MALPRESENTATIONS/ MALPOSITIONS

For Bsc Midwifery student

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Out line

- Introduction
- Objectives
- Definition of mal presentation and mal position
- Diagnosis of mal presentation and mal position
- Management of mal presentation and mal position
- Complication of mal presentation and mal position
- References

Objectives

- To define mal presentation and mal position.
- To list different causes of mal presentation and mal position.
- To describe the diagnosis of mal presentation and mal position.
- To describe the management of d/t mal presentation and mal position.
- To list the complication of d/t mal presentation and mal position.

Introduction

- Fetal malposition and malpresentation

are related to abnormalities of fetal :-

  - Position
  - Presentation
  - Attitude
  - lie

Definitions of terms

- **Fatal Lie:-** is the relation of the long axis of the foetus to the long axis of the mother's abdomen
- **Attitude:-** refers to the position of the fatal head in relation to its neck
- ***Presentation:-*** refers to the fatal part that directly overlies the pelvic inlet

Cont….

- ***Position :-*** refers to the relationship of the fetal presenting part to the maternal pelvis.

- ***Station:***- is a measure of descent of the bony presenting part of the foetus through the birth canal

Definitions of Malpresentation/Malposition

- **Malpresentation** – any fetal presentation other than a vertex presentation.
- **Malposition-** Any fetal position other than LOA,ROA & DOA
- **OT** is a **transient position** and it becomes malposition when diagnose as persistent OT

Cont.…

- Are associated with **maternal and perinatal morbidity** and **mortality** much higher than the vertex presentation
- Appropriate management requires identification of possible etiology as well as understanding of mechanism of delivery of the specific malpresentation to decide appropriate options of delivery

Etiologies of Malpresentation/Malposition

- We can group the etiologies in to;

A. FETAL FACTORES

- Multiple pregnancy
- Congenital anomalies- anencephaly, hydrocephalus, fetal tumors, fetal hydrops…
- Extended fetal head preventing fetal rotation
- Fetal macrosomia

Con…

- Conjoined twins
- Polyhydramnios
- Oligohydramnios
- Placenta Previa

B.MATERNAL FACTORES

- Preterm labor
- Uterine congenital anomalies- arcuate, septate, unicornuate uterus
- Contracted pelvis
- Tumor Previa
- Grand multiparity
- Uterine myoma

C.IDEOPHATIC

- In most cases of malpresentation, none of the fetal or maternal causes can be found and the malpresentation is ascribed due to pure chance occurrence

NB

- Most known causes of malpresentation act by preventing the natural rotation of the fetal head to the lower segment around the 34th week or above and also by preventing the stabilization and fixation of the fetal head in the pelvic inlet around term.

Complications of Malpresentation/Malposition

A . Maternal

- Genital trauma
- Post partum hemorrhage
- Intrapartum infections
- Puerperal sepsis
- Complications of operative delivery

Cont....

B. Perinatal

- Birth trauma- intraventricular hemorrhage; spinal cord injury; Erb's and Klumpke's palsies; visceral injury
- Perinatal asphyxia
- Still birth
- Cord prolapse
- Neonatal infections
- Increased risk of meconium aspiration syndrome

Con…

C. Labor and Delivery

- Prolonged labor
- Obstructed labor
- Premature rupture of the membranes more common
- Increased operative vaginal delivery
- Increased caesarean delivery
- Inefficient uterine action

Diagnosis of Malpresentation/Malposition

- History
- previous malpresentation history ;
- present pregnancy history-
  - preterm labor
  - multiple pregnancy
  - presence of genital tumor diagnosed previously
  - placenta Previa
  - polyhydramnios etc

Con…

- Physical examination –
  - Leopold's palpation after the 34th week of gestation-
    - any presentation other than cephalic
  - Vaginal exam in labor-
    - any presenting part other than the vertex;
    - always rule out pelvic contracture and cord prolapse in all malpresentation diagnosed at pelvic exam

Cont.…

- Sonography- in all malpresentation also rule out:
  - Placenta Previa
  - Any congenital anomaly
  - Any tumor Previa
  - Fetal weight estimation

Outline of Management of Malpresentations

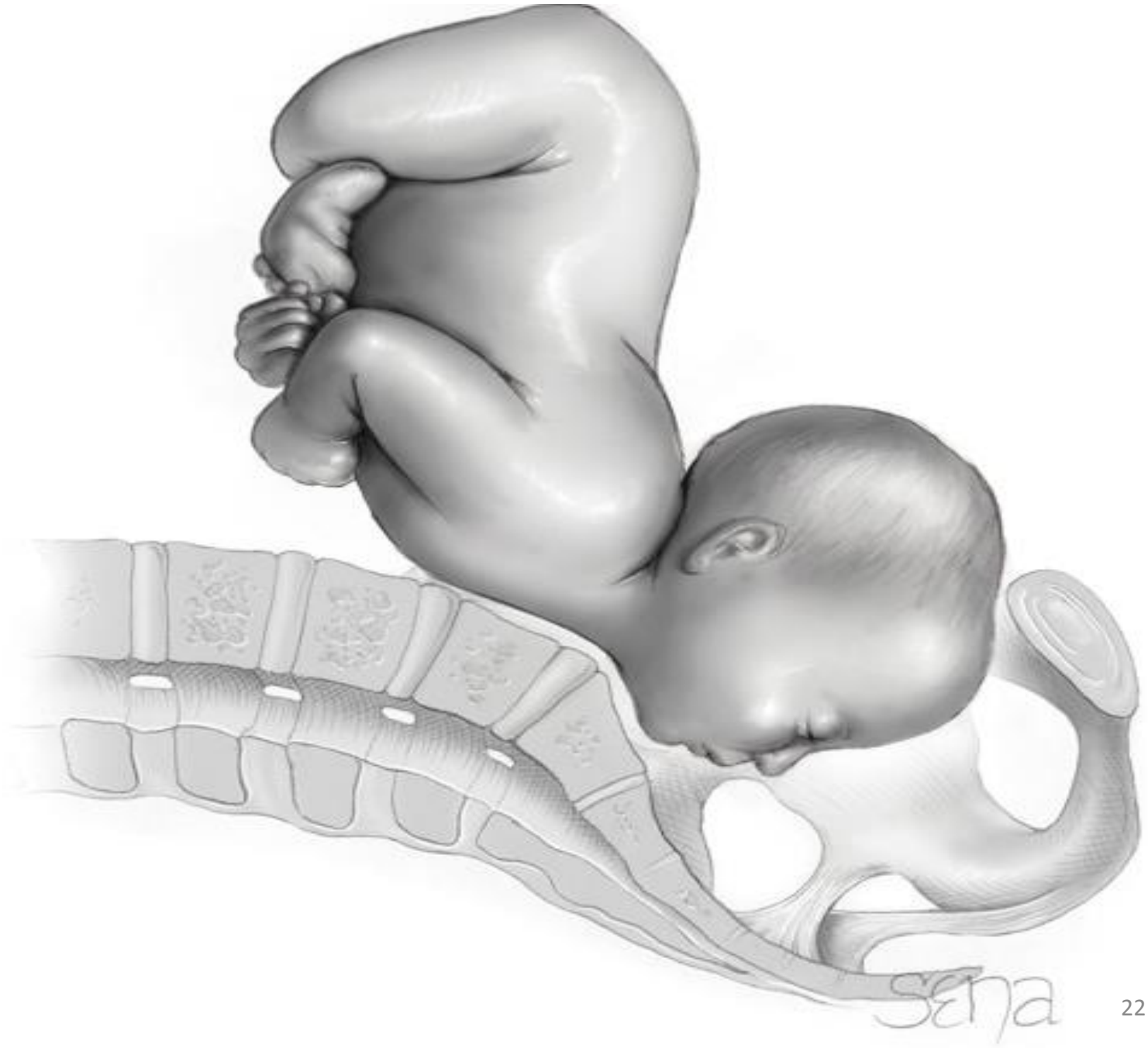
- Search for any possible cause of malpresentation as the etiology may affect the management and outcome
- Assess fetal size, pelvic adequacy, fetal well being as well as the presence of placenta Previa and cord presentation

Cont.....

- Review the mechanism of labor in the specific malpresentation and decide the best route of delivery
- Decide on possible options of management such as external version in breech presentation
- Involve the mother in the decision process

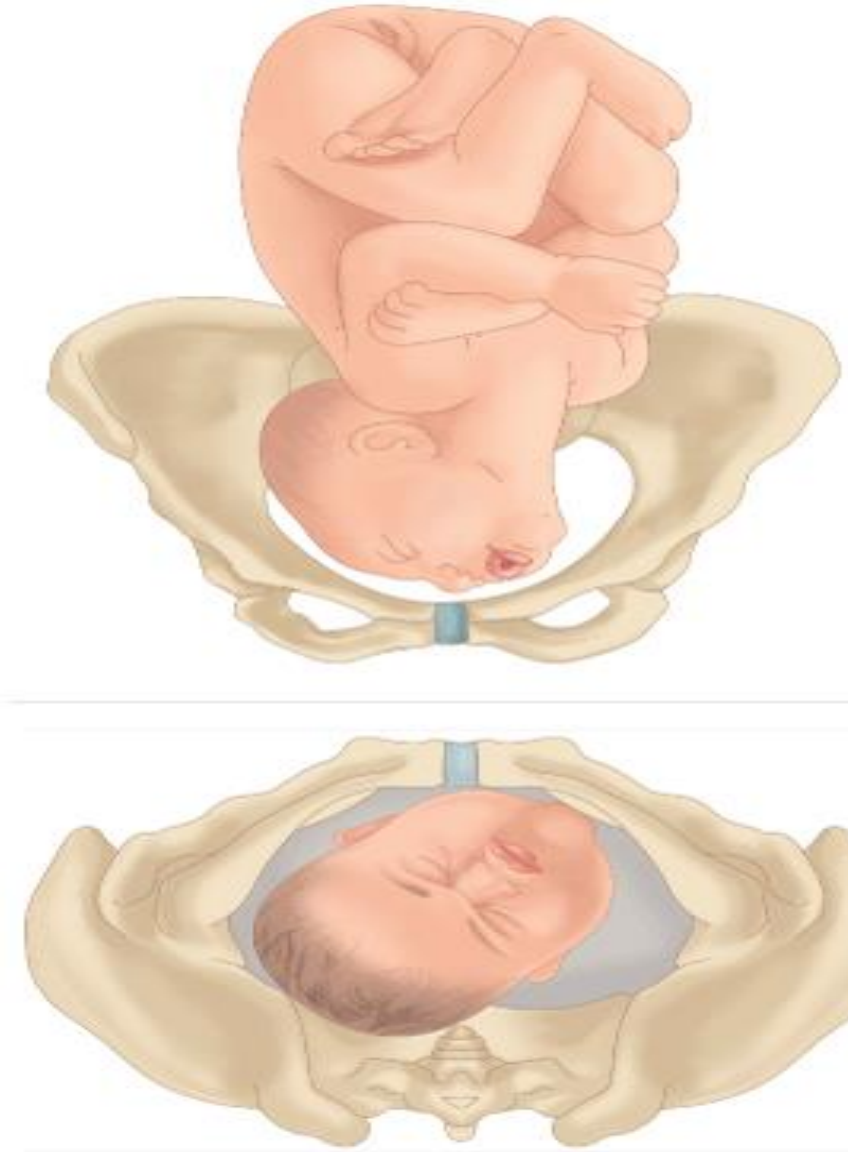
Face Presentation

- Definition:
- It is a cephalic presentation in which the head is completely extended.
- Boundaries of the face- presentation
- **Superiorly;**
  - supra orbital ridges and the root of the nose.
- **Inferiorly;** chins /the mentum.



