Malpresentations

By

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Presentation

Presentation is ......
the part of the fetus which occupying the lower uterine segment

Presentation may be:

Cephalic 95%
Breech 3 - 4% at term
Oblique lie 1:200
Shoulder 1:200
Cephalic 95%

Breech 4%

Longitudinal lie 99%

Oblique lie

Transverse lie 1%
When the head is present in the lower uterine segment “Cephalic” the presentation may be:

- **Vertex**: 99%
- **Face**: 1:500
- **Brow**: 1:1500

During the antenatal period it is difficult clinically to diagnose that the presentation is **vertex, brow or face** so it is used to say cephalic presentation.
Vertex presentation:

- Biparietal 9.5 cm
- Posterior fontanel
- Lamboid suture
- Sagittal suture
- Coronal suture
- Anterior fontanel
Vertex presentation

Is the commonest Presentation
(99% of the cephalic presentations)

The Vertex is the area between

Lambdoid suture and posterior fontanel
Parietal eminence
Coronal suture and anterior fontanel
**Vertex has**

**Transverse Diameters**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biparietal diameter</td>
<td>9.5 cm</td>
</tr>
<tr>
<td>Bitemporal diameter</td>
<td>8.5 cm</td>
</tr>
<tr>
<td>Bimastoid diameter</td>
<td>8 cm</td>
</tr>
<tr>
<td>Subparietal subraprietal</td>
<td>9 cm</td>
</tr>
<tr>
<td>Sub-occipito bregmatic</td>
<td>9.5 cm</td>
</tr>
<tr>
<td>Sub-occipito frontal</td>
<td>10.5 cm</td>
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**Longitudinal diameters**

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During the fetal life the fetus can take the suitable comfortable position.

The position .......
is the relation shape of the denominator of the presenting part to the pelvic brim.
The position of the presenting part can be

Right or left
Anterior
Transfers
Posterior
Direct occipito anterior (OA .... 3 %)
Direct occipito posterior (OP ..... 2 %)

Right occipito anterior (ROA ... 7 %)
Left occipito anterior (LOA ... 7 %)

Right occipito transverse (ROT ... 35 %)
Left occipito transverse (LOT ... 40 %)

Right occipito posterior (ROP ... 3 %)
Left occipito posterior (LOP ... 3 %)
When the head presented as vertex anterior
It is fully flexed “the chin near to the chest”

Most of Vertex anterior presented by

**Transverse Diameter**
the biparietal diameter 9.5 cm

**Longitudinal Diameter**
the Sub - occipito bregmatic 9.5 cm
vertex anterior
Occipito anterior
Right occiputo anterior (ROA).
TRANSVERSE OF INLET = 13.5 cm

INTERSPINOUS S = 10 cm

OBSTETRIC CONJ = 10.5 cm
Upper segment (thick)

Lower segment (thin)

Physiological retraction ring

Bladder

Cervix fully dilated

Vagina distending

Anus stretched
Anthropoid

Intermediates

Gynecoid

Android

Platyeloid
Stages of normal labor

1\textsuperscript{st} stage
2\textsuperscript{nd} stage
3\textsuperscript{rd} stage
4\textsuperscript{th} stage
Stages of Labor

1st

1st

Phase of Maximum Slope

Deceleration Phase

Acceleration Phase

Latent Phase

Active Phase

Cervical Dilatation (cm)

Time (h)
Management of Normal Labor

1st stage

Observation:

Partogram:

Visual representation of events during labor against time.

- Maternal Vital Signs records
- Cervical dilatation.
- Station of presenting part, moulding & caput formation.
- FHR Monitoring
- Advice and medications
management in labour

- proper clinical assessment
- review antenatal chart
- insert large pore I.V. line
- take the necessary investigation
- keep patient fasting during labour
- start I. V. fluids to prevent maternal dehydration and ketosis
- use Partogram for labour progress assessment
- continuous fetal monitoring
- provide adequate analgesia
- regular observation of maternal and fetal condition and the labour progress
- be ready for operative intervention either vaginally or abdominally and inform the neonatologist anesthesia and operation theater staff
**2nd stage**

**MECHANISM OF LABOUR**

**Flexion**

Lever action producing flexion of the head; conversion from occipitofrontal to suboccipitobregmatic diameter typically reduces the anteroposterior diameter from nearly 12- to 9.5 cm.

