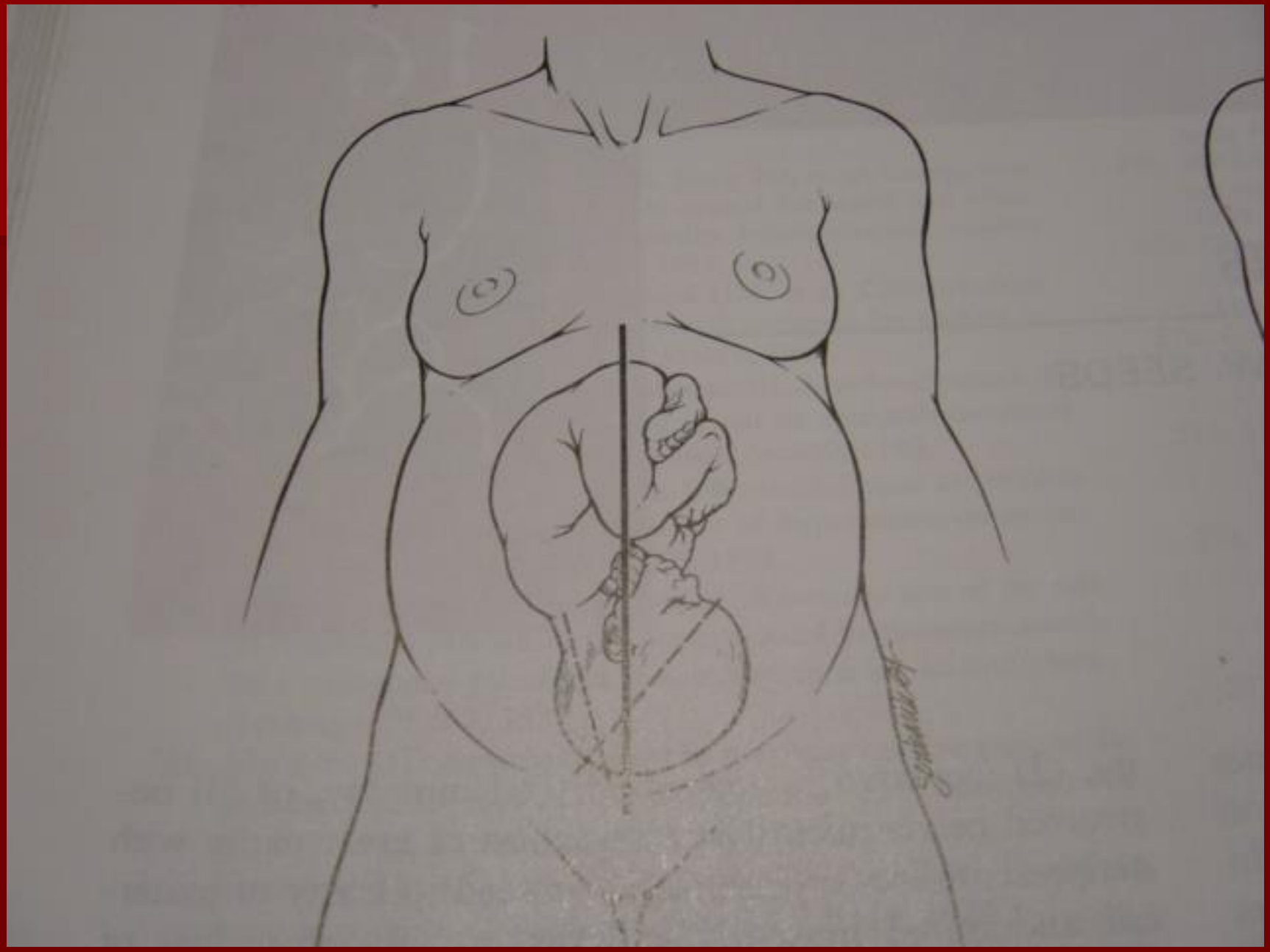
MALPRESENTATION And CORD PROLAPSE

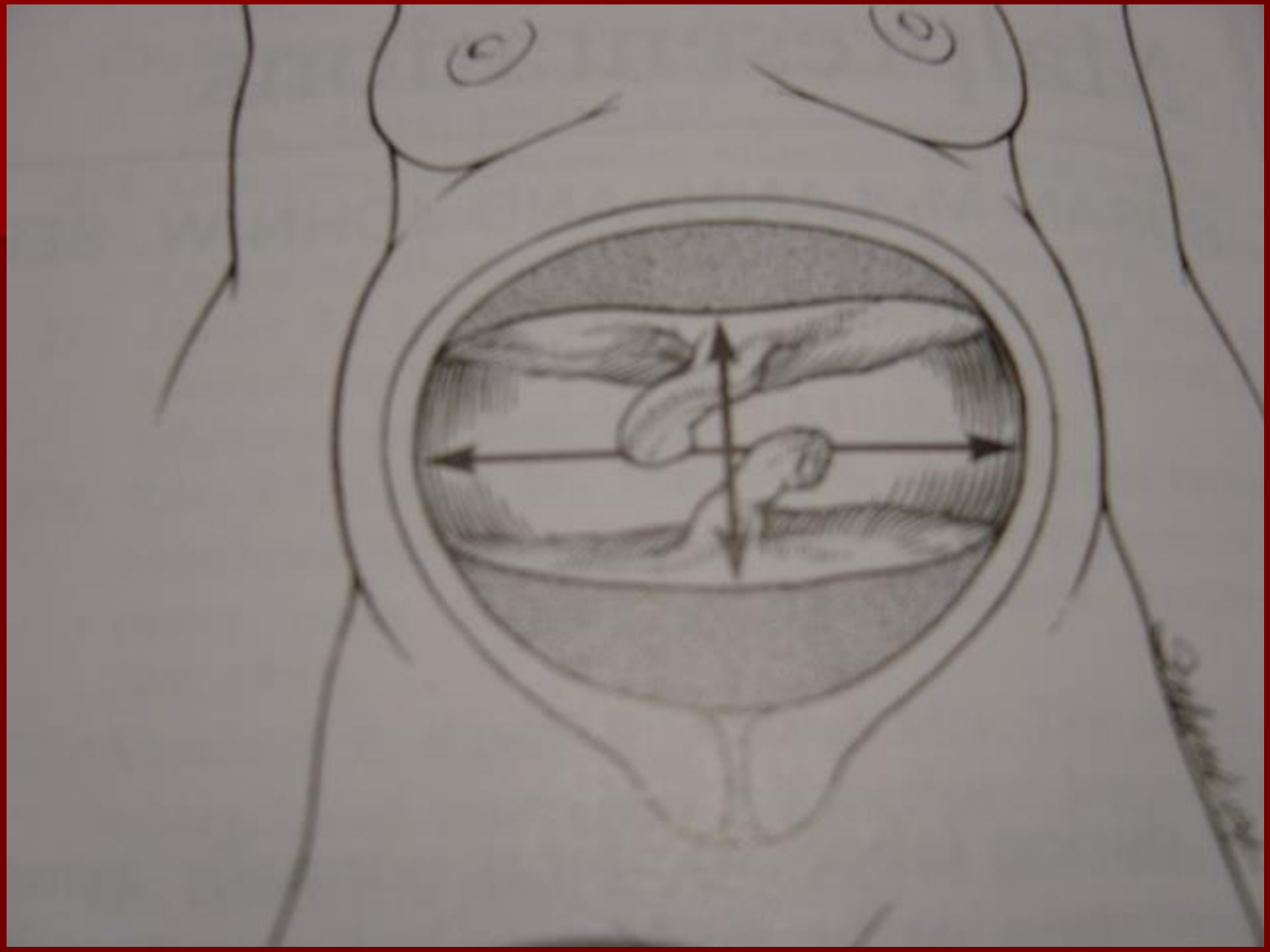
presentation

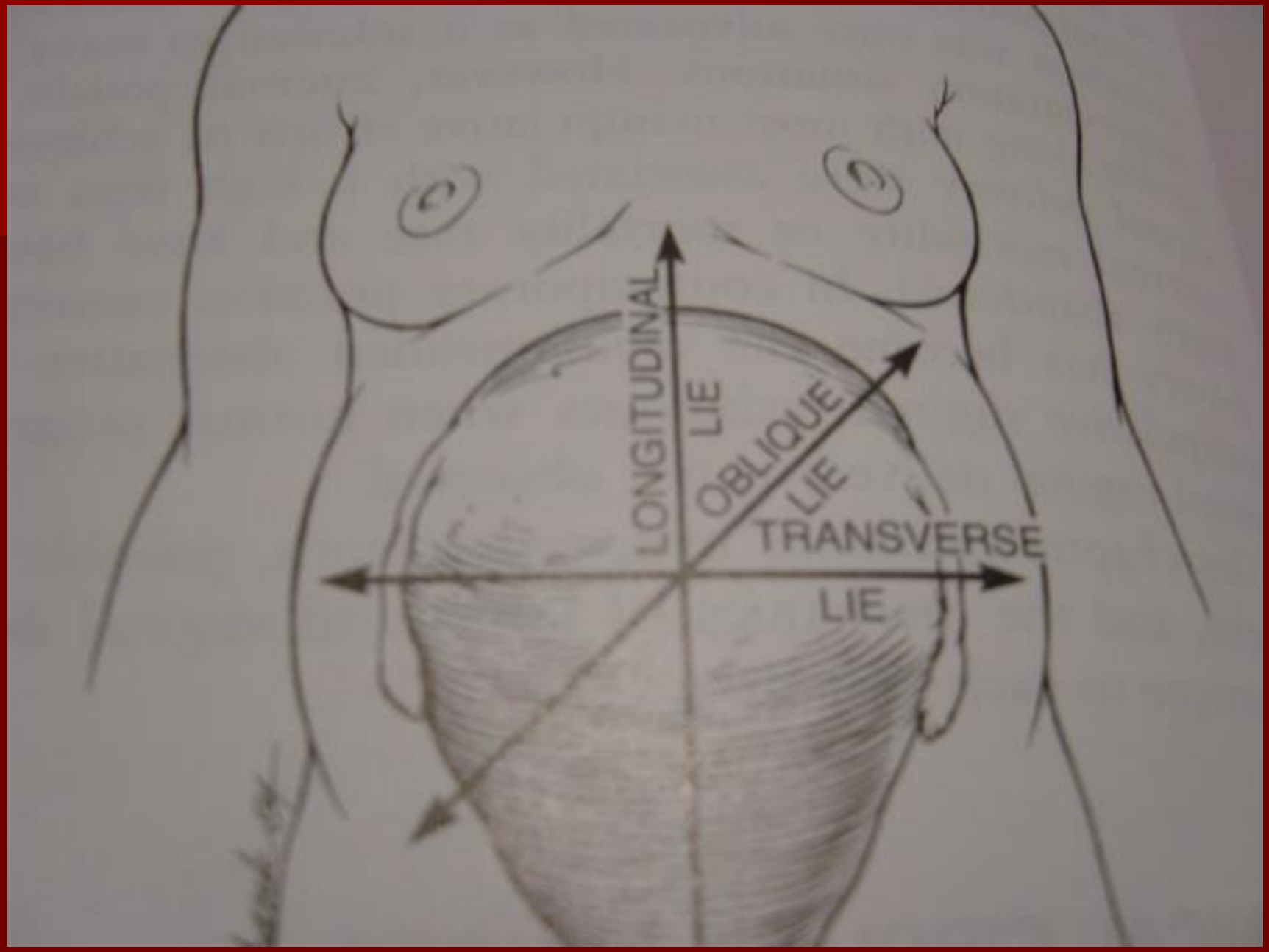
- Presentation of fetus is that part of fetal body that occupies the lower segment of uterus and facing the pelvic brim
- Lie of fetus is a relationship between the longitudinal axis of fetus to the longitudinal axis of the mother
- The fetus usually lie longitudinally in the uterus this called longitudinal lie
- Sometimes the fetus lies transversally or obliquely in uterus this is called transverse and oblique both are abnormal lie