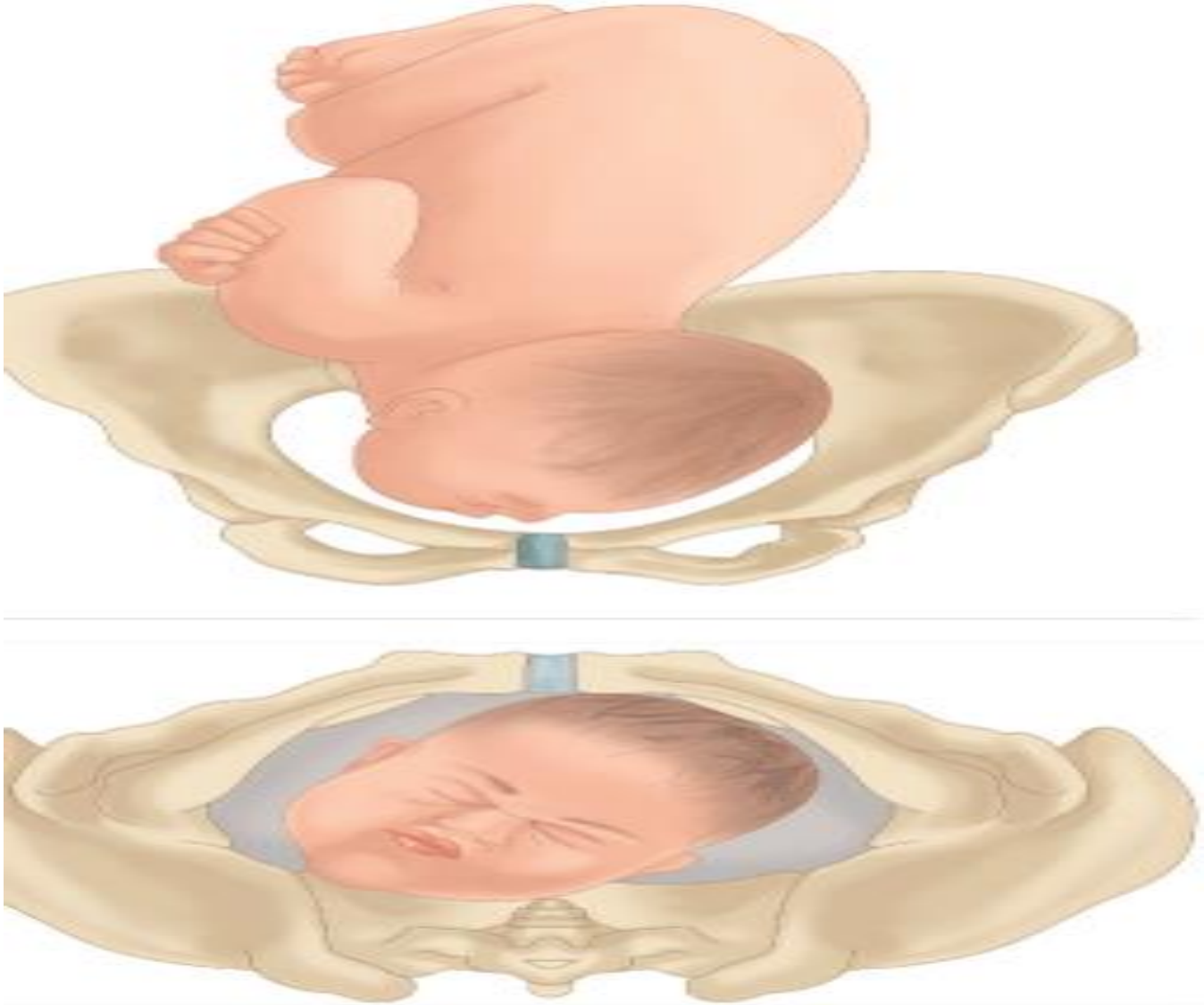
LMA

RMA



Right mento-anterior

RMP



Right mento-posterior

Cont…

- Presenting diameters in face:
  - **Biparietal diameter** – **9.5 cms** in a term fetus
  - **Sub-mento bregmatic diameter-** 9.5 cm in a term fetus
- Denominator in face presentation is the **mentum**
- Possible positions – 8 – e.g. MA, LMT, MP, RMT, etc.
- Possible etiologies
- ✓ Maternal .. Eg. Multiparty with pendulous abdomen, pelvic tumor
- ✓ Fetal.. Congenital malformations ..
- The commonest one is anencephaly, Congenital goiter

excessive nuchal cords

Diagnosis of face presentation

- **Leopold's palpations**

  Third maneuver- occipital prominence is on the same side of the back indicating a hyper extended cephalic presentation

- **Vaginal exam**

  The supra orbital ridges; the fetal nose; eyes; mouth openings and gums are felt on gentle vaginal exam. The forehead is partially felt.

- **Sonography**

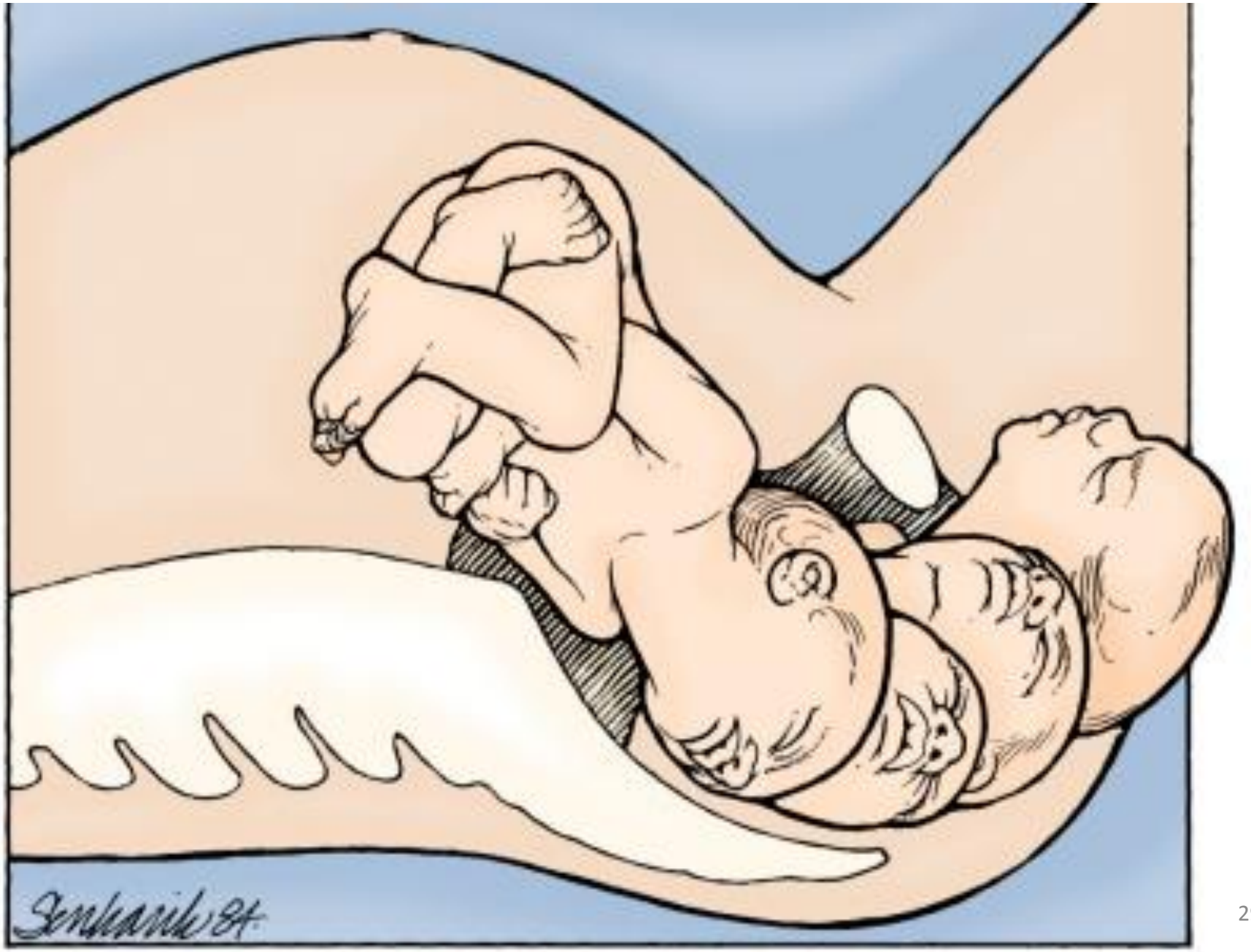
  Assess fetal size, anomalies, goiter

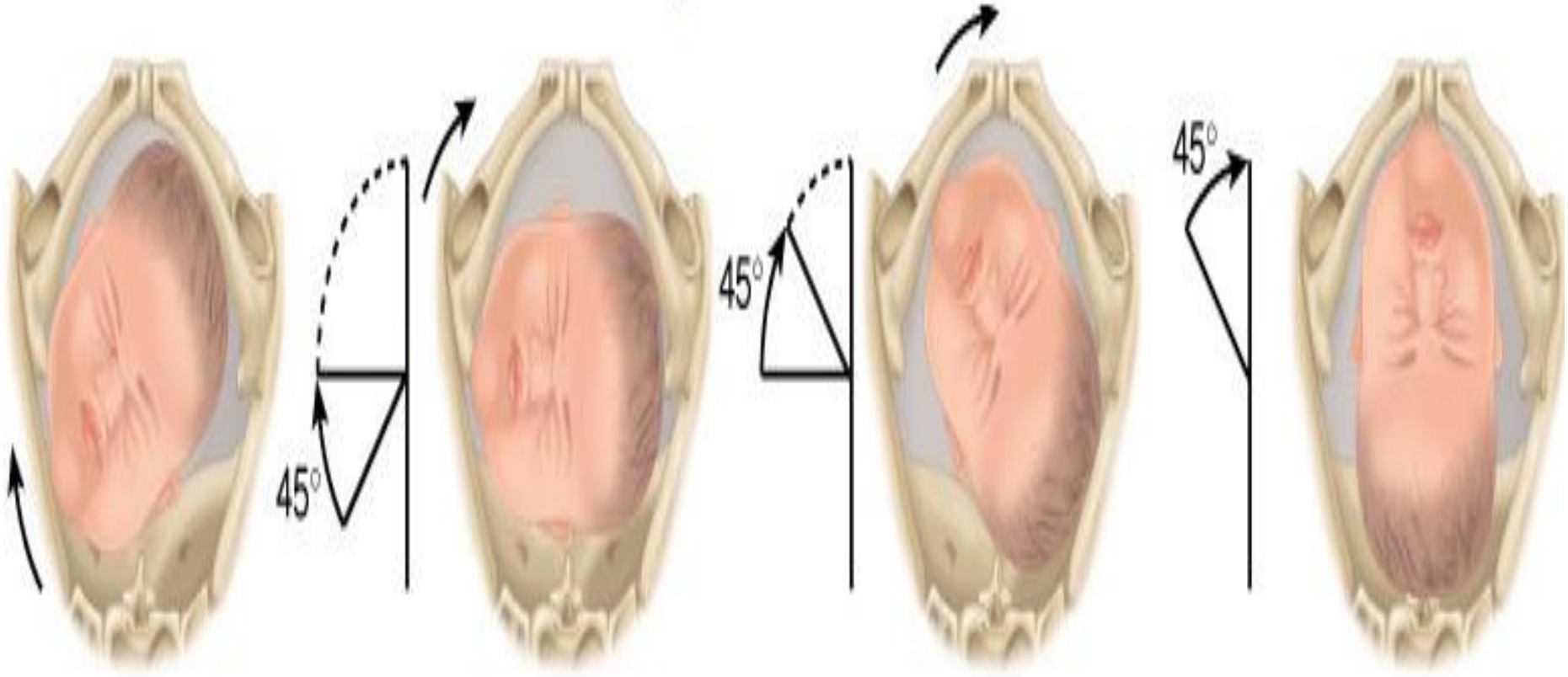
Mechanisms of labor in Face Presentation

- Descent with further extension
- Engagement
- Internal rotation at mid pelvis- two possibilities
  - **Long rotation – up to 135 degrees** to the mento anterior position OR
  - **Short rotation – less than 45 degrees** to the mento posterior position

Cont.…

- In mento anterior positions, delivery follows by flexion of the head towards the symphysis pubis (face to pubes)
- Persistent mento posterior positions cannot be delivered vaginally as the head cannot extend further
- The remainder of the mechanisms after delivery of the head is the same as the vertex





Mechanism of labor for right mentoposterior position with subsequent rotation of the mentum anteriorly and delivery.