**Decent of the presenting part**
Engagement

The greatest transverse diameter "BPD" passes through the pelvic inlet. It may occur in the last few weeks of pregnancy or only during labour especially in multipara. The fetus enters the pelvis in transverse or oblique diameter.
**Synclitism**

The sagittal sutures of the head present med way between the symphysis and sacral promontory.

**Asynclitism**

The sagittal sutures of the head deflects ant towards the symphysis pubis or post towards the sacrum.
Anterior asynclitism Naegele's obliquity

synclitism

Posterior asynclitism Litzmann's obliquity Ear presentation
Further Decent

In multipara descent begins with engagement. It is gradually progressive till the fetus is delivered.

In nulipara further descent may not occur till the 2nd stage of labor.

It is affected by:
- the uterine contractions +
- effacement and progressive dilatation of the cervix
The descending head “occipot” reach the pelvic floor muscles at the level of the ischial spines “ie the midcavity”. The pelvic floor muscles prevent the head to go backward + downward any further and because of the revolving position of the pelvic floor muscles “The levator ani muscles form a V shaped sling”. The head has to change its direction forward + downward ➔ ➔ internal rotation
Internal Rotation

Turning of the head from the OT position ➔ anteriorly towards the symphysis pubis ie. Occipot moves from transverse to anterior “45º”

Less commonly OT ➔ posteriorly towards the sacrum

Extension

When the occiput comes direct below the inferior margin of the symphysis pubis ie the flexed head reaches the vulva it undergoes extension.

the fetal head is encircled by the vulvar ring ➔ Crowning
The head is born by further extension

- Occiput,
- Bregma,
- Forehead,
- Nose,
- Mouth & chin

pass successively over the perineum
Restitution

After delivery of the head it returns to the position it occupied at engagement, the natural position relative to the shoulders (oblique position)

External Rotation

♦ Then the fetal body will rotate to bring one shoulder anterior behind the symphysis pubis (biacromial diameter into the APD of the pelvic outlet)
♦ The ant shoulder slips under the pubis
♦ By lateral flexion of the fetal body the post shoulder will be delivered & the rest of the body will follow
Abnormalities of Labor-1

- **Prolonged latent phase:**
  - **Definition:**
    - > 20 hours in primipara.
    - > 14 hours in multipara.
  - **Treatment:**
    - Maternal sedation.
    - Oxytocin stimulation.
  - **Outcome:**
    - 85% progress into the active phase.
    - 5% wake up without contractions.
Abnormalities of Labor-2

• **Protracted active phase:**
  – Dilatation < 1.2 cm/h in primipara.
  – Dilatation < 1.5 cm/h in multipara.

• **Arrest of active phase:**
  – Cessation of previously normal dilatation after uterine contractions of 200 montevideo units has been present for ≥ 2 hours.
  – Causes: CPD or malpresentation.
  – Management: augmentation or CS.
Abnormalities of Labor-3

• **Protraction of descent:**
  – Descent < 1 cm/h in primipara.
  – Descent < 2 cm/h in multipara.

• **Arrest of descent:**
  – No descent for 2 hours.
Occipito Posterior Position
When the head is presented with vertex posterior “OP” it will be deflexed and the longitudinal diameters will be will change to:

Sub-occipito frontal  10.5cm
Or
Occipito frontal  11.5cm
Occipito Posterior Position OP

**Diagnosis**

**Antenatal**

Diagnosed is important at least to rule out any major causes which may be a contraindication to leave the patient into labour.

