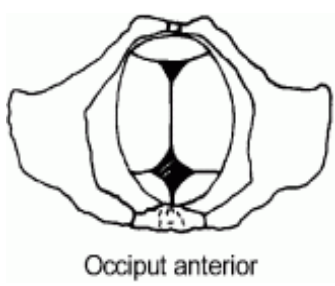
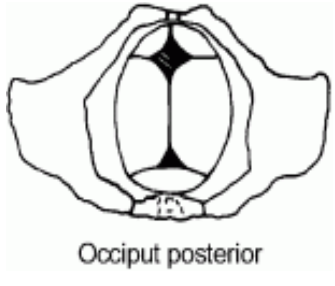
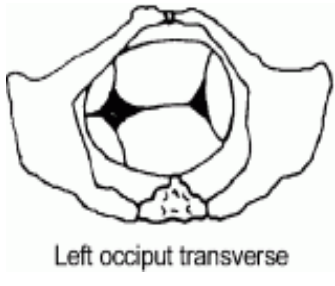
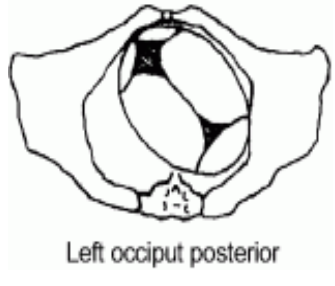


Occiput Posterior Position

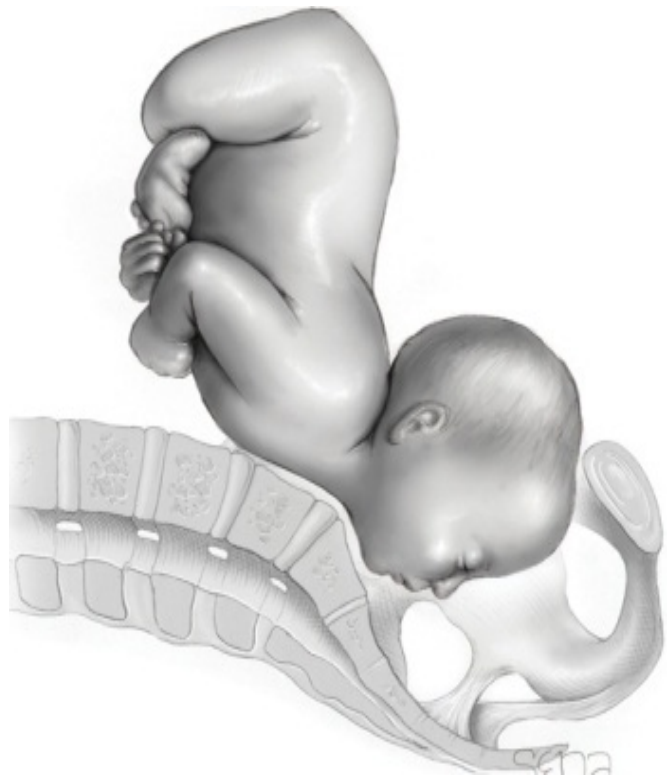
- It is a cephalic presentation in which the head is flexed & the occiput is directed posteriorly. It occurs in 20% [ROP (18%) is more common than LOP (2%)] due to dextro-rotation of the uterus]
- **etiology:**
 1. contracted pelvis ++ esp android pelvis (the occiput fits more posteriorly),
 2. kyphosis.
 3. anterior insertion of the placenta
- **diagnosis:**
 1. history: feeling fetal kicks on both sides of the mid-line
 2. abdominal examination
 - a. subumbilical groove may be seen
 - b. umbilical grip: the back is not easily felt & the fetal limbs (small parts) are easily felt on both sides of the mid-line
 - c. first pelvic grip: non-engagement +++
 - d. second pelvic grip: the cephalic prominence is on the same side of the limbs.
 - e. FHS: over the anterior shoulder near ASIS or directly over the chest in the mid-line
 3. PV:
 - a. to identify the presenting part: **the posterior fontanel is directed posteriorly.** In neglected cases with diffuse caput masking the fontanel try to feel the posterior ear & its helix denotes the direction of the occiput
 - b. to assess the degree of deflexion: the easier the anterior fontanel is felt, the more the degree of deflexion, the worse the prognosis. Causes of deflexion:
 - (1) the sinciput descends faster than the occiput because the BTD (8.5 cm) of the sinciput enters the oblique diameter (12 cm) while the BPD (9.5 cm) of the occiput enters the sacrocotyloid diameter (9.5 cm)
 - (2) opposing convexities of the maternal & fetal spines → straightening of fetal spines
 - c. to assess pelvic capacity and progress of labor
 - d. to exclude cord prolapse
- **mechanism:** one of the following 4 scenarios occurs (DOA, DOP, POP, DTA)
- **management**
 1. during pregnancy: trial of correcting the abnormality: postural (not done)
 2. during labor:
 - a. long anterior rotation: to become a DOA: → vaginal delivery
 - b. DOP (face to pubis): vaginal delivery with outlet forceps & generous episiotomy
 - c. DTA & POP:
 - (1) try manual rotation + delivery with forceps
 - (2) try rotation & delivery with forceps
 - (3) try rotation & delivery with ventouse
 - (4) CS: if
 - (a) failure of the above maneuvers
 - (b) contracted pelvis
 - (c) associated abnormalities: previous CS,
 - (d) fetal or maternal distress