Management of Face Presentation

- Assess fetal size, pelvic adequacy and the presence of anomalies at initial diagnosis and intervene with abdominal delivery if cephalo pelvic disproportion or a contracted pelvis is diagnosed
- Follow labor progress and ascertain internal rotation to mento anterior position

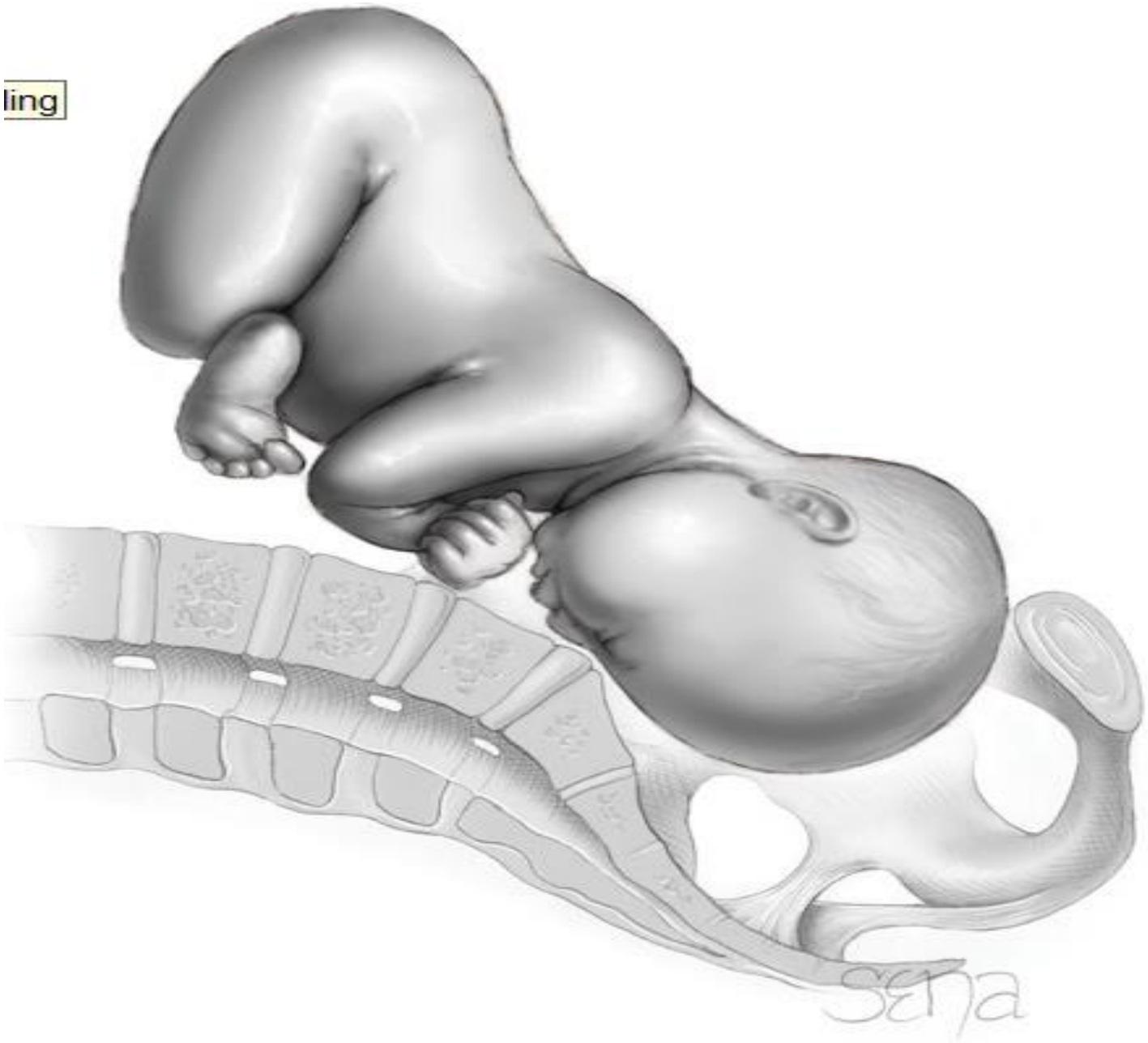
Cont.....

- If internal rotation is to the mento posterior position and it persists, deliver by caesarean section
- Augmentation of labor and application of forceps in delayed second stage is controversial and if applied should be on an individualized basis
- **Manual rotation to mento anterior position is an outdated management**

Brow Presentation

Defin: It is a cephalic presentation in which the head is midway between flexion and extension.

- Dignosed when the portion of the fetal head between the **orbital ridge** and **the anterior fontanel** presents at the pelvic inlet.
- Incidence : About 1:1000 labor& it is rare case
- Presenting diameters in brow presentation:
  - **Biparietal diameter – 9.5 cms**
  - **Mentovertical diameter- 13.5 cms**
- Most brow presentations at term are **transitory presentations in early labor .**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Diagnosis of Brow Presentation

(A) During pregnancy: It is difficult

- Ultra sonography may be helpful

(B) During labour:

- frontal bones,
- supra-orbital ridges, and
- root of the nose but not the chin

Mechanisms of Labor in Brow Presentation

I. Persistent brow:

- The engagement diameter is the mento -vertical 13.5 cm which is longer than any diameter of the inlet so there is no vaginal mechanism of labour and labour is obstructed.

II. Transient brow:

- May occur during conversion of vertex into face presentation.
- So if brow is flexed to become vertex or extended to become face it may be delivered

Management brow….

(A) Early in the first stage:

❖Exclude contracted pelvis, if present do c/ section.

1. The case is considered as *transient brow, observe* carefully and given a chance for spontaneous conversion into either face or vertex.
2. The rest of management as other malpresentation.

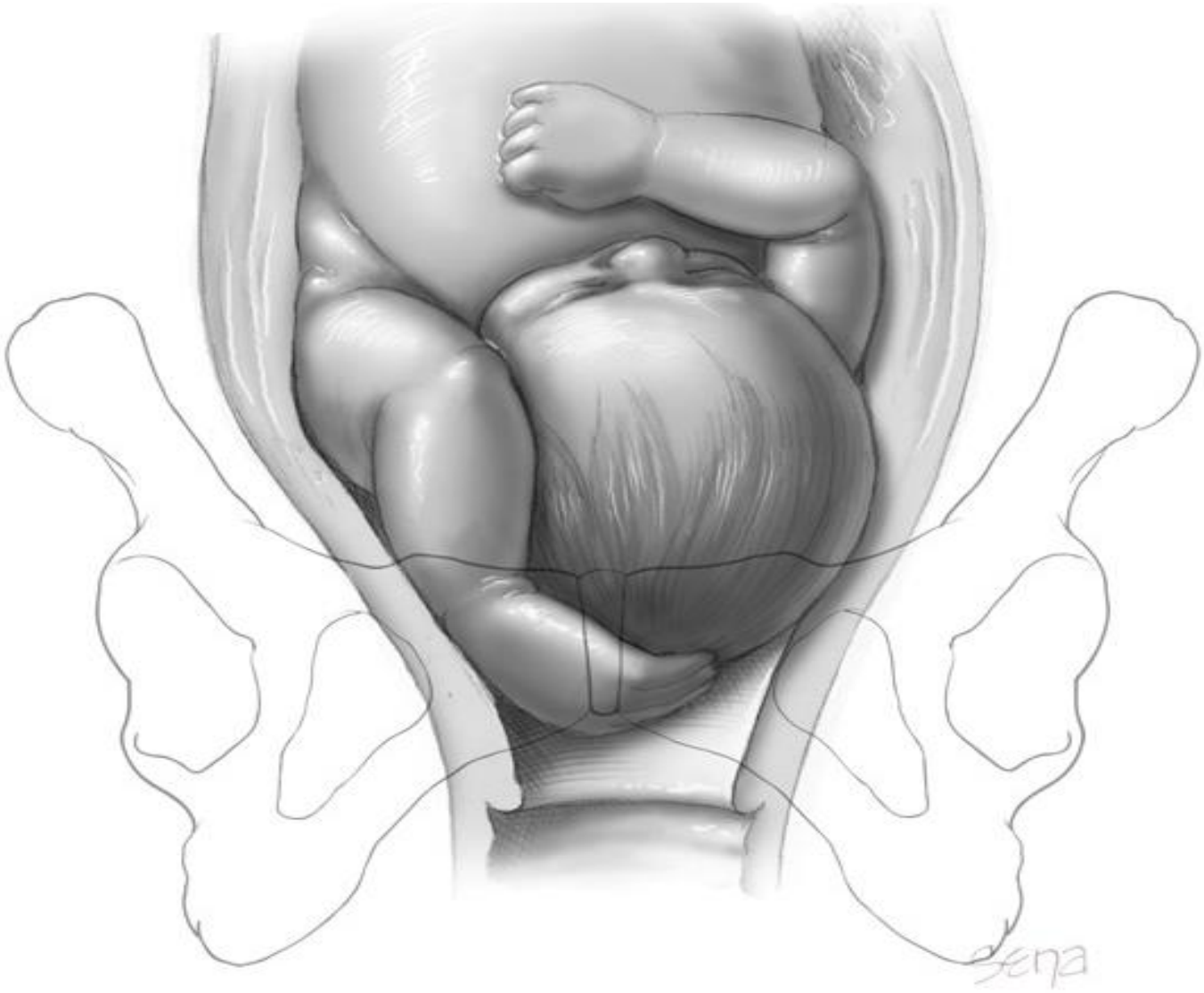
(B) In the second stage:

❖The case is considered as *persistent brow so:*

1. Caesarean section is done if the foetus is alive.
2. Craniotomy if the foetus is dead.

Compound presentation

- **Definition:** It is the presence of a limb alongside the presenting part i.e.
- It is a vertex presentation with a single or double hand or feet felt alongside the fetal head on vaginal exam OR
- A breech presentation with a single or double hand felt alongside the breech presentation .
- If the hand is felt anterior or lower to the vertex and not alongside then it is a **" hand prolapse"** rather than a compound presentation



Diagnosis

- The tips of the fingers of the hand or feet are felt alongside the fetal head on vaginal exam
- The tips of the fingers of the hand are felt alongside the breech
- Always assess the pelvic capacity as well as the presence of cord in compound presentations diagnosed in labor

Mechanism of labor

- The **usual progress** in a compound presentation diagnosed in **early labor** is the **gradual regression of the extremity upward** as the vertex is pushed downwards by uterine action.

Management

❑Early labor

- In early labor:
- **Assess** pelvic capacity
  - fetal status
  - presence of cord
  - other contraindications for vaginal delivery
- If all the above are normal, monitor labor progress and recession of the extremity upward with further labor progress

❑Later labor

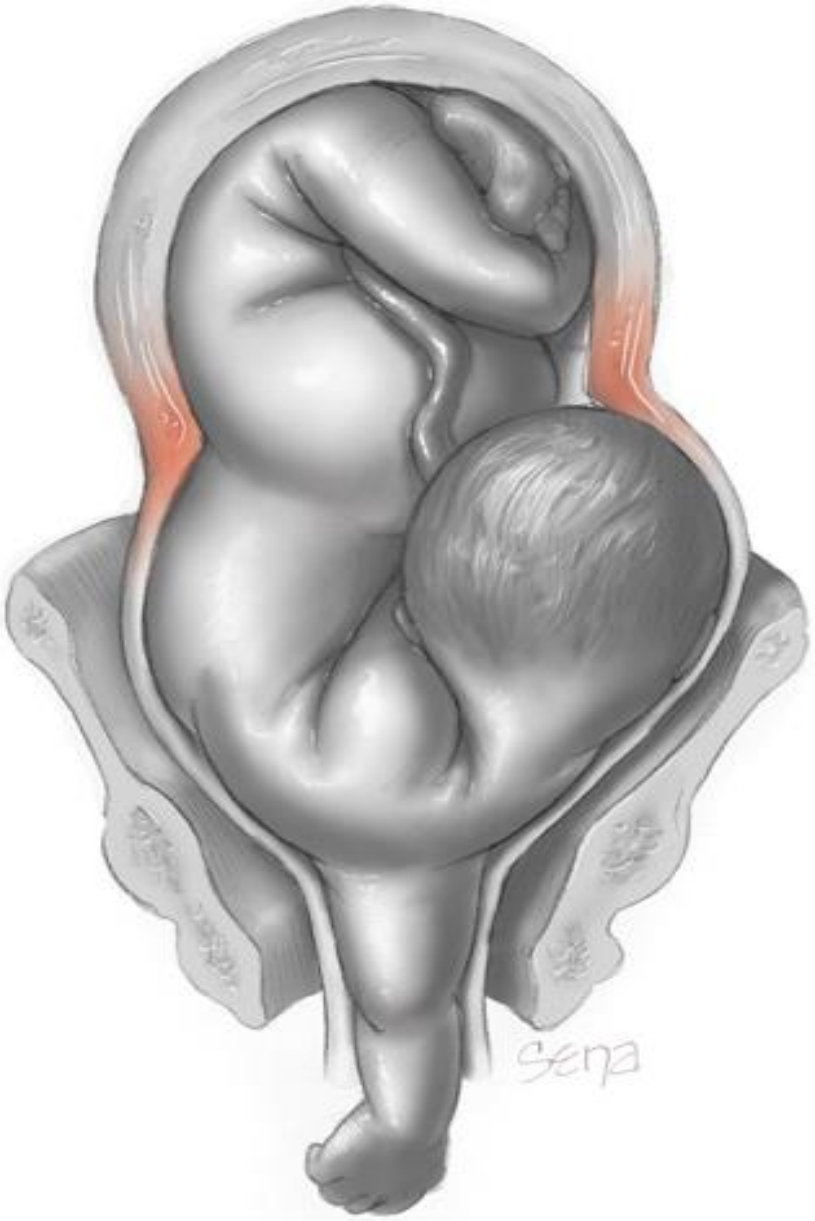
- ❖In late labor or a suspected contracted pelvis or cord presentation/prolapse or other contraindications for vaginal delivery; expedite delivery by caesarean section.
- ❖**Induction and augmentation and instrumental deliveries are contraindicated in compound presentations**

Shoulder Presentation

- Shoulder presentation occurs with the fetus is in the **transverse lie**
- In late labor, shoulder presentation may be accompanied by **a hand prolapse**.
- Diameter attempting to be delivered in shoulder presentations is the **crown-rump length**

Shoulder p…..