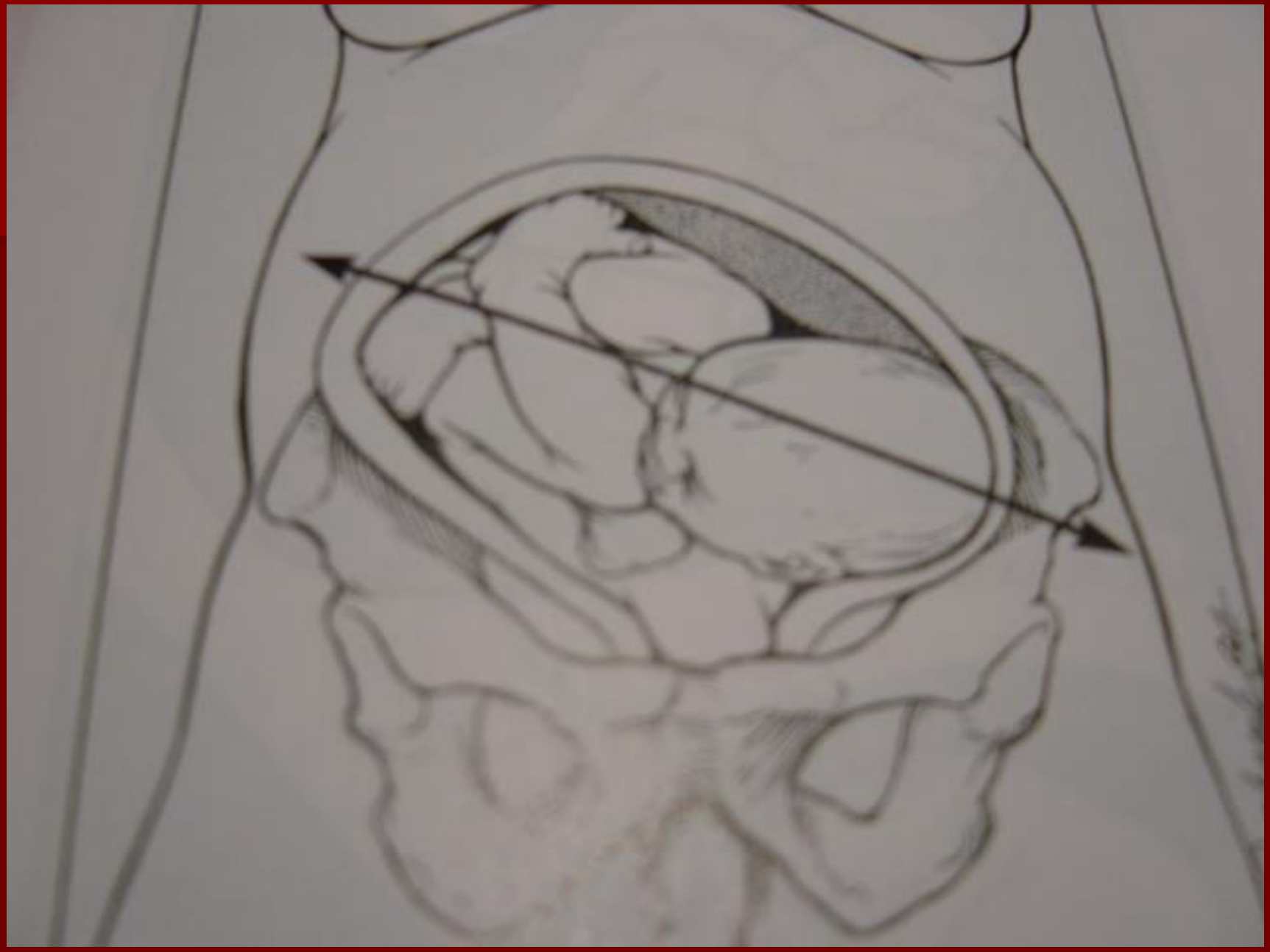
MALPRESENTATION

- Malpresentation is the situation where a fetus within the uterus is in any position that is not cephalic






LONGITUDINAL
LIE
OBLIQUE
LIE
TRANSVERSE
LIE



Etiologic factors in malpresentation

- ***Maternal***

  Great parity

  Pelvic tumors

  Pelvic contracture

  Uterine malformation

- ***Fetal***

  Prematurity

  Multiple gestation

  Hydramnios

  Macrosomia

  Hydrocephaly

  Trisomies

  Anencephaly

  Myotonic dystrophy

  Placenta previa

Breech Presentation

Introduction

Breech presentation occurs in 3-4% of all deliveries.

The occurrence of breech presentation decreases with advancing gestational age. Breech presentation occurs in 25% of births that occur before 28 weeks' gestation, in

7% of births that occur at 32 weeks, and 1-3% of births that occur at term.

Perinatal mortality is increased 2- to 4-fold with breech presentation, regardless of the mode of delivery. Deaths most often are associated with malformations, prematurity, and intrauterine fetal demise

Predisposing factors

- *prematurity, uterine abnormalities (eg, malformations, fibroids), fetal abnormalities (eg, CNS malformations, neck masses, aneuploidy), and multiple gestations.*

  AF (amminiotic fluid)abnormality.Abnormal placentation.

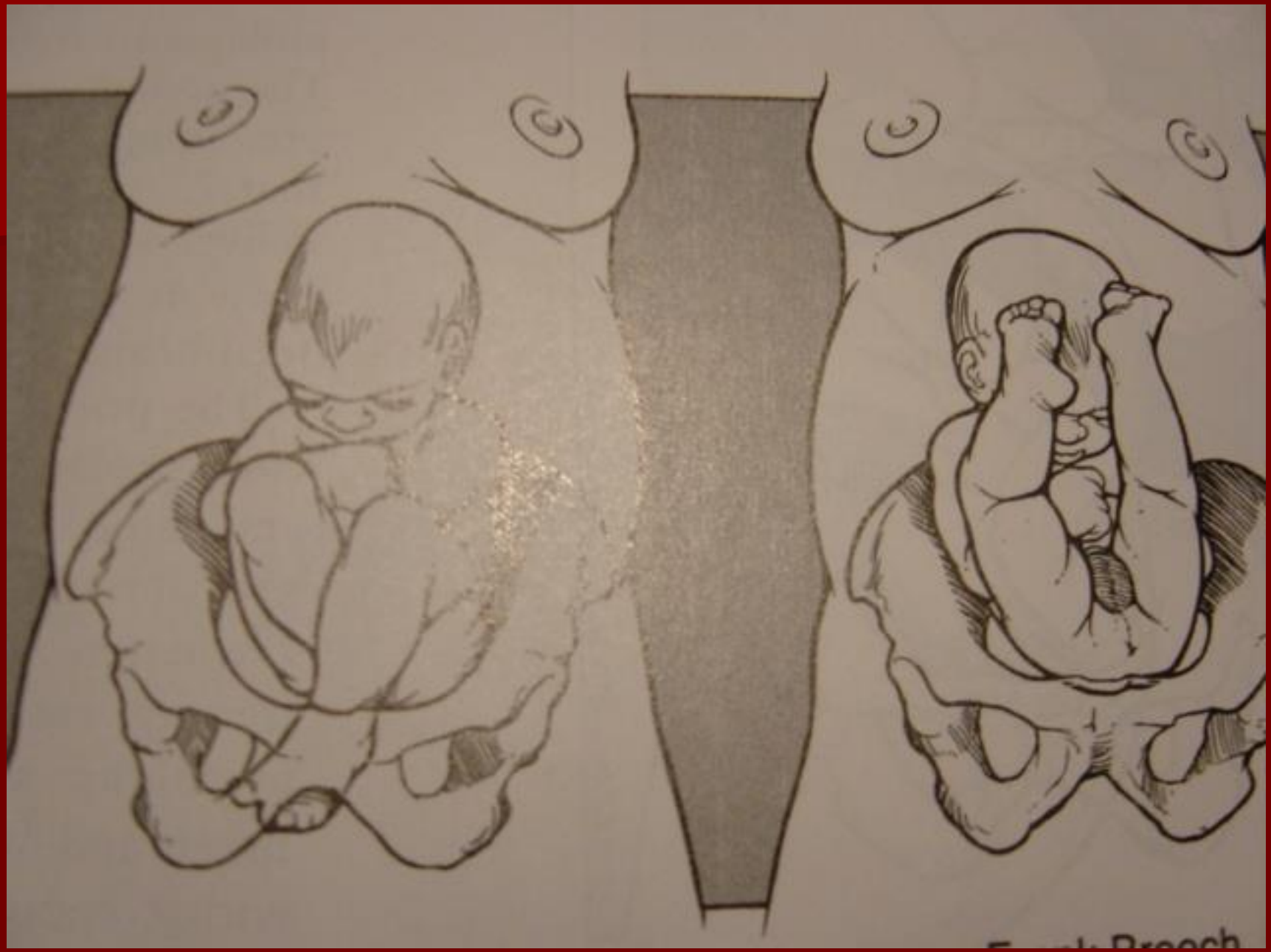
  Contracted pelvis.MG.Pelvic tumor.