July 14, 2011

<p>long anterior rotation 3/8 circle</p>	<p>90% gynecoid</p>	 <p>Occiput anterior</p>	<p>vaginal delivery</p>
<p>Posterior rotation 1/8 circle</p>	<p>6% anthropoid</p>	 <p>Occiput posterior</p>	<p>direct occipito-posterior (face to pubis) → head is delivered by flexion</p>
<p>Anterior rotation 1/8 circle</p>	<p>1% platypelloid</p>	 <p>Left occiput transverse</p>	<p>deep transverse arrest → no mechanism</p>
<p>no rotation</p>	<p>3% android</p>	 <p>Left occiput posterior</p>	<p>persistent occipito-posterior → no mechanism</p>

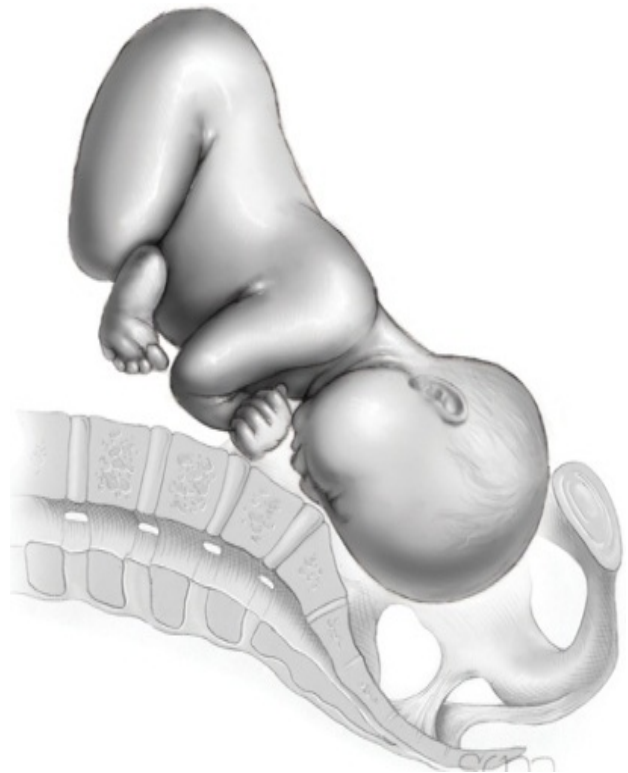
Face Presentation

- It is a cephalic presentation in which the head is completely extended i.e. presenting the face.
- **It occurs in 1:** 600 to 1:2000.
- **etiology:** It is either
 1. primary: during pregnancy (rare): due to cord around the neck, anencephaly, dolicocephaly, goitre, cystic hygroma
 2. secondary: during labor due to ↑ deflexion of the head in OP (more common)
- **diagnosis:**
 1. abdominal examination
 - a. subumbilical groove may be seen in mentoposterior
 - b. first pelvic grip:
 - (1) non-engagement
 - (2) a horse-shoe structure in mentoanterior (catching the chin)
 - c. second pelvic grip: the occiput is higher than the sinciput & the cephalic prominence is opposite the side of the limbs
 2. pelvic examination:
 - a. to identify the presenting part: feeling the face: supraorbital margins, nasal openings, mouth, alveolar margin, **chin (never diagnose face without feeling the chin)**. In neglected cases with edema of the face (tumefaction), it may be mistaken for frank breech
 - b. to assess the progress of labor, to exclude contracted pelvis, and to exclude cord prolapse
 3. investigations: ultrasound to
 - a. confirm diagnosis
 - b. exclude associated abnormalities: multiple pregnancy, placenta previa,
- **complications:** obstructed labor and edema of the fetal glottis
- **mechanism:** (88% vaginal delivery, 12% no mechanism)
 1. mentoanterior (80%): descent, engagement, ↑ **extension**, internal rotation of the chin 1/8 circle anteriorly, **delivery of the face by flexion**. The diameters of engagement (BPD & SMB) have the same measures as those of the fully flexed vertex (BPD & SOB) but the bones of the face are non-moldable
 2. mentoposterior (20%): one of the following 4 scenarios occurs
 - a. long anterior rotation of the chin 3/8 circle → delivery of the face by flexion (8%)
 - b. anterior rotation of the chin 1/8 circle → deep transverse arrest of the face → **no mechanism**
 - c. no rotation → persistent mentoposterior → **no mechanism**