- The shoulder presentation cannot be delivered **vaginally.**
- In rare circumstances when the fetus is very small and the pelvis is capacious, a shoulder presenting fetus can be delivered **doubled up (“conduplicacio corpore”).**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Diagnosis of Shoulder Presentation

- **Leopold's palpations :** Transverse lie diagnosed and it is abnormal after the 34th week of pregnancy.
- **Vaginal examination:** In delayed and neglected cases the hand and arm may prolapse. Cord prolapse rate is the highest among malpresentations (20%)
- **Sonography :** In addition to confirming the diagnosis, presence of congenital anomalies, placenta previa, uterine anomalies and fetal size assessment should be made

Management of shoulder presentation

Antepartum	Early labor	Late labor
•After 34th week- diagnostic work up for possible etiology (placental localization; fetal size; uterine anomalies; tumors; etc). •If all is normal, perform external cephalic version. •If recurrent (unstable lie), admit to ward to avoid the possibility of membrane rupture and cord prolapse outside hospital.	•If pelvic capacity is adequate; no cord prolapse; no other associated abnormalities (congenital anomalies; placenta previa) and fair fetal size can be managed by external cephalic version. •If cord prolapse or other abnormalities, manage by expedited caesarean delivery .	•In an alive fetus, perform expedited caesarean delivery. •In a dead fetus, with fully dilated cervix, accessible neck per vaginum, and experienced operator one can perform decapitation with or without initial embryotomy.

Cord presentation and prolapse

Definitions:

- Cord presentation and prolapse describe a situation in which the umbilical cord is felt anterior to the fetal presenting part on vaginal examination.
- If the **membranes are intact** it is a **cord presentation** while with **ruptured membranes it is identified as a prolapsed cord.**
- As long as the membranes are not ruptured, the risk of compression and asphyxia is low.

Cont…

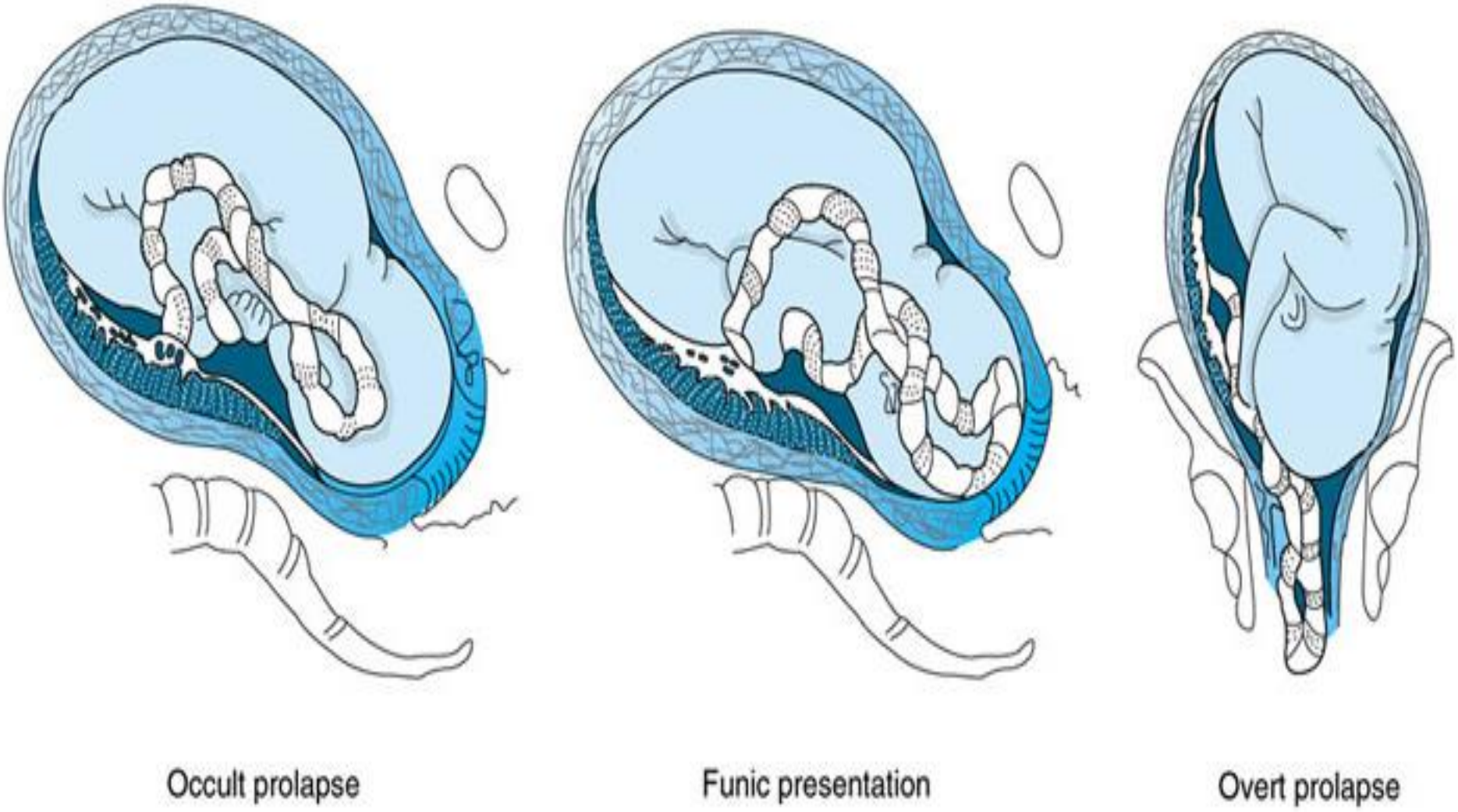
- Cord prolapse can be **overt**, being felt inside the cervix, the vagina or even hanging outside the introitus or "**Occult"** cord prolapse with the cord anterior to the presenting part in the lower segment but not felt on digital vaginal exam has also been described.
- Cord prolapse can occur in:

✓ vertex & frank breech presentations(0.5%)

✓ complete breech (5%)

✓ footling breech (15%)

✓ shoulder presentation (20%)



Types of prolapsed cords.

Etiology of Cord Prolapse

- Malpresentations in labor
- PROM
- Amniotomy with a high fetal station
- Polyhydramnios with sudden membrane rupture
- Second twin delivery
- Internal podalic version
- Cepalopelvic disproportion in labor

Diagnosis of Cord Presentation/Prolapse

- **Vaginal exam-** cord hanging outside the introitus; felt in the vagina or inside the cervix anterior to the presenting part
  - **Check for pulsation and its rate**
  - *Replace the cord immediately into the vaginal (not inside the uterus) canal if outside the introitus*
- If membrane is intact, cord presentation is diagnosed

Cont…

- In all malpresentations, a careful search for cord presentation or prolapse should be made
- Occult cord prolapse can only be diagnosed by detection of abnormal fetal heart rate patterns
- In cases of malpresentations, sonographic search can also be made for cord anterior to the fetal presentation

Complications of Cord Prolapse

- Cord compression and constriction of umbilical vessels due to cold exposure outside the introitus can lead to **fetal asphyxia and death**.
- Partial cord occlusion may give the fetus some time but in complete cord occlusion the fetus can die of asphyxia in *5-7 minutes if cord compression is not immediately relieved*.
- There is increased maternal risk from cord prolapse because of emergency operative vaginal or abdominal delivery performed in order to *save the fetus*.

Managment

Immediate management	Delivery
If cord is pulsating: •Put mother in knee-chest position •Initiate oxygen administration by face mask 5L/min •Insert bladder catheter and infuse the bladder with 0.5L of saline •Replace the cord into the vaginal canal (not into the uterus) •Push fetal presenting part upwards via the examining hand in the vagina to relieve compression of the cord by the presentation •Prepare for immediate delivery	Non-pulsatile cord: •Manage as any other labor as the cord prolapse will not alter the course of labor Pulsatile cord: Second stage of labor: •Expedite delivery by forceps delivery if other conditions for forceps delivery are met. •Breech extraction if other conditions for breech extraction are met. •Internal podalic version with breech extraction if sudden prolapse during delivery of second twin. First stage of labor: •Expedited caesarean delivery.

Breech Presentation

Definition:

- It is a longitudinal lie in which the buttock is the presenting part with or without the lower limbs.
- A longitudinal lie of the fetus with the caudal pole (buttock or lower extremity) occupying the lower part of the uterus and cephalic pole in the uterine fundus.

Breech…….

- Breech presentation is more common **remote from term** because the **bulk of each fetal pole is more similar.**
- Most often, however, as term approaches, the fetus turns spontaneously to a cephalic presentation because the increasing bulk of the buttocks seeks the more spacious fundus.
- But, breech presentation persists in **3 to 4 percent** of singleton deliveries at term.

Breech…

❑Incidence:

- ❖3.5% of term singleton deliveries and
- ❖about 25% of cases before 30 weeks of gestation and most cases undergo spontaneous cephalic version up to term

Etiology of breech presentation:

- In general, the foetus is adapted to the pyriform shape of the uterus with the **larger buttock in the fundus** and **smaller head in the lower uterine** segment.
- Any factor that interferes with this adaptation, allows **free mobility** or **prevents spontaneous version**, can be considered a cause for breech presentation as follows:

Cont…

1. **Prematurity** : due to

   - relatively small foetal size,

   - relatively excess amniotic fluid, and

   - more globular shape of the uterus

2. **Factors that prevent spontaneous version** (Extended legs, Multiple pregnancy, A very large baby, Oligohydramnios, A small pelvis, Placenta praevia, Intrauterine foetal death)
3. **Factors that change the uterine shape**
    - ❖Congenital abnormalities of the uterus (Bicornuate and septate uterus)
    - ❖Uterine and Pelvic tumours)

4. **Factors that change the foetal shape** (Hydrocephaly, Anencephaly, Foetal tumours)
5. **Factors causing the foetus to rotate more easily** (Polyhydramnios, A lax abdominal musculature, High parity with a relaxed uterus)
6. Unknown causes in a large percentage of cases

Types of breech presentations

- THREE TYPES

1. **Complete breech** - both hips and knees in flexion
2. **Frank breech** – hips in flexion & knees in extension
3. **Incomplete breech** :one or both hips are not flexed, and one or both feet or knees lie below the breech, such that a foot or knee is lowermost in the birth canal
   - ***Footling breech:*** is an incomplete breech with one or both feet below the breech
   - **knee presentation**

Types of breech presentations:

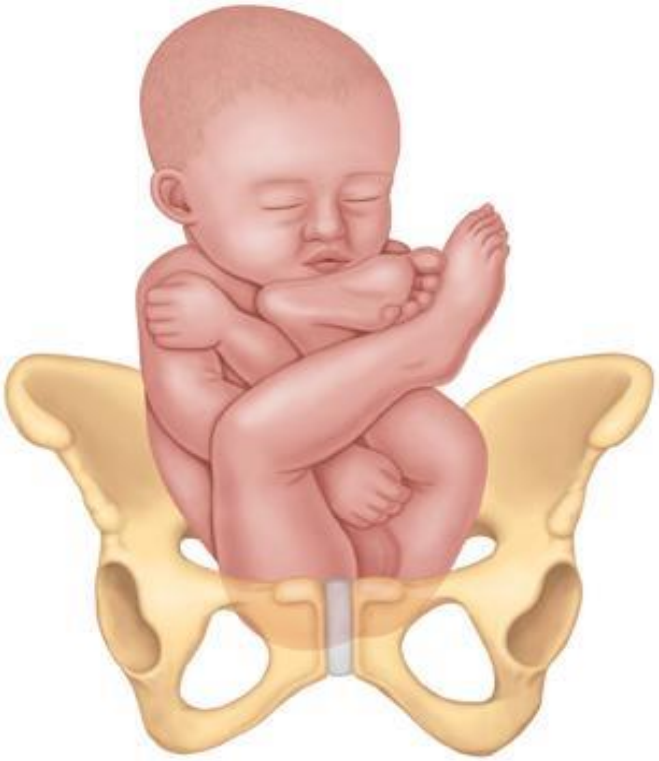
Complete breech:

- The feet present beside the buttocks as **both knees and hips are flexed.**
- thighs are apposed to the abdomen and the legs lie on the thighs.
- **Least common type(5%)**

Cont…

Frank breech:

- It is breech with extended legs where the knees are extended while the hips are flexed and thus the feet lie in close proximity to the head.
- The commonest type (60-65%)
- More common at term



cont…

Footling breech:

- The hip and knee joints are extended on one or both sides.
- Accounts (25-35%)
- More common in preterm singleton breeches

Cont…

3) Knee presentation:

- The hip is partially extended and the knee is flexed on one or both sides

Diagnosis

❑ Abdominal Examination

❖ With the first Leopold maneuver, the hard, round, readily ballottable fetal head may be found to occupy the fundus.