Breech presentation

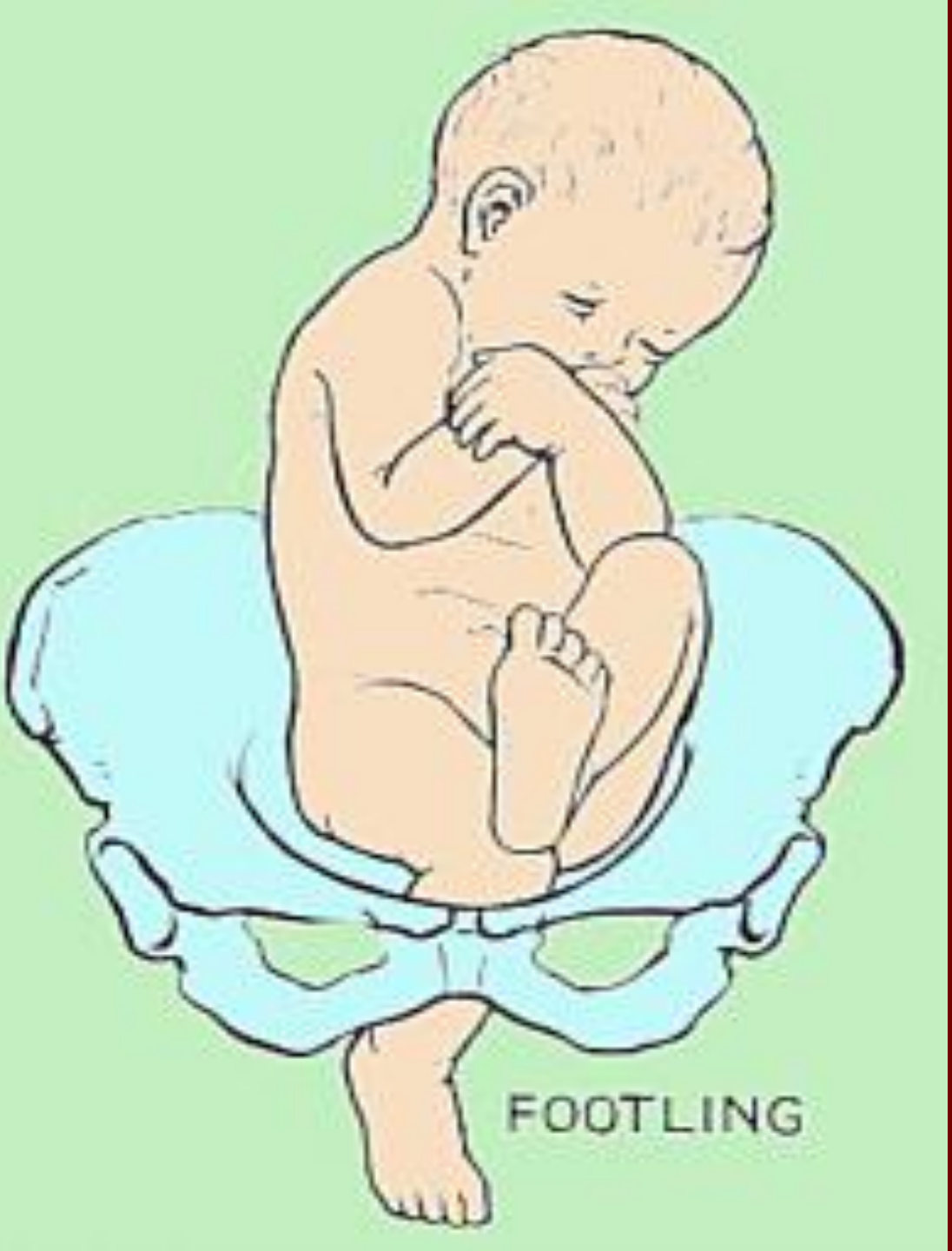
- ***Perinatal mortality is increased 2- to 4-fold with breech presentation, regardless of the mode of delivery.***
- ***Congenital malformation 6%***

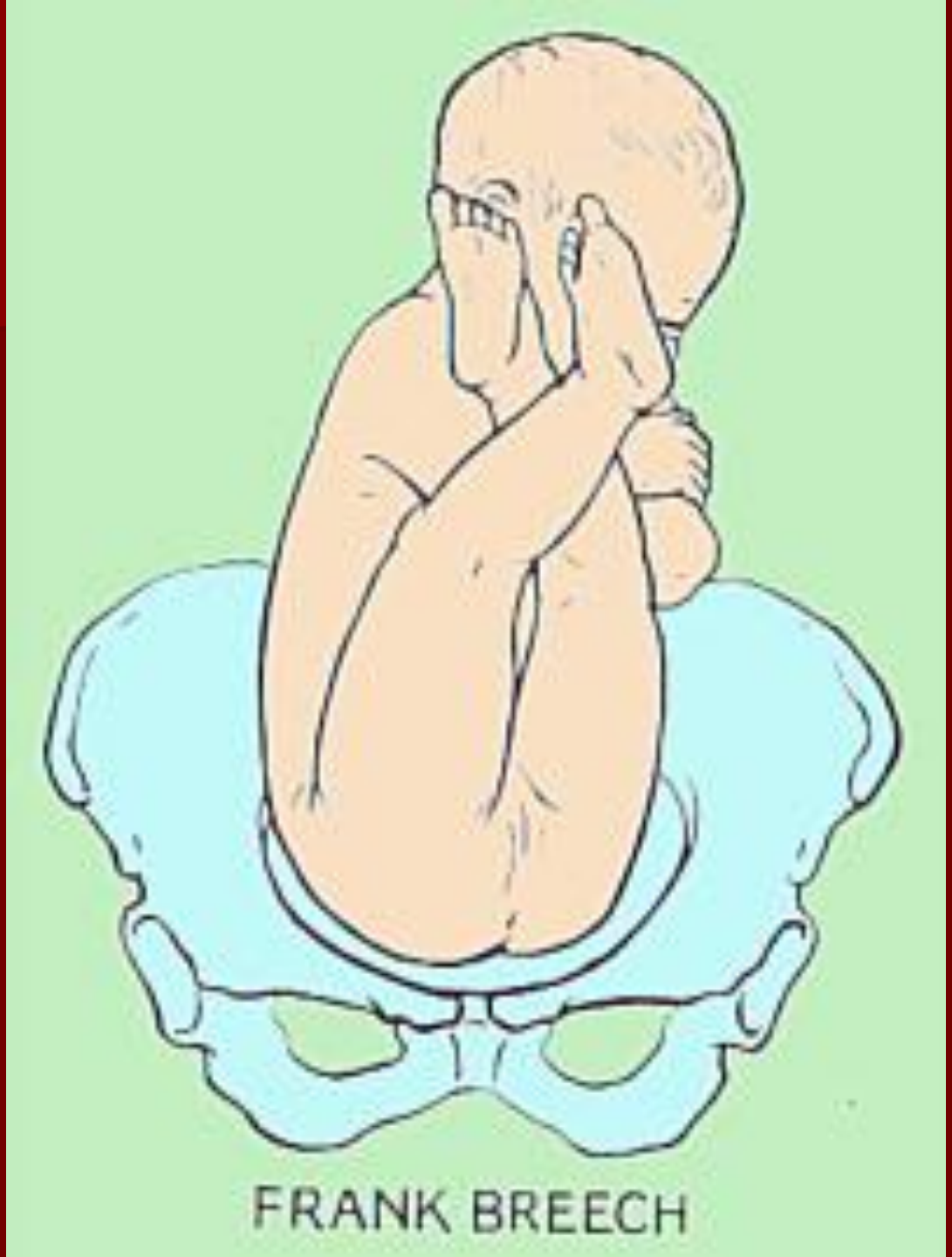
Types of breeches

- Frank breech (50-70%) - Hips flexed, knees extended
- Complete breech (5-10%) - Hips flexed, knees flexed
- Footling or incomplete (10-30%) - One or both hips extended, foot presenting