 - d. posterior rotation of the chin 1/8 circle → direct mentoposterior which can only be delivered by a movement of extension, yet the head is maximally extended → **no mechanism**
- **management:**
 1. during pregnancy: trial of correcting the abnormality: Schatz maneuver (usually fails)
 2. during labor:
 - a. mentoanterior: vaginal delivery ± outlet forceps with generous episiotomy
 - b. mentoposterior: according to the scenario occurring during the 2nd stage
 - (1) long anterior rotation of the chin: vaginal delivery ± outlet forceps with generous episiotomy
 - (2) DTA, PMP, DMP: CS. Old maneuvers include manual rotation & delivery with forceps or rotation & delivery with forceps



Brow Presentation

- it is a cephalic presentation in which the head is midway between flexion & extension i.e. presenting the forehead. It is **RARE** (1:10000)
- **etiology**
- **diagnosis**
 1. abdominal examination
 - a. umbilical grip: straight back
 - b. first pelvic grip: non engaged
 - c. second pelvic grip: the occiput & sinciput are on the same level & the cephalic prominence is equidistant from the back
 2. pelvic examination: to identify the presenting part: anterior fontanel on one side & supraorbital margin with the root of nose on the other, the chin is **never** felt
 - a. It is either persistent or transient brow (OP → brow → face)
 3. investigations: ultrasound to
 - a. confirm diagnosis
 - b. exclude associated abnormalities: fetal goiter, anencephaly
- **complications:** obstructed labor.
- **mechanism:** none because the longitudinal diameter of engagement is MVD 13.75 cm
- **management:**
 1. during pregnancy: trial of correcting the abnormality: Thorn maneuver (usually fails)
 2. during labor: if persistent brow → CS



Shoulder Presentation

- ◆ It is a presentation in which neither poles of the fetus presents because the fetal lie is oblique or transverse. It occurs in 1:300
- ◆ **etiology:**
 1. contracted pelvis ++, leiomyoma, septate or bicornuate uterus
 2. Twins, placenta previa, preterm
 3. pendulous abdomen, multipara ++
- ◆ **diagnosis:**
 1. abdominal examination
 - a. fundal level less than period of amenorrhea
 - b. fundal grip: empty
 - c. umbilical grip: head on one side & buttocks on the other
 - d. first pelvic grip: empty
 2. PV:
 - a. to identify the presenting part: the shoulder (soft, small, meeting of 3 bones) or the arm
 - b. to assess cervical dilatation, ROM and to exclude cord prolapse
 3. investigations: ultrasound to
 - a. confirm diagnosis
 - b. exclude associated abnormalities: multiple pregnancy, placenta previa,
- ◆ **Complications:** obstructed labor.
- ◆ **Mechanism:** none.
- ◆ **Management:**
 1. during pregnancy: external cephalic version
 2. Cesarean Delivery