❖ With the third maneuver, if not engaged, the breech is movable above the pelvic inlet.

❖ After engagement, the fourth maneuver shows the firm breech to be beneath the symphysis.

Cont…

- **Vaginal Examination**

❖ With the frank breech presentation, both **ischial tuberosities, the sacrum, and the anus** usually are palpable, and after further fetal descent, the **external genitalia** may be distinguished.

❖ The **sacrum and its spinous processes** are palpated to establish the **position** and **presentation**

Cont…

❑Sonography

- ❖The best confirmation of a suspected breech presentation is with sonography.
- ❖It also can provide information regarding the breech type and neck angle.

Management of Breech Presentation

1. vaginal delivery

2.cesarean delivery

3. External cephalic version (ECV)

Methods of Vaginal breech Delivery

- **There are three general methods of breech delivery through the vagina:**
- ***Spontaneous breech delivery.*** The fetus is expelled entirely spontaneously without any traction or manipulation other than support of the newborn.
- ***Partial breech extraction.*** The fetus is delivered spontaneously as far as the umbilicus, but the remainder of the body is extracted or delivered with operator traction and assisted maneuvers, with or without maternal expulsive efforts.
- ***Total breech extraction.*** The entire body of the fetus is extracted by the obstetrician.

Labor Induction and Augmentation in breech

- Induction or augmentation of labor in women with a breech presentation is **controversial**
- Many years ago, Brenner and associates (1974) found similar perinatal outcomes in newborns with induced versus spontaneous labor
- In oxytocin-augmented labor, however, infant mortality rates were higher and Apgar scores were lower.
- Su and colleagues (2003) reported that avoiding labor augmentation and having an experienced obstetrician present at birth significantly reduces the risk of adverse perinatal outcomes.

Cardinal Movements with Breech Delivery

Delivery of the buttocks:

- The engagement diameter is the **bitrochanteric** diameter 10 cm which enters the pelvis in one of the oblique diameters.
- The anterior buttock meets the pelvic floor first so it rotates 1/8 circle anteriorly.
- The anterior buttock hinges below the symphysis and the posterior buttock is delivered first by lateral flexion of the spines followed by the anterior buttock.
- External rotation occurs so that the sacrum comes anteriorly.

❑ Delivery of the shoulders:

- ❖ The shoulders enter the same oblique diameter with the **biacromial diameter 12 cm** (between the acromial processes of the scapulae).
- ❖ The anterior shoulder meets the pelvic floor first, rotates 1/8 circle anteriorly, hinges under the symphysis , then the posterior shoulder is delivered first followed by the anterior shoulder.

❑**Delivery of the after-coming head**:

❖ The head enters the pelvis in the opposite oblique diameter.

❖The **occiput rotates 1/8 circle anteriorly**, in case of **sacro- anterior position** and **3/8 circle anteriorly** in case of **sacro- posterior position**.

❖ Rarely, the occiput rotates posteriorly and this should be prevented by the **obstetrician**

Management of Vaginal Breech Delivery:

I) Spontaneous breech delivery:

- This is rarely occurs in multipara with adequate pelvis, strong uterine contractions and small sized baby.
- The baby is delivered spontaneously without any assistance but perineal lacerations may occur.

(II) Assisted breech delivery:

❑ Criteria

- ❖ Complete or frank breech
- ❖ No contraindication to vaginal birth (eg, placenta previa)
- ❖ Absence of fetal anomaly
- ❖ fetal weight 2000 g –4000g
- ❖ GA 36 weeks or more
- ❖ Flexed fetal head,
- ❖ No hyperextension
- ❖ Normal progress of labor
- ❖ Continuous fetal heart rate monitoring available
- ❖ Staff skilled in breech delivery and facilities
- ❖ available for safe emergency cesarean delivery

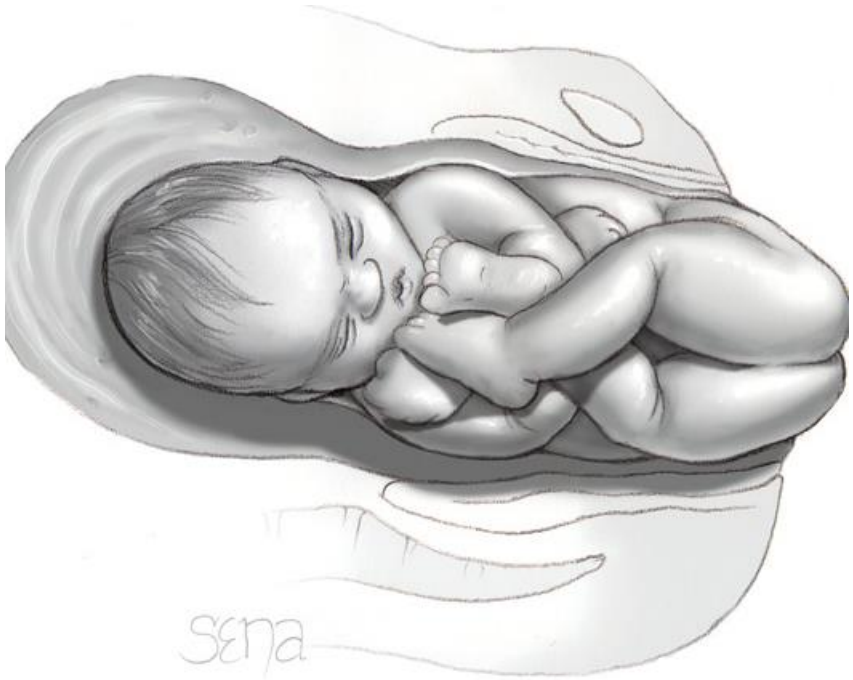
Cont…

- The membranes are left intact because spontaneous rupture of the membranes is more likely to be followed by cord prolapse due to the irregular outline of the breech.

Steps in assisted breech delivery

- The golden rule is to **"Keep your hands off“** to deliver the fetal buttock.

- The body is allowed to deliver spontaneously up to the level of the umbilicus



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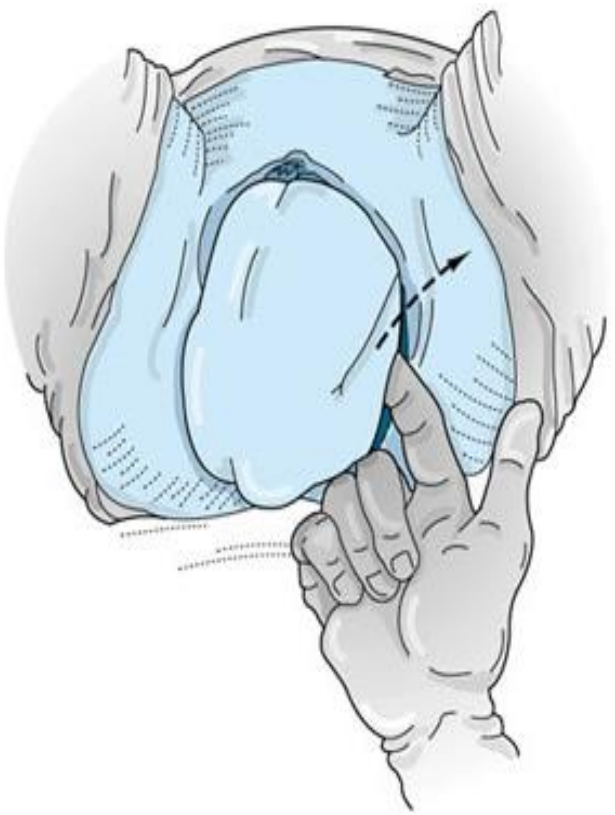
- After the umbilicus has been reached, wait spontaneous delivery of the legs

Cont…

- If the legs do not deliver spontaneously, deliver one leg at a time:
- pressure is applied to the medial aspect of the knee, which causes flexion and subsequent delivery of the lower leg.
- Do not pull the baby while the legs are being delivered



Flexion and abduction of the thigh to deliver extended leg.

- **Trunk and legs** — Maternal expulsive efforts alone should be adequate to deliver the fetus' buttocks and lower limbs if **not extended.**
- The mother is encouraged to bear down until the feet, legs, and trunk to the scapulae are visible.
- The body is supported in a plane at or below the horizontal plane of the birth canal.

- If the legs are extended after the umbilicus has delivered, the operator may use his/her fingers to exert pressure on the back of the knee (**Pinard maneuver)** and guide the thigh away from the trunk as the trunk is rotated in the opposite direction.
- This causes the knee to flex and allows extraction of the foot and the leg.
- The same procedure can be repeated, if needed, to deliver the other leg and foot.
- Cord pulsation is checked and a small loop pulled down to prevent traction on the cord.
- Meconium passage is not uncommon.

Cont…

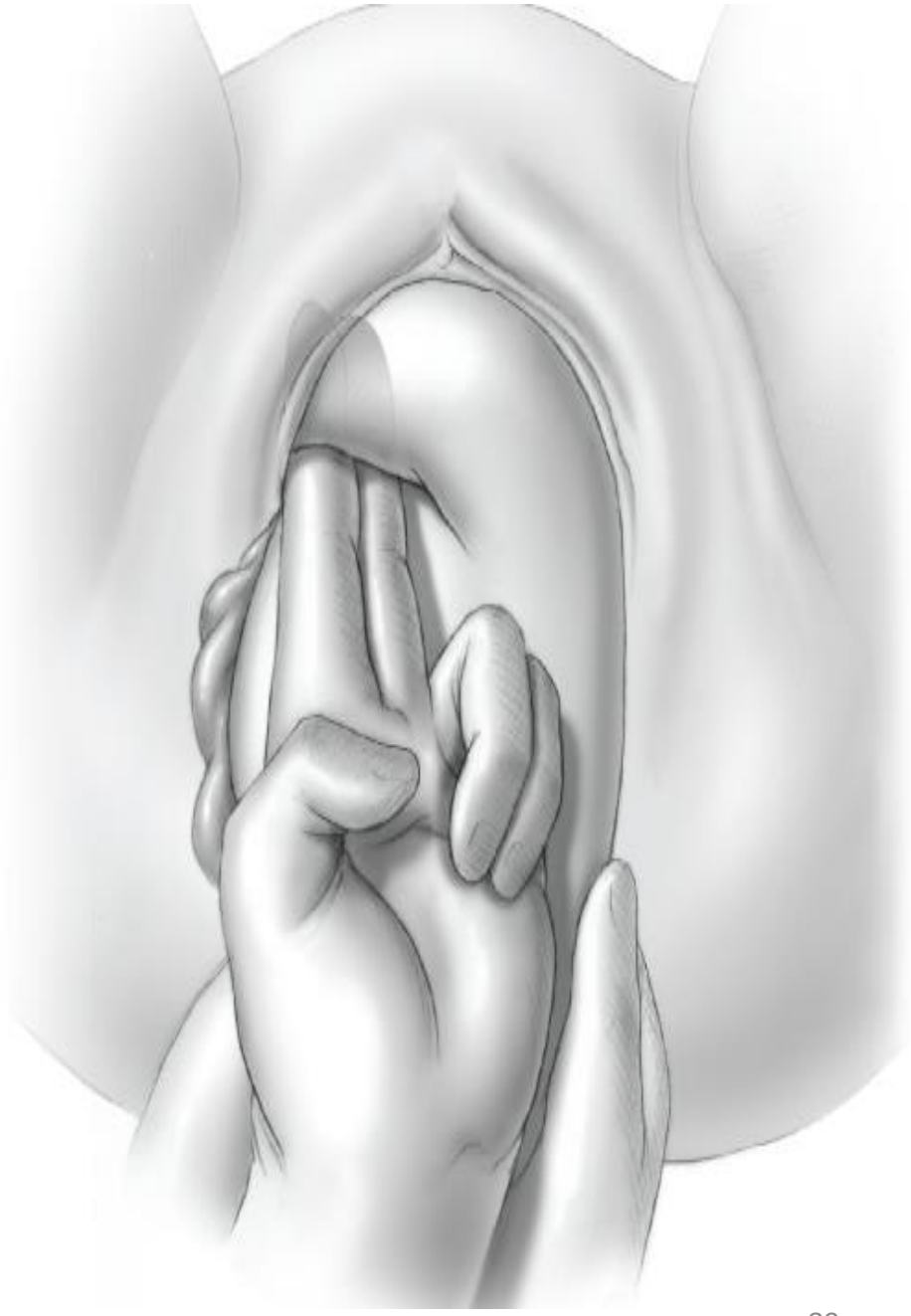
- Following delivery of the legs, the **fetal bony pelvis is grasped with both hands,** using a cloth towel moistened with warm water.
- The fingers should rest on the anterior superior iliac crests and the thumbs on the sacrum, minimizing the chance of fetal abdominal soft tissue injury

Cont…

- **ARMS ARE FELT ON CHEST:**
  - Allow the arms to disengage spontaneously one by one.
  - Only assist if necessary.
  - After spontaneous delivery of the first arm, lift the buttocks towards the mother’s abdomen to enable the second arm to deliver spontaneously.