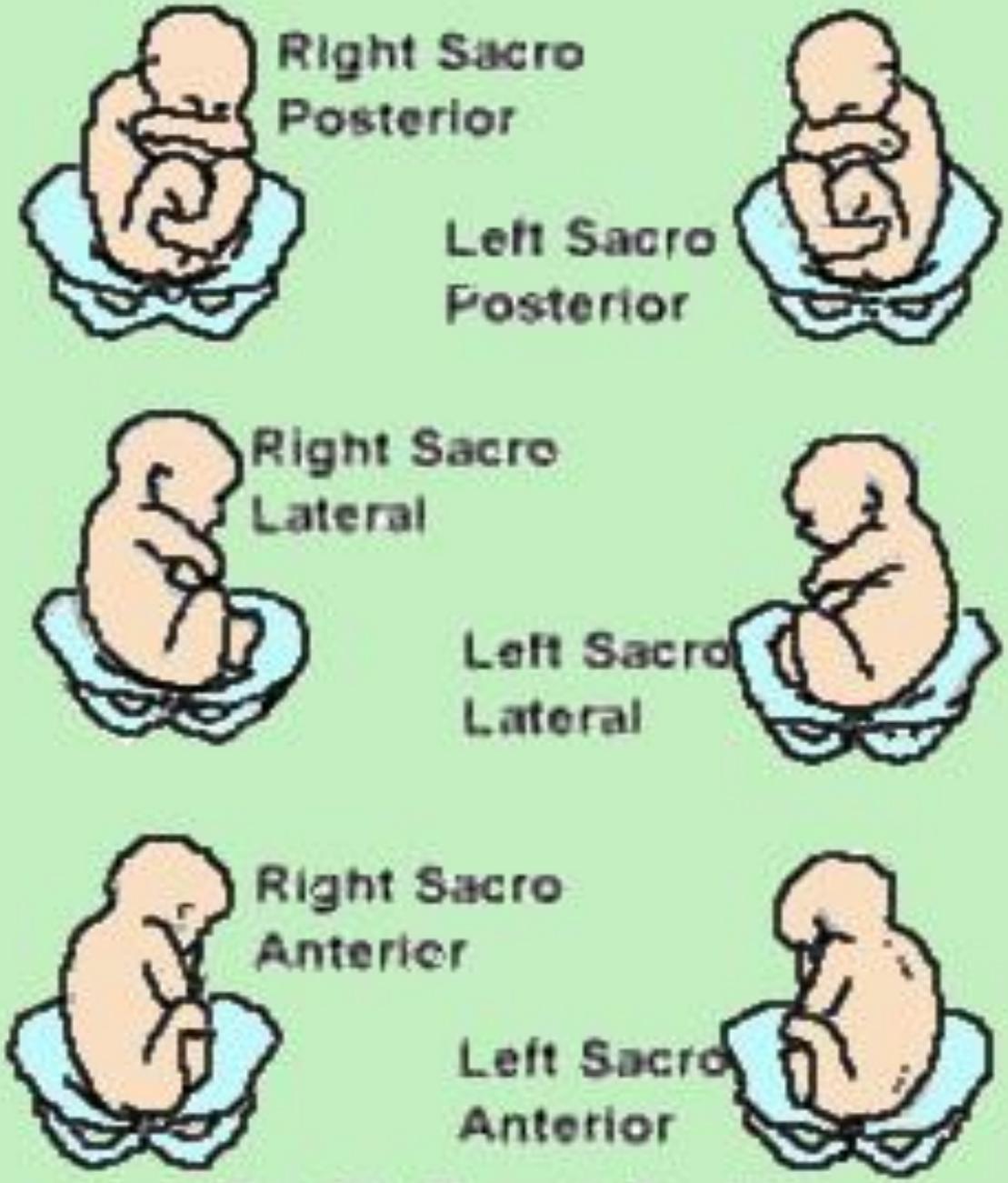

COMPLETE BREECH


FOOTLING

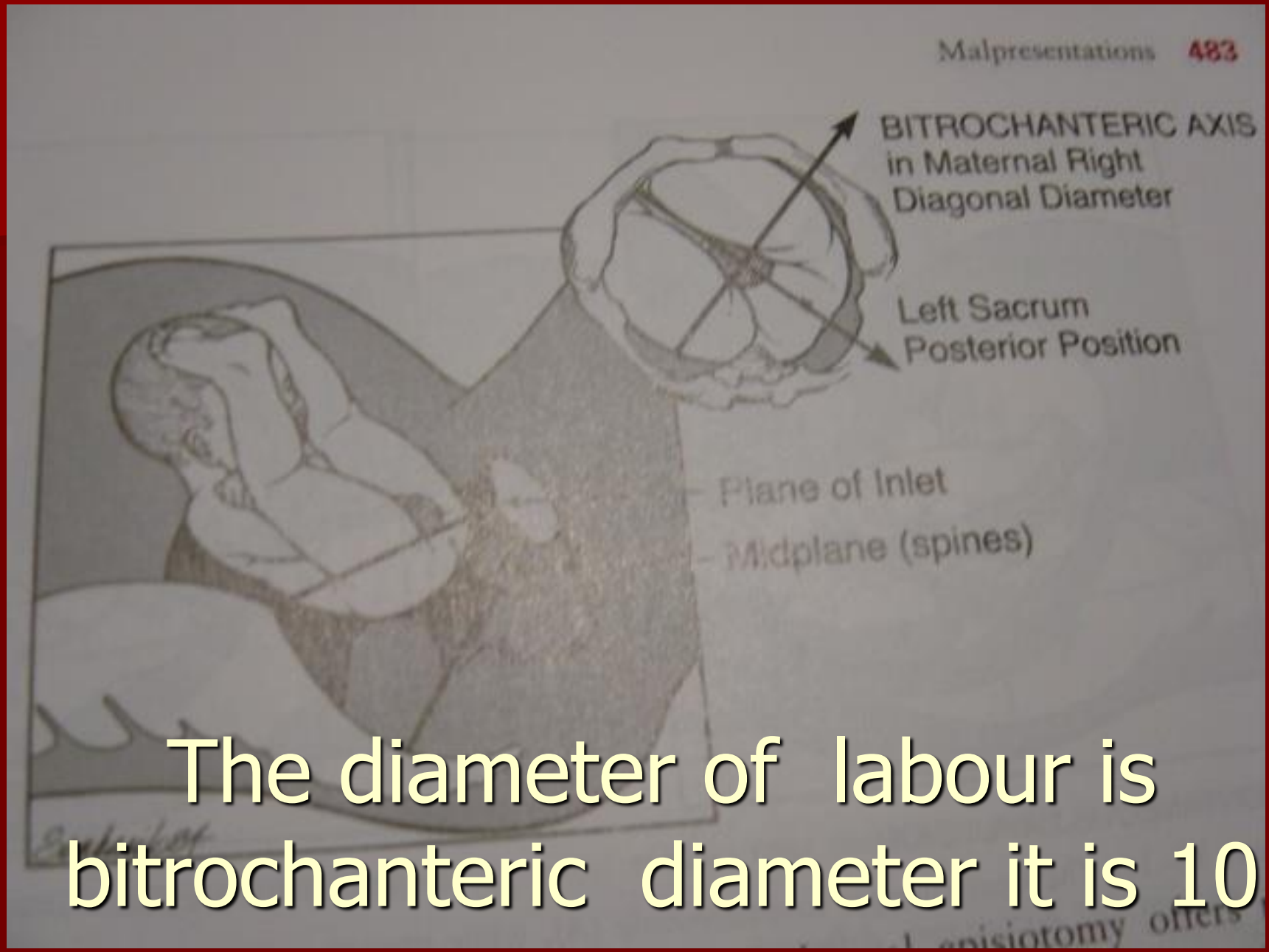

FRANK BREECH

position

- In breech the denominator is sacrum toSIJ which nominator
- Position is a relation between part of fetal presenting part to maternal sacroiliac joint
- SA,SP,LST,RST
- LSP,RSP.LSA,RSA