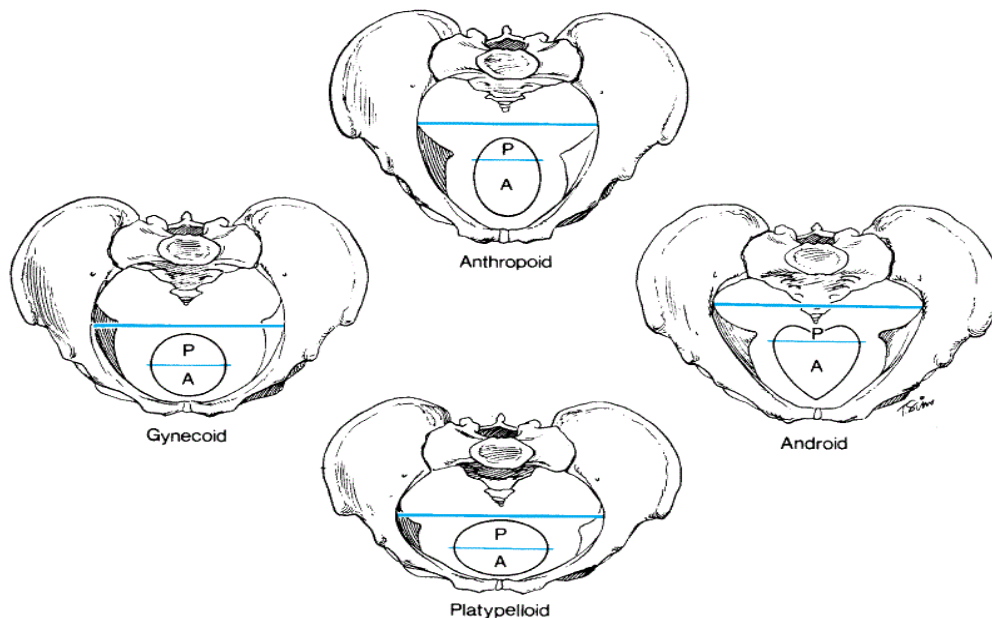
Cord Presentation & Prolapse

- **Cord presentation:** cord below the presenting part with intact membranes
- **Cord prolapse:** cord below the presenting part with ruptured membranes
- **etiology:**
 1. malpresentation with the presenting part not well-applied on the cervix,
 2. polyhydramnios, twins, prematurity
 3. contracted pelvis
- **Diagnosis:** by PV whether presentation or prolapse & whether the cord is pulsating or not. FHS shows variable deceleration (if there is cord compression)
- **complications:** fetal distress & death
- **management:**
 1. **prolapse:**
 - a. non-pulsating: vaginal delivery
 - b. pulsating: knee chest or Sim' s position, oxygen mask, & URGENT CS. **Rapid vaginal delivery may be an option in**
 - (1) forceps (vertex presentation & certain conditions are fulfilled before forceps)
 - (2) breech extraction (breech presentation)
 2. **presentation:** monitor the fetus, preserve the membranes till full cervical dilatation, knee chest or Sim' s position, oxygen mask.
 - a. if the membranes rupture before full cervical dilatation → URGENT CS
 - b. if the membranes are kept intact till full cervix dilatation → **rapid vaginal delivery.**

Contracted Pelvis

- Any decrease in any pelvic diameter interfering with the normal mechanism of labor. One or more of the diameters decreased by ≥ 1 cm. It is classified according to AP diameter of the inlet (true conjugate) into:
 1. mild: 9-10 cm
 2. moderate: 8-9 cm.
 3. Severe: 6-8 cm.
 4. Extreme: <6 cm.
- **Etiology:**
 1. **pelvis:**
 - a. **developmental:**
 - (1) justaminor pelvis: generally contracted pelvis is the commonest type.
 - (2) Nagele's pelvis: absent one ala of the sacrum (oblique pelvis).
 - (3) Robert's pelvis: absent both alae of the sacrum (transverse contracted pelvis).
 - (4) High assimilation pelvis: sacralization of the 5th lumbar vertebra.
 - b. Acquired:
 - (1) rickets: flat pelvis, generally contracted flat pelvis, pseudo osteomalacic pelvis, scoliosis.
 - (2) Osteomalacia: tri radiate inlet.
 - (3) Others: Neoplastic and Traumatic.
 2. Vertebral column:
 - a. Kyphosis
 - b. Scoliosis → **Oblique** pelvis.
 - c. Spondylolisthiasis: forward slipping of the lumbar vertebrae over the sacral promontory
 3. Lower limb: → **Oblique** pelvis: TB of the hip joint (coxalgic pelvis), Poliomyelitis, Tumors or fractures on one side.
- Types of pelvis (Mixed types occur & are more common than the pure forms)