Cont…

- If the arm does not spontaneously deliver place one or two fingers in the elbow and bend the arm, bringing the hand down over the baby's face.



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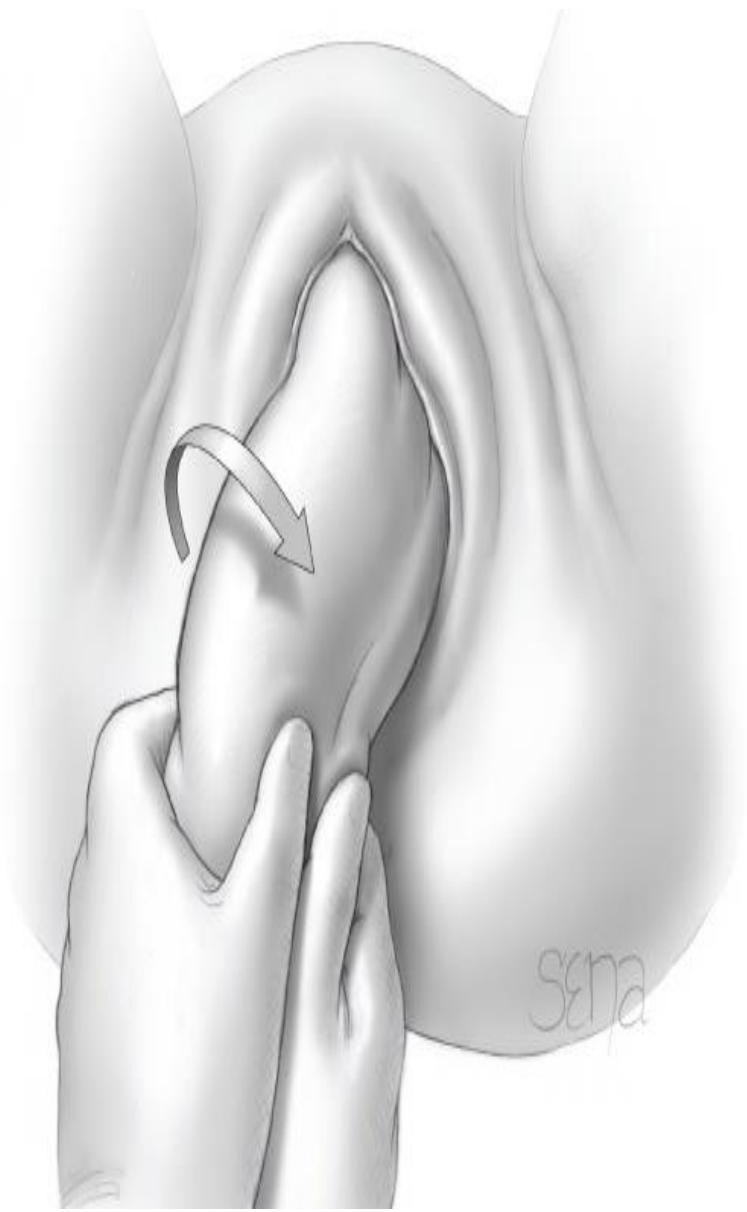
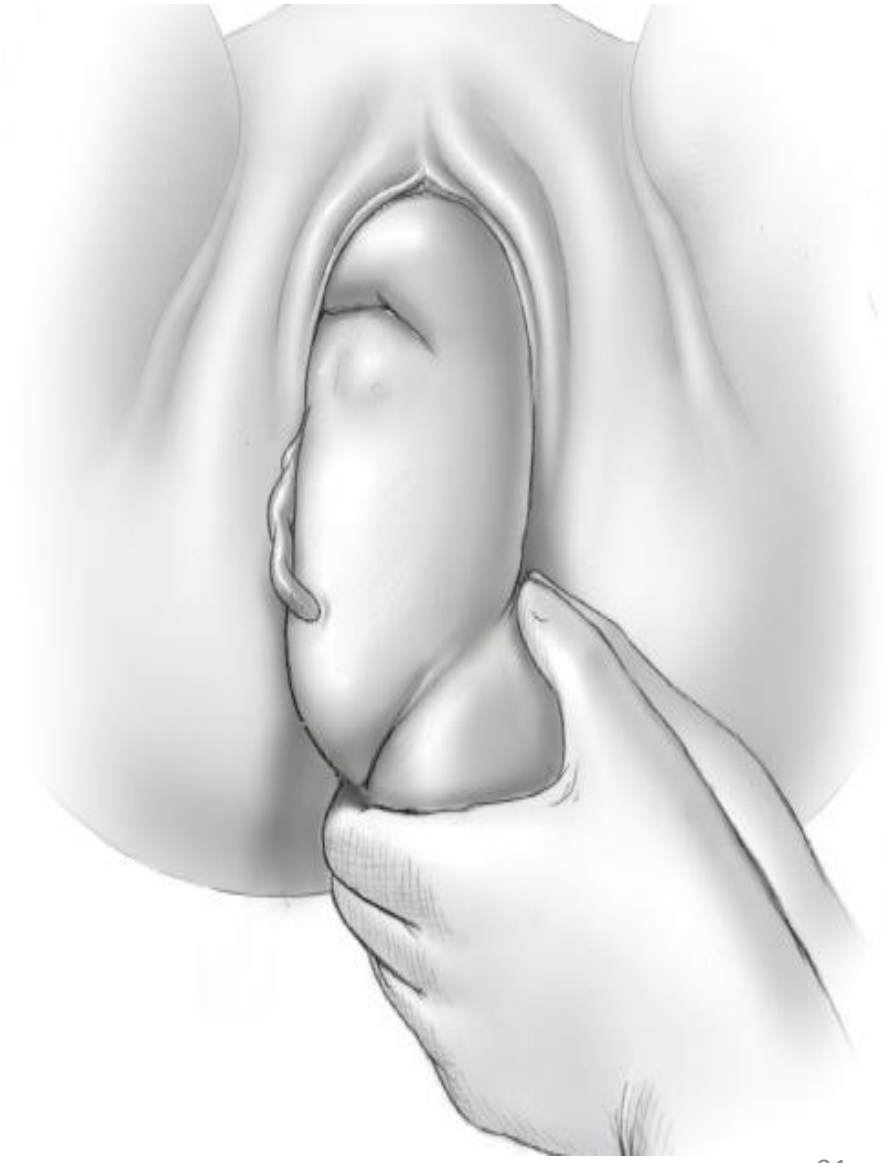
- **Arms are stretched above the head or folded around the neck:** Use the **Lovset's manoeuvre:**
- Gentle downward traction is combined with an initial 90-degree rotation of the fetal pelvis through one arc and then a 180-degree rotation to the other, to effect delivery of the scapulas and arms



- ARMS ARE STRETCHED ABOVE THE HEAD OR FOLDED AROUND THE NECK: Use the Lovset’s manoeuvre



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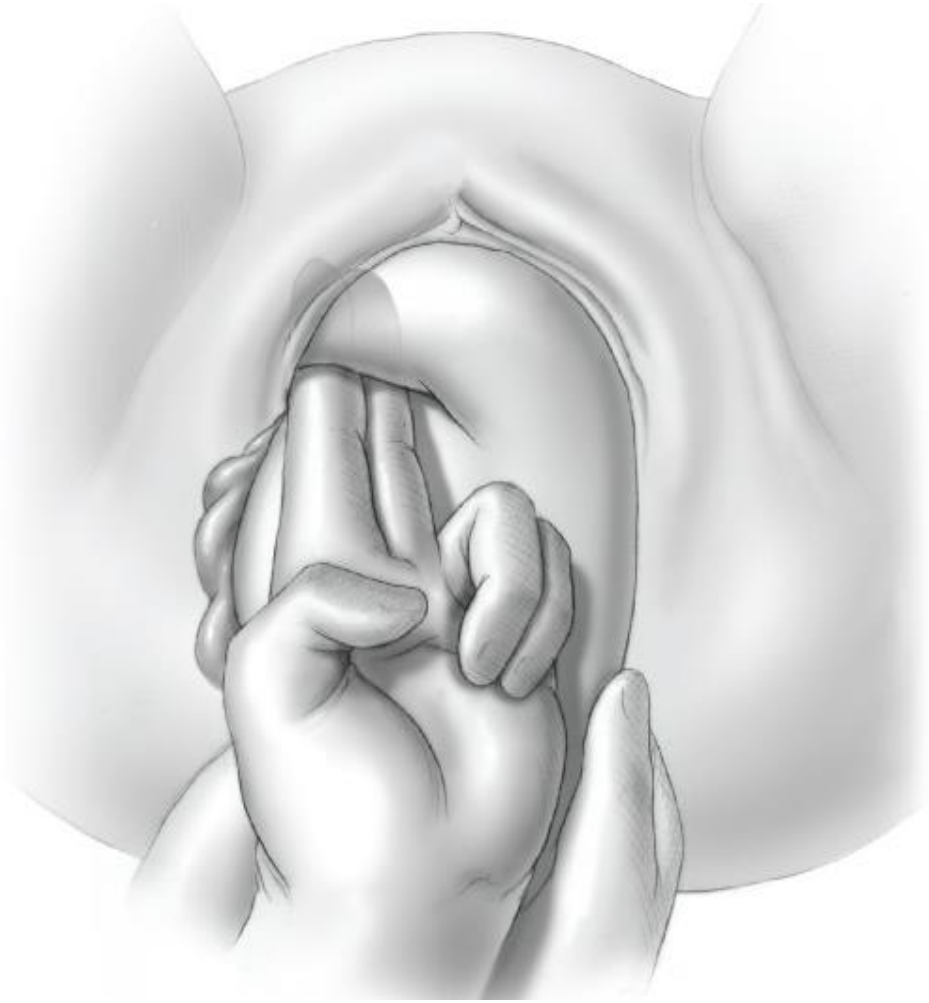