The Six Breech Positions



The diameter of labour is bitrochanteric diameter it is 10 cm

DIAGNOSIS

- Palpations and ballottement
- Pelvic exam
- X-ray studies
- Ultrasound

MANAGEMENT

- Antepartum
- During labor
- Delivery

Antepartum management External cephalic version ECV

- It is obstetrical maneuvers that applied to the external surface of maternal abdomen to change the presentation of fetus from breech to cephalic .
- It is recommended that ECV should be offer to woman with uncomplicated pregnancy with breech presentation bet 37 _42 weeks of gestatiom
-

ECV

- It has succeful rat of 40_70%
- Reduce the rate of ClS and vaginal delivery of breech delivery
- Reduces the perinatal mortality and morbidity and decreases maternal morbidity from ClS and assisted vaginal delivery and instrumental delivery

The procedure is performed at or after 37 completed weeks by an experienced obstetrician at or near delivery facilities. ECV should be performed with a tocolytic (e.g. nifedipine) as this has been shown to improve the success rate. The woman is laid fl at with a left lateral tilt having ensured that she has emptied her bladder and is comfortable. With ultrasound guidance, the breech is elevated from the pelvis and one hand is used to manipulate this upward in the direction of a forward role, while the other hand applies gentle pressure to fl ex the fetal head and bring it down to the maternal pelvis

The procedure can be mildly uncomfortable for the mother and should last no more than 10 minutes. If the procedure fails, or becomes difflcult, it is abandoned. A fetal heart rate trace must be performed before and after the procedure and it is important to administer anti-D if the woman is Rh negative.

Using external version to turn breech

ECV

- Risk
- Transient fetal bradycardia.
- placental Abruption or cord accident
- fetomaternal hemorrhage
- Premature rupture of membrain.
- INDECATIONS
- All pergnant women with uncomplicated pregnancy with breech presentation.
- Maternal request

ECV

- Relative contraindecation
- Previous lower segment CIS
- Maternal disease like hypertension and diabetes
- Fetal growth restriction or oligohydtramions
- Maternal obesity BMI>20

ECV

- Obsoletes contraindecation
- Multiple pregnancy.
- Antepartum haemorrhage
- Need of CIS regardless breech e.g placenta previa
- Repture membrane
- Any suspected fetal compromise
- Maternal decline.

If ECV fails, or is contraindicated, and Caesarean section is not indicated for other reasons, then women should be counselled regarding elective Caesarean section and planned vaginally delivery. A recent large multicentre trial (the Term Breech Trial) confirmed that planned vaginal delivery of a breech presentation is associated with a 3 per cent increased risk of death or serious morbidity to the baby. Although this trial did not evaluate long-term outcomes for child or mother, it has led to the recommendation that the best method of delivering a term breech singleton is by planned Caesarean section. Despite this, either by choice or as a result of precipitous labour, a small proportion of women with breech presentations will deliver vaginally. It therefore remains important that clinicians and hospitals are prepared for vaginal breech delivery

Vaginal delivery Criteria for VD orCS

- *VD*
  - *Frank*
  - *GA>34w*
  - *FW=2000-3500gr*
  - *Adequate pelvis*
  - *Flexed head*
  - *Nonviable fetus*
  - *No indication*
  - *Good progress labor*
- ***CS***
  - ***FW<1500or> 3500gr***
  - ***Footling***
  - ***Small pelvis***
  - ***Deflexed head***
  - ***Arrest of labor***
  - ***GA24-34w***
  - ***Elderly PG***
  - ***Inf or poor history***
  - ***Fetal distress***

Management of labour:

- Fetal well-being and progress of labour should be carefully monitored.
- An epidural analgesia is not essential but may be advantageous; it can prevent pushing before full dilatation.
- Fetal blood sampling from the buttocks provides an accurate assessment of the acid-base status (when the fetal heart rate trace is suspect).
- There should be an operator experienced in delivering breech babies available in the hospital.

Although much emphasis is placed on adequate case selection prior to labour, a survey of outcome of the undiagnosed breech in labour managed by experienced medical staff showed that safe vaginal delivery can be achieved.

Technique

Delivery of the buttocks

In most circumstances, full dilatation and descent
of the breech will have occurred naturally. When
the buttocks become visible and begin to distend the
perineum, preparations for the delivery are made. The
buttocks will lie in the anteriorposterio rdiameter.
Once the anterior buttock is delivered and the anus is seen over the fourchette (and no sooner than this), an
episiotomy can be cut.

Assisted vaginal breech delivery

- Thick meconium passage is common as the breech is squeezed through the birth canal. This usually is not associated with meconium aspiration because the meconium passes out of the vagina and does not mix with the amniotic fluid.

- Picture 4. Assisted vaginal breech delivery: No downward or outward traction is applied to the fetus until the umbilicus has been reached.

- *Delivery of the legs and lower body*
- If the legs are flexed, they will deliver spontaneously.
- If extended, they may need to be delivered using Pinard's manoeuvre. This entails using a finger to flex the leg at the knee and then extend at the hip,first anteriorly then posteriorly. With contractions and maternal effort, the lower body will be delivered.
- Usually a loop of cord is drawn down to ensure that
- it is not too short.

Assisted vaginal breech delivery: With a towel wrapped around the fetal hips, gentle downward and outward traction is applied in conjunction with maternal expulsive efforts until the scapula is reached. An assistant should be applying gentle fundal pressure to keep the fetal head flexed.

Delivery of the shoulders

The baby will be lying with the shoulders in the transverse diameter of the pelvic mid-cavity. As the anterior shoulder rotates into the anterior–posterior diameter, the spine or the scapula will become visible. At this point, a finger gently placed above the shoulder will help to deliver the arm. As the posterior arm/ shoulder reaches the pelvic fl oor, it too will rotate anteriorly (in the opposite direction). Once the spine becomes visible, delivery of the second arm will follow. This can be imagined as a 'rocking boat' with one side moving upwards and then the other. Loveset's manoeuvre essentially copies these natural movements (Figure 8.5). However, it is unnecessary and meddlesome to do routinely (one risks pulling the shoulders down but leaving the arms higher up, alongside the head).

Assisted vaginal breech delivery: After the scapula is reached, the fetus should be rotated 90° in order to delivery the anterior arm.

Assisted vaginal breech delivery: The anterior arm is followed to the elbow, and the arm is swept out of the vagina.

. Assisted vaginal breech delivery: The fetus is rotated 180°, and the contralateral arm is delivered in a similar manner as the first. The infant is then rotated 90° to the back-up position in preparation for delivery of the head.

Assisted vaginal breech delivery: The fetal head is maintained in a flexed position by using the Mauriceau-Smellie-Veit maneuver, which is performed by placing the index and middle or the fingers in the mouth of the fetus toexert flexion and right hand finger to exert flexion on fetal shoulders.