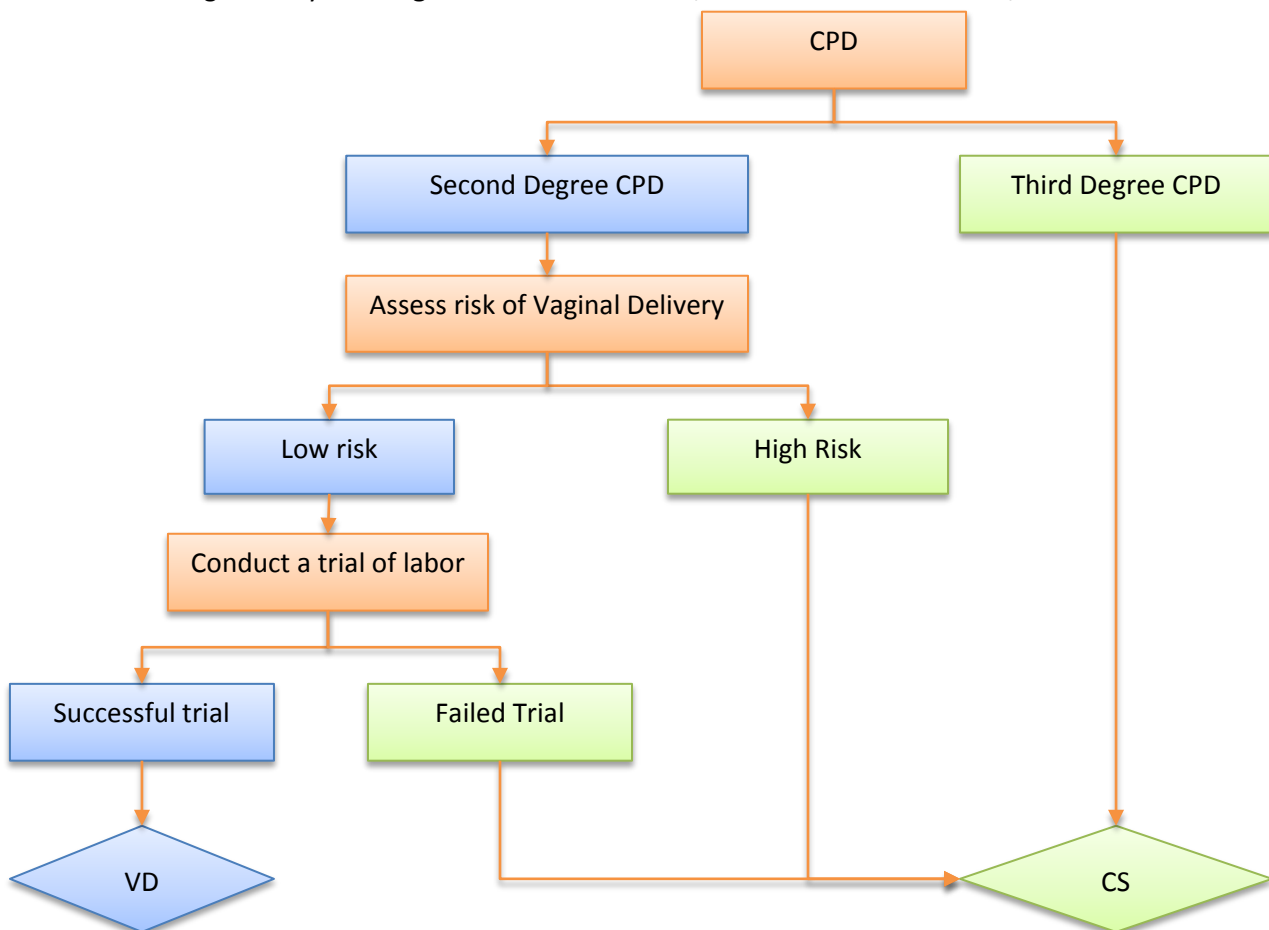
	Gynecoid	anthropoid	android	platepelloid
Brim	transverse oval	long oval	triangular (wedge)	flat
APD of the inlet	11	13	10	10
side walls	Straight		convergent	
ischial spines	not prominent		prominent	
sciatic notch	Wide	Wide	narrow	narrow
sub pubic angle	Wide	Narrow	narrow	wide