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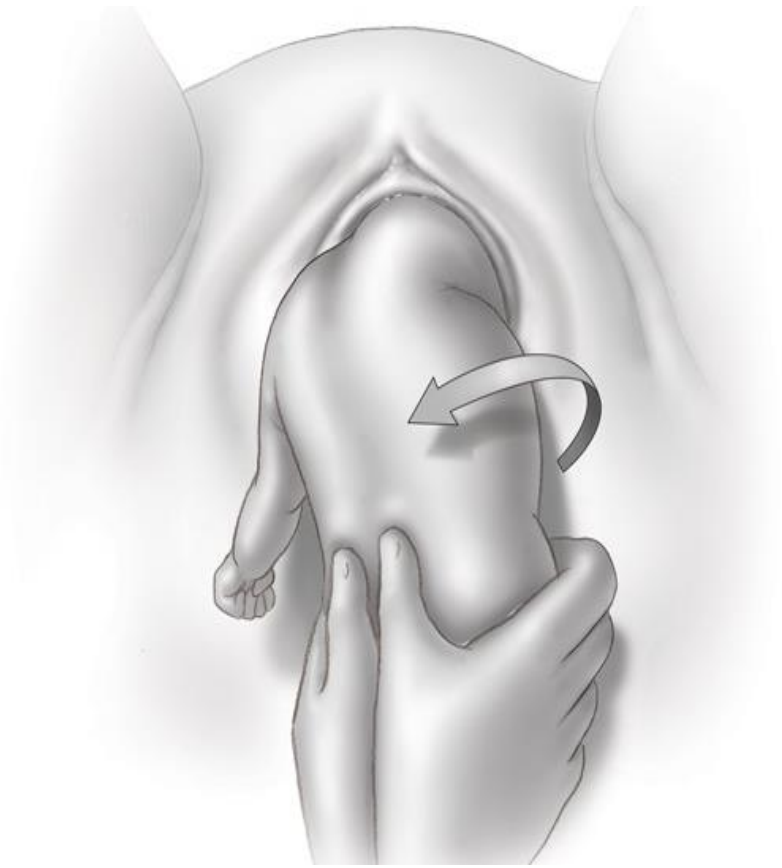
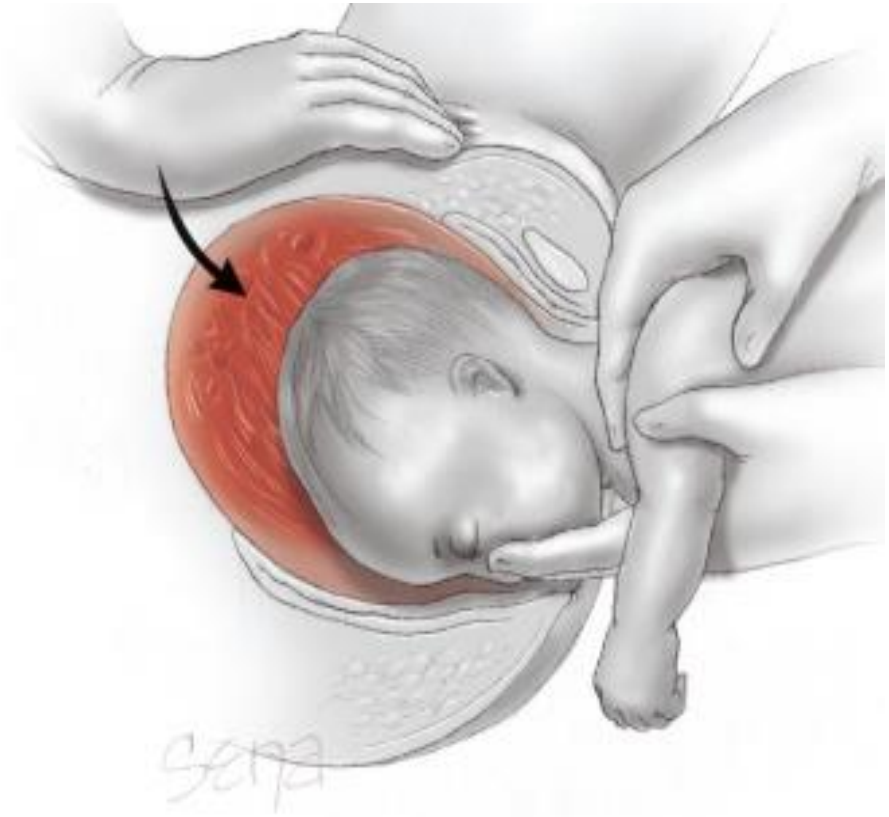


Deliver head by the **Mauriceau Smellie Veit manoeuvre**

- Lay the baby face down with the length of its body over your hand and arm.
- Place the first and third fingers of this hand on the baby's cheekbones and place the second finger in the baby's mouth.
- Use the other hand to grasp the baby's shoulders.



Cont…

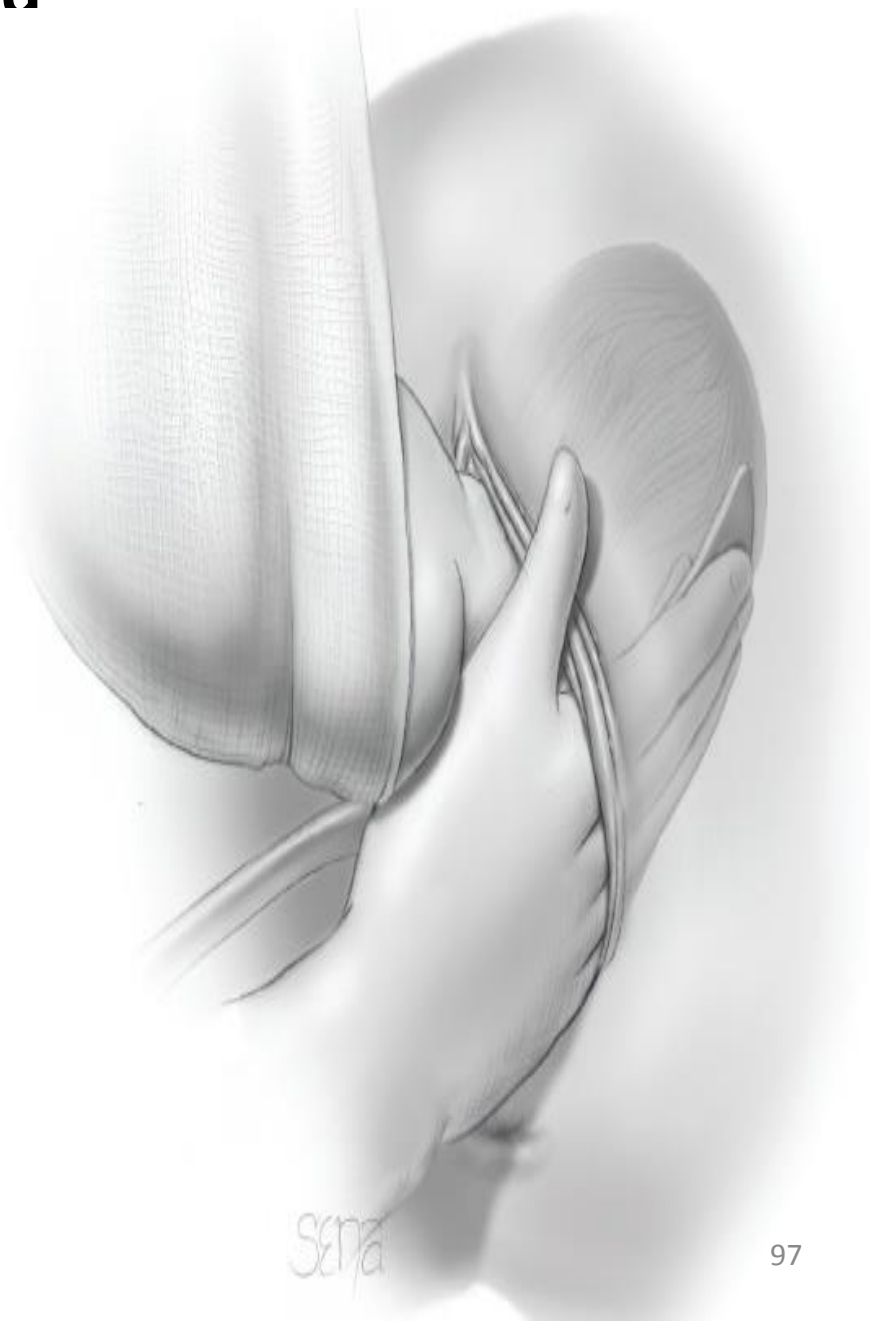
- With two fingers of this hand, gently flex the baby's head towards the chest, while applying downward pressure on the jaw to bring the baby's head down until the hairline is visible.

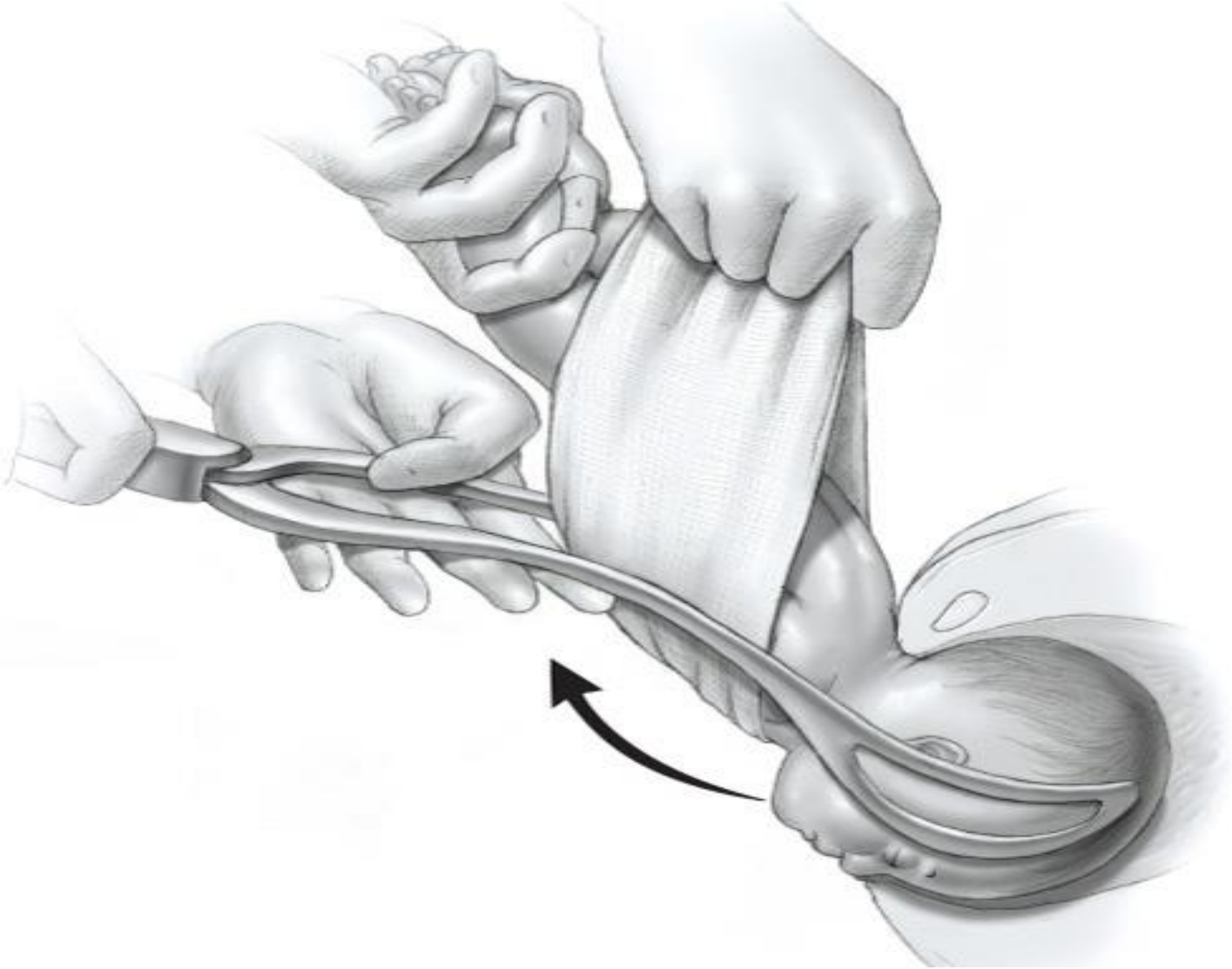
- Pull gently to deliver the head.
  - Note: Ask an assistant to push above the mother's pubic bone as the head delivers.
  - This helps to keep the baby's head flexed.

  - Raise the baby, still astride the arm, until the mouth and nose are free

Forceps to Aftercoming Head

- Specialized forceps can be used to deliver the aftercoming head, ***Piper forceps,*** when the Mauriceau maneuver cannot be accomplished easily.
- The blades of the forceps should not be applied to the aftercoming head until it has been brought into the pelvis by gentle traction, combined with suprapubic pressure, and is engaged.
- Suspension of the body of the fetus in a towel effectively holds the fetus and helps keep the arms out of the way





- **Head entrapment** — Head entrapment is a potentially serious complication of breech delivery.
- The preterm fetus is at high risk because its fetal head-to-abdominal circumference ratio is larger than that of a mature baby; therefore, the premature breech head may be caught in a partially dilated cervix, resulting in acute asphyxia from compression of the umbilical cord.
- This can also happen with a larger baby, especially if the mother begins to push before full cervical dilatation occurs.
- In both premature and mature babies in breech presentation, the skull may not have sufficient time to mold when passing through the bony pelvis.
- This may also play a role in head entrapment and can result in damage to the occipital bone during delivery.

Measure that can be taken for head entrapment

1. **Administer a uterine relaxant**

- If the head is entrapped, the preferred option is to administer a uterine relaxant, either a beta adrenergic agonist (eg, **terbutaline** 0.25 mg subcutaneously or 2.5 to 10 mcg/minute intravenously) or **nitroglycerin** (50 to 200 mcg intravenously).
- Uterine relaxation may allow the head to be delivered.
- If uterine relaxation alone is unsuccessful, all other options pose significant risk to the fetus and mother.