Suspension during antenatal examinations raise when:

- High head
- Large amount of head is palpable
- Fetal back is placed posterior
- The sencipot is lower than the occipot
Occipito Posterior Position OP

Diagnosis During Labour

vaginal examination during labour:

- High presenting part
- Anterior fontanel felt near to the symphysis
- Posterior fontanel felt near to the sacral promontory
- Frontal sutures and Frontal bones
- Orbital ridge and Nose
Occipito Posterior Position OP

Possible Etiological causes

Maternal
- Prematurity
- Multiple gestation
- Polyhydramnios
- Oligohydramnios
- Pelvic tumor
- Non gynaecoid pelvis
- Post traumatic contracted pelvis "RTA"
- Post Poliomyelitis

Fetal
- Large for gestational age (LGA)
- Large fetal head
- Cord around the neck
- Neuronal tubes
- Congenital anomalies
- Pelvic anomalies
- Head
- Neck tumors
Occipito Posterior Position OP

Complication

Maternal

Fetal

prolonged and complicated labour
Rupture of fetal membranes
Maternal distress … dehydration …
marked moulding
keto acidosis

Cord prolapse → fetal distress
Infection
→ fetal death
Obstructed labour → uterine rupture →
→ ( APH ) → ( PPH ) → maternal death
management

Diagnosed before labour

○ Exclude any major cause lead to OP
○ Plan the further managements

Explanation and Advice

Type of delivery
When?

Arrange the necessary investigation
○ Mechanism of labour in OP

○ 75% of the vertex rotate from the posterior position to anterior position and deliver as Occipito anterior

○ 5% of the vertex continue labour in Posterior position and deliver as Face to Pubis

○ 20% will end as deep transfers arrest and need to be delivered by vacuum rotation by rotational forceps by Cesarean Section
Mechanism of labor for right occiputo posterior position, anterior rotation.
Mechanism of labour in OP

Life saving skills – home by whom
Occipito transverse
brow presentation
brow presentation

In Brow Presentation the head is Deflexed
the longitudinal Diameter will be
mento - vertical 13cm

most of cases of brow presentation diagnosed in labour

in early labour minor deflection attitude are common
when the uterus contract the head will either :

more flexion attitude → vertex

Head stay med way between extension and
flexion attitude ( deflexed attitude ) → brow

full extension → face
Brow Presentation

Possible Etiological causes

Maternal

Factors

PG
- High assimilation angle
- Bicornate uterus
- Septet uterus
- Fibroid uterus
- Pelvic tumor
- Non gynaecoid pelvis
- Post traumatic contracted pelvis “RTA”
- Post Poliomyelitis

Fetal

Factors

- Prematurity
- Multiple gestation
- Polyhydramnios
- Oligohydramnios
- Large for gestational age fetus
- Large fetal head
- Congenital Abnormalities
- Cord around the neck
- Posterior fontanelle
- Neck tumor
Diagnosis

Majority of cases are secondary, primary cases will occasionally be diagnosed during antenatal follow up.

Suspension during antenatal examinations raise when:

- High head
- Large amount of head palpable on the same side of the back
- Deep depression between the back and the head

Vaginal examination in early labour:

- High presenting part
- Anterior fontanel
- Frontal sutures and Frontal bones
- Orbital ridge and Nose
complication
Increase in maternal and fetal morbidity and mortality

Maternal complication
- Rupture of fetal membranes
- Prolonged and complicated labour
- Maternal distress ... dehydration ... keto acidosis
- Infection
- No engagement of presenting part
- Obstructed labour → uterine rupture → maternal death

fetal complication
- Rupture of fetal membranes
- Cord prolapse → fetal distress → fetal death
- Marked molding
management of brow presentation

Brow presentation is not suitable for vaginal delivery because of the large longitudinal diameter.

If brow presentation diagnosed in early labour with no maternal or fetal compromise we may wait and review the condition after 2 hours if still brow … emergency cesarean section.