- **Complications:** obstructed labor (what are the maternal & fetal complications?).
- **diagnosis:**
 1. Bad obstetric history: prolonged labor and instrumental delivery, prior CS.
 2. **Examination:**
 - a. general: height.
 - b. Abdominal: Non-engagement, malpresentations & malposition.
 - c. Assessment of Pelvic capacity:
 - (1) inlet:
 - (a) **diagonal AP diameter (conjugate)** (normally 12.5 cm - The true conjugate= diagonal conjugate-1.5): The promontory will be easily palpable in the unanesthetized patient only if the pelvis is contracted in the anteroposterior diameter..
 - (b) **posterior surface of the symphysis pubis:** normal smooth rounded curve or abnormal angulation.
 - (c) **Iliopectineal line:** undue prominence.
 - (d) **Tests of cephalopelvic disproportion (CPD)** at the brim (inlet):
 - (i) if the head (**the best pelvimeter**) is engaged in the end of pregnancy, it can be taken that there is no disproportion at the brim (inlet).
 - (ii) If the head is not engaged, the degree of CPD at the brim (inlet) can be assessed as follows: the left hand presses the head into the pelvis. Fingers of the right hand in the vagina to assess descent of the head while the thumb is over the pubis to estimate the degree of overlap.
 - (a) head descends to the level of the ischial spines or into the high cavity (**1st degree CPD**).
 - (b) head is found to be level with the pubis (**2nd degree CPD**).
 - (c) head is found to be anterior to the pubis (over-riding head) (**3rd degree CPD**).
 - (2) Cavity:
 - (a) **sacrum:** curve, shape, length.
 - (b) **Ischial spines:** normal smooth & difficult to palpate or abnormal prominence & encroaching on the available space in the cavity.
 - (c) **Sacrospinous ligament:** normal accommodates 3 fingers indicating normal width of the **sacrosciatic notch**.
 - (3) Outlet:
 - (a) **sub pubic arch:** that admits 3 fingers normally.
 - (b) **Subpubic angle:** normally spans the abducted thumb from the hand.
 - (c) **Bituberous diameter:** normally allows access to the 4 knuckles of the clenched fist. According to **Thom's dictum** the sum of the bituberous diameter & the posterior sagittal diameter must be ≥ 15 cm.
 - (i) Diagnosis of **contracted outlet (Funnel pelvis)**
 - (a) pelvic side walls are converging
 - (b) narrow sub pubic angle
 - (c) bituberous diameter is < 8 cm.
 - (d) Anteroposterior diameter is reduced.
 - (ii) **contracted outlet is usually associated with:** Android, Anthropoid, generally contracted pelvis, High assimilation pelvis, Nagele's pelvis, Spondylolisthiasis, Osteomalacia.
 3. Investigation: pelvimetry

July 14, 2011

- **treatment:** is guided by: **the degree of CPD at the inlet, assessment of the outlet, associated condition**



- **Trial of labor:** is a clinical test of the undetermined factors of labor: efficiency of uterine contractions, Molding of the head, yield of pelvic soft tissue.
 1. Contraindications:
 - a. third degree CPD.
 - b. Contracted outlet
 - c. Associated abnormalities:
 - (1) Post term pregnancy.
 - (2) Malpresentation & malposition.
 - (3) elderly PG,
 - (4) antepartum hemorrhage,
 - (5) DM.
 - (6) Uterine scar.
 2. Technique: hospitalization, All facilities for CS, establish partogram
 3. Criteria of failed trial:
 - a. Abnormal pattern of cervical dilatation.
 - b. Abnormal pattern of descent.
 - c. Fetal distress.
 - d. Maternal distress e.g. intrapartum hemorrhage.