Delivery of the head

The head is delivered using the Mauriceau–Smellie–Veit manoeuvre: the baby lies on the obstetrician's arm with downward traction being levelled on the head via a finger in the mouth and one on each maxilla

Delivery occurs with fi rst downward and then upward movement (as withinstrumental deliveries). If this manoeuvre proves diffi cult, forceps need to be applied.

An assistant holds the baby's body aloft while the forcepsare applied in the usual manner

. Piper forceps application: Pipers are specialized forceps used only for the aftercoming head of a breech presentation. They are used to keep the head flexed during extraction of the fetal head. An assistant is needed to hold the infant while the operator gets on one knee to apply the forceps from below.

Delivery of the head

- Brun_Marshull by swinging the trunk of the toward thematernal abdomen till the mouth and nose become visible

P Assisted vaginal breech delivery: Low 1-minute Apgar scores are not uncommon after a vaginal breech delivery. A pediatrician should be present for the delivery in the event that neonatal resuscitation is needed.

21–4. Maneuver for delivery of the head. The
f the left hand are inserted into the infant's
r over mandible; the right hand exerts pres-
he head from above. (Modified and repro-
th permission, from Pernoll ML: *Benson and Per-*
dbook of Obstetrics and Gynecology, 10th ed.
Hill, 2001.)

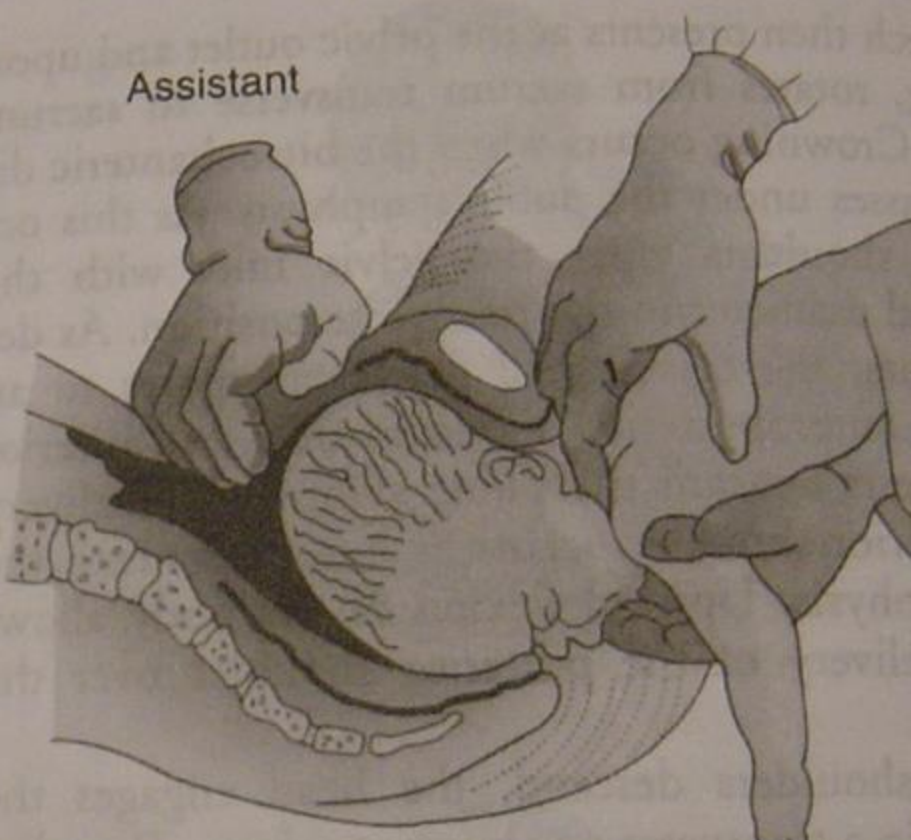


Figure 21–6. Mauriceau-Smellie-Veit mar
delivery of the head. The fingers of the left h
serted into the infant's mouth or over the m
the fingers of the right hand curve over the
An assistant exerts suprapubic pressure on
(Reproduced, with permission, from Pernoll M

Risks

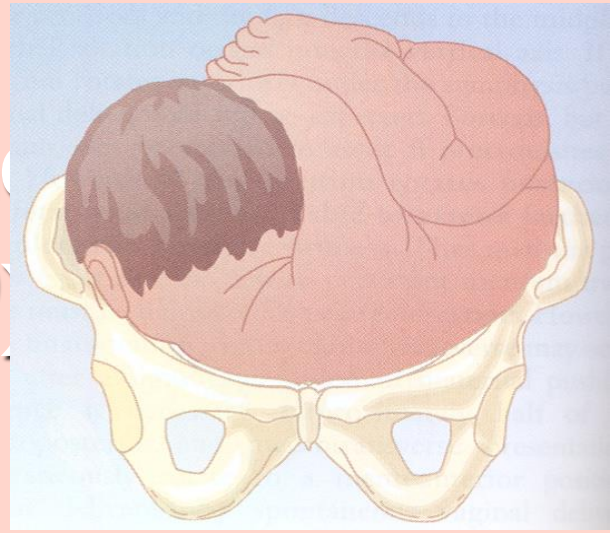
- Lower Apgar scors
- An entrapped head
- Nuchal arms ,
- Cervical spine injury
- Cord prolapse

Shoulder Presentation

Shoulder presentation

- **It is a Transverse lie**

in which the long axis of th
fetus is perpendicular(90^0
to long axis of mother.



- **Shoulder of baby comes in**

–the lower segment of uterus(**0.5%**)

4 position in Shoulder presentation

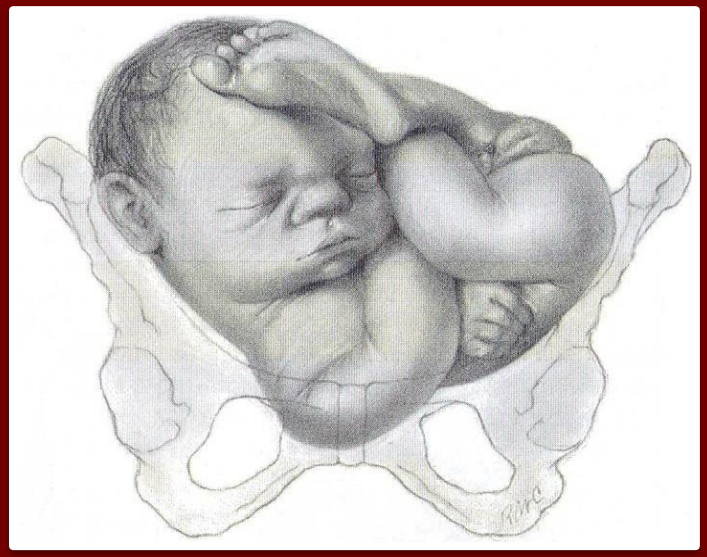
- **Acrimon- anterior(60%)**
  - Left
  - Right
- **Acrimo- posterior(40%)**
  - Right
  - Left

✓ Acrimo anterior position is more common as the concavity of front of fetus fix in convexity of maternal spine

