly
- Placenta: praevia
- Pelvis: contraction, tumour
- Parity: high maternal parity (80% of cases occur in women who are para3 or more)

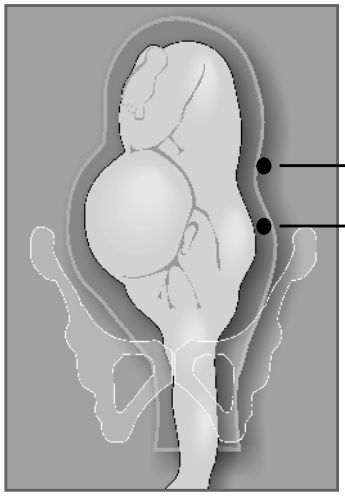


Diagnosis and Management

- On abdominal palpation, no fetal pole is presenting to the pelvis, and the head is palpable in either the right or left iliac fossa
- on vaginal examination, may palpate ribs, scapula, clavicle
- in advanced labour, fetal hand and arm may prolapse into the vagina

- Consider **ECV prior to labour**
- if diagnosed in labour, deliver by **Caesarean section** (as fetal head and trunk would have to enter pelvis at the same time to deliver vaginally)
- Caesarean may need to be **classical,** as lower segment often inadequate

Neglected Shoulder Presentation With Arm Prolapse

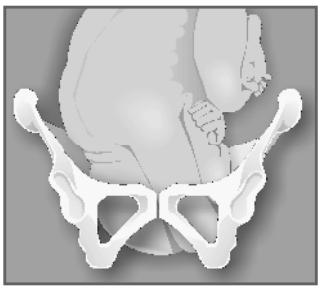


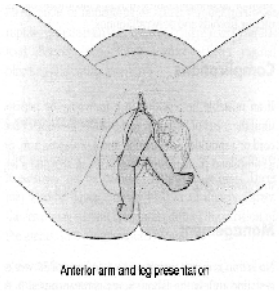
NEGLECTED SHOULDER

- NEGLECTED SHOULDER
- Obstructed labor (TRANSVERSE LIE)with impending rupture of the uterus and a dead or dying fetus.
- Membranes rupture early, much liquor escapes and infection is a hazard. Later, uterine tone increases, contractions become violent, the lower segment thins and a pathological ring is detected as it ascends in the abdomen. o Impacted shoulder and may be prolapsed arm
- Meanwhile, the bladder becomes thick and easily felt.
  Ketosis, dehydration and infection are now evident and the fetus dies of asphyxia.
- Such an outcome represents obstruction and neglected shoulder presentation. It will lead almost inevitably to uterine rupture.

V- Compound Presentation

- **Incidence:** 0.1%
- **Mechanics of presentation:**
  - When a fetal extremity prolapses alongside the presenting part, and both enter the maternal pelvis at the same time
    - vertex-hand
    - breech-hand
    - vertex-arm-foot
- **Aetiology**
  - Fetal: multiple- premature
  - Maternal: multiparity

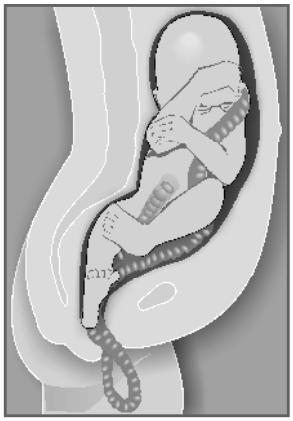


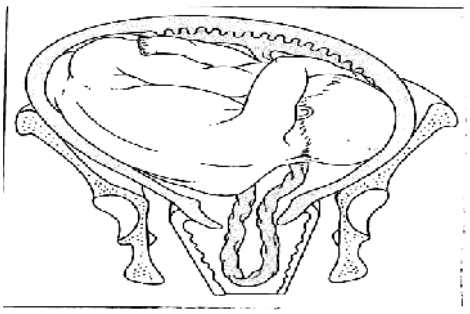


MANGEMENT

- Exclude **cord prolapse**
  - occurs in up to 20% of cases
- Otherwise **expectant**
  - mostly doesn't interfere with normal delivery
  - vertex-foot: try to gently reposition the lower extremity
  - if arm prolapses in vertex-hand, wait and see if it moves as head descends; if it converts to shoulder presentation, deliver by CS