If brow presentation diagnosed in established labour with signs of obstructed labour … emergency cesarean section.
Face presentation

full extension of head over the neck
Face Presentation

Possible Etiological causes

Maternal
- PG
- High assimilation angle
- anencephally
- Bicornate uterus
- Prematurity
- Septet uterus
- Multiple gestation
- Fibroid uterus
- Polyhydramnios
- Oligohydramnios
- Non gynaecoid pelvis
- Large Fetus

Fetal
- Post traumatic contracted pelvis “RTA”
- Large Fetal head
- Post Poliomyelitis

Congenital Abnormalities
- Cord around the neck
- Neck tumor
Longitudinal lie. Face presentation. Left and right anterior and ri posterior positions.
Diagnosis

Majority of cases are secondary, primary cases will occasionally be diagnosed during antenatal follow up.

Suspension during antenatal examinations raise when:

- High head occiput higher than senciput
- Large amount of head palpable on the same side of the back
- Deep depression between the back and the head…’S’ shape of the fetal spin
vaginal examination in early labour:

when the cervix is sufficiently dilated
vaginal examination is helpful

In face presentation we should recognize:

○ the orbital ridges
○ the eyes
○ the nose
○ the mouth
complication

Increase in maternal and fetal morbidity and mortality

Maternal complication
- Rupture of fetal membranes
- Prolonged and complicated labour
- Maternal distress … dehydration … keto acidosis
- Infection
- No engagement of presenting part
  - Obstructed labour → uterine rupture →
    - (APH) → (PPH) → maternal death

Fetal complication
- Rupture of fetal membranes
- Cord prolapse → fetal distress → fetal death
- Edema of the brow
- Marked moulding
management

If the presentation diagnosed before labour

Exclude pelvic contraction

Estimate fetal size

Exclude fetal abnormalities

Mento-anterior position … can deliver virginally
management in labour

▪ proper clinical assessment
▪ review antenatal chart
▪ insert large pore I.V. line
▪ take the necessary investigation
▪ keep patient fasting during labour
▪ start I. V. fluids to prevent maternal dehydration and ketosis
▪ use Partogram for labour progress assessment
▪ continuous fetal monitoring
▪ provide adequate analgesia
▪ regular observation of maternal and fetal condition and the labour progress
▪ be ready for operative intervention either vaginally or abdominally and inform the neonatologist, anesthesiologist, and operation theater staff
Mechanism of labour

Mechanism of labour in mento- anterior position

As labour progress

Increase extension ... with mentum ' chin ' leads

Descent

Engagement in the transverse diameter of the brim

Further Descent

Rotation anteriorly to bring the mentum towards the symphysis pubis

Further Descent ... mentum will escapes under the pubis

Flexion of the face allows the birth of the head

Delivery of the shoulders .... Delivery of the body ... placenta
mento- posterior position

If the chin rotates posterior and presentation becomes mento- posteriorly position vaginal delivery is not visible … emergency C S
Mechanism of labour in mento-posterior position

As labour progress

Increase extension ... with sinciput leads

Descent ..... 

Engagement in the transverse diameter of the brim

Further Descent ... the mentum is carried to the hallow of the sacrum

Descent continues ..the occiput crushes into the shoulder the occipital bone is behind the pubis.

No further Descent ...obstructed labour
Breech presentation
Breech presentation
Breech presentation
Breech presentation
Breech presentation

The nearest part of the fetus to the pelvic brim is the buttocks and lower limbs

The denominator in case of breech is the sacrum

Incidence :

Depends on the gestational age of the fetus :-

- Before term between 28 – 36 weeks 10-15%
- After 37 completed weeks 3%
types:

Complete breech (flexed breech)

all joints are flexed the feet presents beside the buttocks.