2. Symphysiotomy

- Successful delivery of the obstructed aftercoming-head by symphysiotomy has been reported in observational studies, primarily in Sub-Saharan Africa, where facilities for safe cesarean delivery may not be available and some clinicians have experience with this procedure.
- No randomized trials have been performed.

3. Zavanelli maneuver with cesarean delivery

- If surgical facilities are available, the provider can attempt to replace the body of the baby in the uterus (Zavanelli maneuver), and proceed to cesarean delivery.
- Although a review of 11 cases of obstructed aftercoming head of the breech managed with this maneuver reported successful outcomes, the safety of this approach is unclear.
- It has been used primarily in cephalic presentations with shoulder dystocia, and maternal and fetal injury and fetal death have been reported in some of these cases.

❑ Special issues for the preterm fetus

- ❖ There is some evidence that delivering the very small breech fetus with intact membranes has advantages for the baby.
- ❖ Delay in rupturing the membranes until the infant has passed through the vagina reduces the risk of entrapment of the aftercoming head by an insufficiently dilated cervix, helps to protect the infant from trauma, and impedes cord prolapse.
- ❖ However, an observational study reported increased neonatal mortality following early preterm vaginal breech delivery

❑ Dührssen incisions

- ❖ If the fetus is preterm and the cervix is effaced, but incompletely dilated, the cervical os can be surgically enlarged.
- ❖ One or two fingers are placed under the cervix to protect the fetus and allow the surgeon to palpate the cervicovaginal junction.
- ❖ Bandage scissors are then used to make one to three incisions extending the full length of the cervical lip, typically at 2, 10, and 6 o'clock **(Dührssen incisions)**
- ❖ Extension of the incisions into the lower uterine segment and broad ligament may occur, with potential injury to uterine vessels, ureter, and bladder and severe hemorrhage.

Complications of Breech Delivery

(A) Maternal:

- ❖ Prolonged labour with maternal distress.
- ❖ Obstructed labour with its sequelae may occur as in impacted breech with extended legs.
- ❖ Laceration especially perineal.
- ❖ Postpartum haemorrhage due to prolonged labour and lacerations.
- ❖ Puerperal sepsis

Cont…

(B) Foetal:

- ❖ Intracranial haemorrhage
- ❖ Fracture, dislocation of the cervical spines
- ❖ Asphyxia due to: Cord prolapse or compression by the head.
- ❖ Rupture of an abdominal organ
- ❖ Brachial plexus injury.

Cesarean delivery

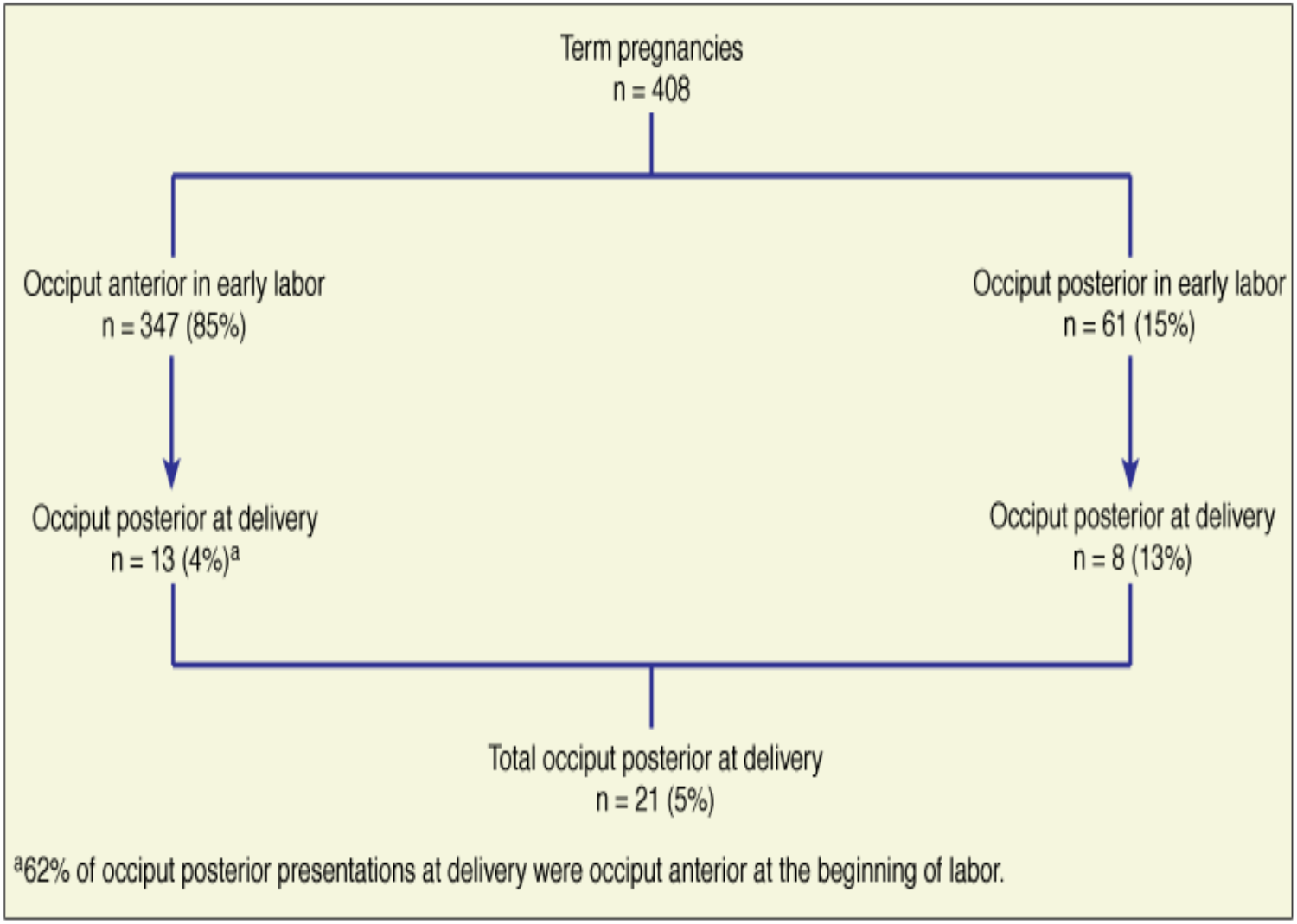
- EFW <1,500 or >4,000 g
- Footling presentation
- Small pelvis
- Hyperextended fetal head
- Absence of expertise
- Nonreassuring fetal heart rate pattern
- Arrest of progress

MALPOSITION

❖Persistent Occiput Posterior Position

❖Definition:

- ❖ It is a vertex presentation with foetal back directed posteriorly.
- ❖Most OPP undergo spontaneous anterior rotation followed by uncomplicated delivery.
- ❖ Although the precise reasons for failure of spontaneous rotation are not known, transverse narrowing of the midpelvis is undoubtedly a contributing factor.



Occiput posterior presentation in early labor compared with presentation at delivery. Sonography was used to determine position of the fetal head in early labor. (From Gardberg and associates, 1998.)

Etiology:

1. The shape of the pelvis: **anthropoid** and **android pelvis** are the most common cause of occipito-posterior due to narrow fore-pelvis.

2. **Maternal kyphosis**: The convexity of the foetal back fits with the concavity of the lumbar kyphosis.

❖ **3. Anterior insertion of the placenta**: the foetus usually faces the placenta (doubtful).

Cont…

4. Other causes of malpostion as

- placenta praevia,
- pelvic tumours,
- pendulous abdomen,
- polyhydramnios,
- multiple pregnancy.

Diagnosis:

ABDOMENAL EXAMINATION

1. The abdomen looks flattened below the umbilicus due to absence of round contour of the foetal back.
2. A groove may be seen below the umbilicus corresponding to the neck.

- **Ultrasond**
- **On Vaginal examination** we can detect

  the direction of the occiput and

  the degree of deflexion

Management of Labour:

- ❖Exclude contracted pelvis
- ❖ Exclude cord presentation or prolapse
- ❖Avoid premature rupture of membranes

❖During second stage labor One of the following will occur:

(I) Long internal rotation 3/8 circle:

occurs in about 90% of cases and delivery is completed as in normal labour.

(II) Direct occipito - posterior (face to pubis):

❖occurs in about 6% of cases.

❖the head can be delivered spontaneously or by aid of outlet forceps.

❖Episiotomy is done to avoid perineal laceration

(III) Deep transverse arrest (1%) and persistent occipito-posterior (3%):

❖*The labour is obstructed and one of the following should be done*

(A)Vacuum extraction (ventose):

❖ Proper application as near as possible to the occiput will promote flexion of the head.

❖Traction will guide the head into the pelvis till it meets the pelvic floor where it will rotate.

(B) Manual rotation and extraction by forceps:

- Under general anaesthesia the following steps are done:

1. Disimpaction: the head is grasped bitemporally and pushed slightly upwards.
2. Flexion of the head
3. Rotation of the occiput anteriorly by the right hand vaginally aided by,

- Rotation of the anterior shoulder abdominally towards the middle line by the left hand or an assistant

Cont…

(C) Rotation and extraction by a forceps:

1. ***Kielland's forceps:***

❖Single application for rotation and extraction of the head as this forceps has a minimal pelvic curve.

2. ***Barton's forceps:***

❖Originally was designed for deep transverse arrest.

(D) Caesarean section:

❖It is indicated in :

1. Failure of the above methods.
2. Other indications for C.S as;
   - ❖ contracted pelvis,
   - ❖ placenta praevia,
   - ❖ prolapsed pulsating cord
   - ❖ before full cervical dilatation,and
   - ❖ elderly primigravida

Cont…

(E) Craniotomy:

if the foetus is dead.

PERSISTENT OCCIPUT TRANSVERSE:

- Definition: persistent OT position as an OT position that is maintained for an hour or more into the second stage of labor.
- more common with the **platypelloid or android** pelvis

2 types

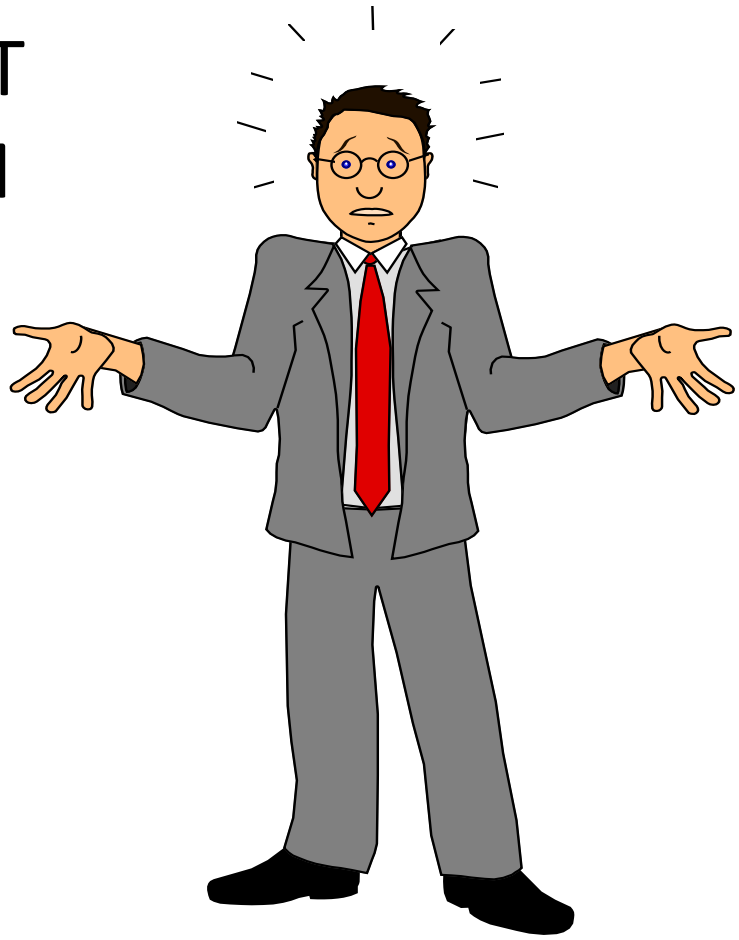
- **High transverse arrest** (arrest above station +2 on a -5 cm to + 5 cm scale)
- **Deep transverse arrest** (arrest below station +2 on a -5 cm to + 5 cm scale)

Reference

- William Obstetrics 25rd edition.
- Gabbe Obstetrics. 7th edition
- Obstetrics and gynecology lecture note.
- Up to Date 2018.

‘’STAY AT HOME,, PREVENT YOU AND YOUR FAMILY FROM COVID 19 INFECTION’’

THANK YOU ?




THANK YOU
FOR YOUR ATTENTION