VI-Cord Presentation/ Prolapse





- Cord below the presentating part with intact or ruptured membranes
- Risk Factors:
- Malpresentation, prematurity, polyhydramnios,
- ARM with high presenting part, long cord

Epidemiology

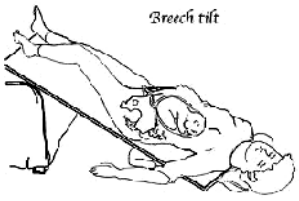
Presentation	Incidence
Vertex	0.4%
Frank breech	0.5%
Complete breech	4 - 6%
Footling breech	15 - 18%

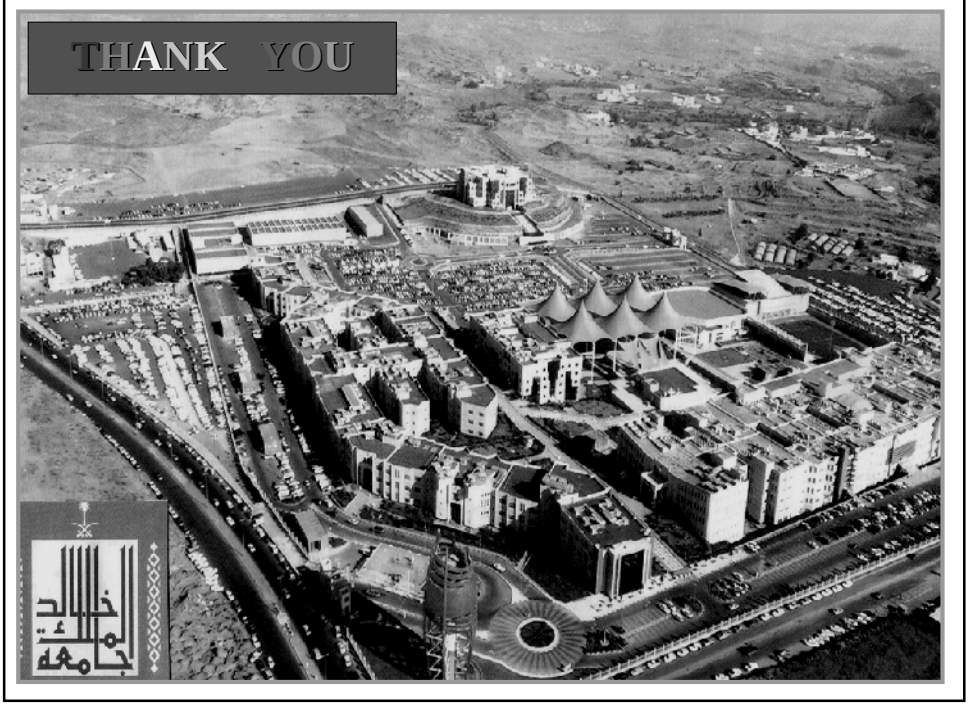
Rapid Response to Cord Prolapse:

- Recognize non-reassuring tracing
- Visually inspect / palpate cord to diagnose
- Assess fetal status (CTG, ultrasound)
- Assess labour progress (dilatation, station)
- Do not attempt to replace cord within uterus
- Consider replacing cord within vagina, or wrap in
- warm moist packs, if external
- Hold presenting part off cord

☐Position change (Trendelenburg OR knee-chest)

- Tocolysis
- **Prepare for Urgent delivery**




THANK YOU
جامعة الملك خالد