Incomplete breech (extended breech)

extended knee joints with flexion of the hip .....frank breech.

extended knee and hip joints .....footling breech.
Etiology

- Prematurity
- fetal abnormality
- multiple pregnancy
- Polyhydramnios
- Oligohydramnios
- placenta praevia
- uterine abnormality
- pelvic masses
- multiparty
Complication of breech

Maternal complication:

Increased maternal mortality and morbidity

- Discomfort and sub costal pain
- Dyspepsia
- Prolonged labor
- M. Distress
- Increased manipulation and m. trauma
- Puerperal sepsis
- High incidence of C/S rate
Complication of breech

Fetal complication:

Increased fetal mortality and morbidity

- Prematurity
- S.R.O.M
- Cord prolapse
- Entrapment of the fetal head
- Asphyxia
- intra ventricular hemorrhage
- Fetal trauma
Diagnosis

Symptoms:

Pain under the ribs
Discomfort
Indigestion
Hard mass at the hypochondrium
Fetal movements in the lower abdomen
Examination:

P.V. examination … clinical pelvemetry

Ultrasound scan

External cephalic version

Complication

Contraindication
Management

Ante natal:

- Insure fetal wellbeing
- Search for causes of breech presentation
- Possibility of change to cephalic ECV
- Mode of delivery

External cephalic version
Breech allowed to deliver vaginally
No other indication for C S
No other complication medical or obstetrical with breech
Estimated Fetal size between 2.5 - 3.5 kg
Adequate pelvis
In labor

1st stage of labor:

- proper history
- review of the A.N C. records
- investigation
- iv fluids
- keep fasting
- give anti acid
- Partogram
- continuous fetal monitoring
- analgesia
- inform neonatologist
- keep theater staff and the anesthetist informed
2nd stage of labor:

Spontaneous breech delivery
2nd stage of labor:

Assisted breech delivery

delivery of the shoulders

LOVSET’S maneuver
2nd stage of labor:

Delivery of the head

MAURICEAU – SMELLIE – VEIT maneuver

Forceps for the after coming head
Forceps for the after coming head
TRANSVERSE LIE

“Shoulder Presentation”

The longitudinal axis of the fetus lie perpendicular to the longitudinal axis of the mother.
CAUSES

- Placenta Previa
- Pelvic or uterine mass
- Multiparty “pendulous abdomen”
- Prematurity
- Oligohydramnious
- Polyhydramnious
- Uterine abnormalities
- Fetal abnormalities
COMPLICATION

Increased Maternal complication
- Obstructed labor
- Rupture uterus
- Operative intervention

Increased Fetal complication
- Cord prolapse
- Fetal trauma
- Fetal death
MANAGEMENT

Management of transverse lie depend on the gestational age and the possible cause

- Hospital admission and day by day follow up

- Proper clinical assessment history, examination, investigation, consent
- Search for the cause if any ---
treat according to the cause

- Caesarian section if labor start
  or at term with persistent T.L.
UNSTABLE LIE

An unstable lie is the lie which constantly change from one lie to another
Unstable lie is associated with

Placenta Previa
Pelvic or uterine mass
Multiparity
Prematurity
Polyhydramnious
Fetal abnormalities
Complication & managements

Same as transverse lie
CORD PRESENTATION AND CORD ROLAPSE

When the umbilical cord lies alongside or in front of the presenting part while the fetal membranes are intact is known as cord presentation.

If the fetal membranes rupture and the cord is felt it is called cord prolapse.
Predisposing factors

- Malposition
- Malpresenation
- Cephalopelvic disproportion
- Polyhydramniouls
- Prematurity
Complication

Fetal distress
Fetal anoxia
Fetal death
Emergency operative intervention
Cord prolapse is an obstetric emergency and delivery must be as quick as possible.

C/S is necessarily except if:

- The cervix is fully dilated and the presenting part is engaged forceps or vacuum can be performed by experienced obstetrician.
- Death fetus with no other indication for C/S allow vaginal delivery.
As soon as the diagnoses is made the cord should be handled as little as possible to avoid arterial spasm.

Pressure on the cord can be reduced by displacing the presenting part by hand in the vagina or by placing the patient in the knee-chest position.
Syntocinon should be stopped if it was used.

Investigation should be sent urgently.

Patient should be transferred to the operating theater for emergency C/S.

The pediatrician should be informed to attend the delivery.
Thank you all

Good Luke