✓ Placenta is posterior in 60% of cases

Lt Acrimoanterior

Rt Acrimoanterior

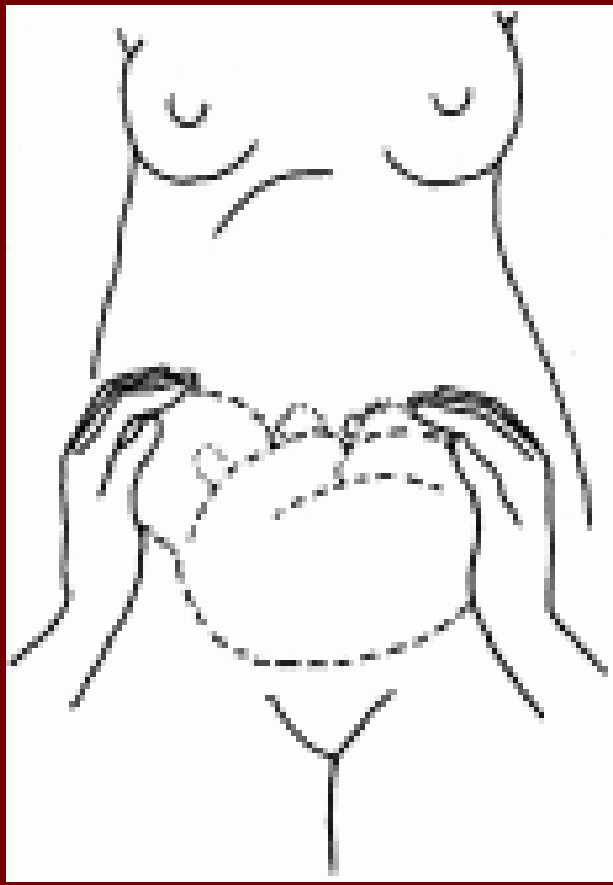


Rt Acrimoposterior

Lt Acrimoposterior

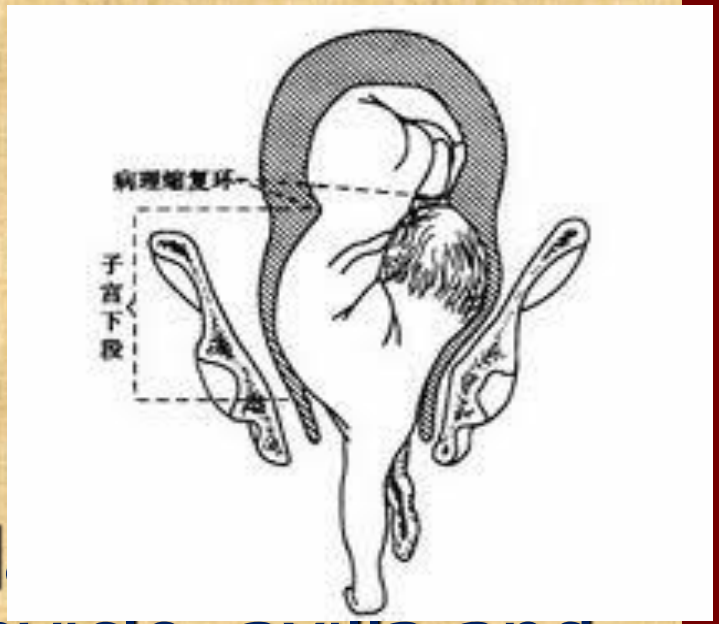
Diagnosis

- Abdominal examination,
  - the head is usually felt in one iliac fossa or in the flank.
  - The breech in the other iliac fossa but at a higher level
  - Fundal level just above umbilicus
  - FH sound heard below the umbilicus



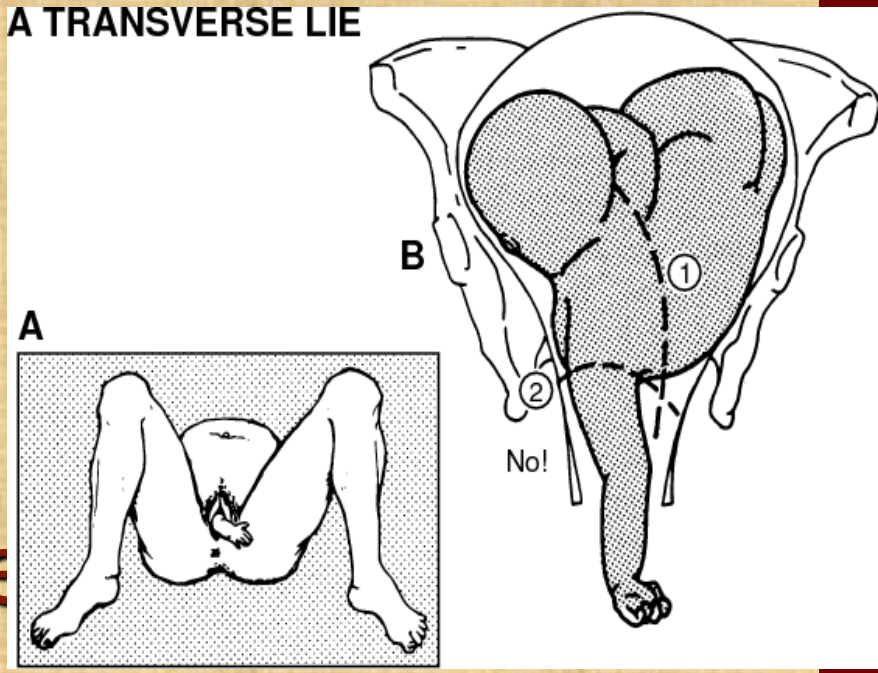
On vaginal examination

- Early in labor
  - the cervix is superior
  - lower uterine segment is imperfectly packed
- Late in labor
  - The cervix is sufficiently dil
    feel: scapula, acromion, clavicle, axilla and ribs
- Confirm position: If the arm is prolapsed and supinated the dorsum points to the back and the thumb points to the head.



Neglected shoulder

- Prolonged labor
- Membrane ruptured
- liquor drained
- Arm may be prolapse
- Fetus dead or dying
- Lower segment overstretched
- Signs and symptoms of obstructed labor



Management

During pregnancy

- **A-External cephalic version**
- Can be tried up to full term,
- Even early in labour before ROM

- * Laxity of the abdominal & uterine walls makes the procedure easier than in breech
- * The fetus will be rotated only 90 degrees.

- **B. If fails, do external podalic version. head.**

During labor

- External cephalic version (ECV) is tried with intact membranes :
- **- If succeeded:**

  Rupture of membranes and application of abdominal binder.
- **- If failed:**

  C.S. is the safest for the mother & fetus.

- If the membranes are ruptured before full cervical dilatations do **C.S.**

Management

- In modern practice, persistent transverse lie in labor is delivered by caesarean section whether the fetus is alive or dead

SHOULDER DYSTOCIA (Sh.D)

Shoulder dystocia will still the obstetric nightmare

Definition:

Shoulder dystocia (Sh. D) is the inability to deliver the fetal shoulders after delivery of the head, without the aid of specific maneuvers (ie. other than gentle downward traction on the head) .

Definition

Objective definition :

Mean head-to-body delivery time > 60 seconds

PATHOPHYSIOLOGY

Shoulder dystocia results from a size discrepancy between the fetal shoulders and the pelvic inlet when:

1. The bisacromial diameter is large relative to the biparietal diameter
2. Pelvic prim is flat rather than gynecoid

SHOULDER DYSTOCIA

- 0.15-1.7%,
- Risk factor;macrosomia,diabetes,history of SD,prolonged2th stage of labor,maternal obesity,multiparity,postterm.
- 50%SDnorisk factor

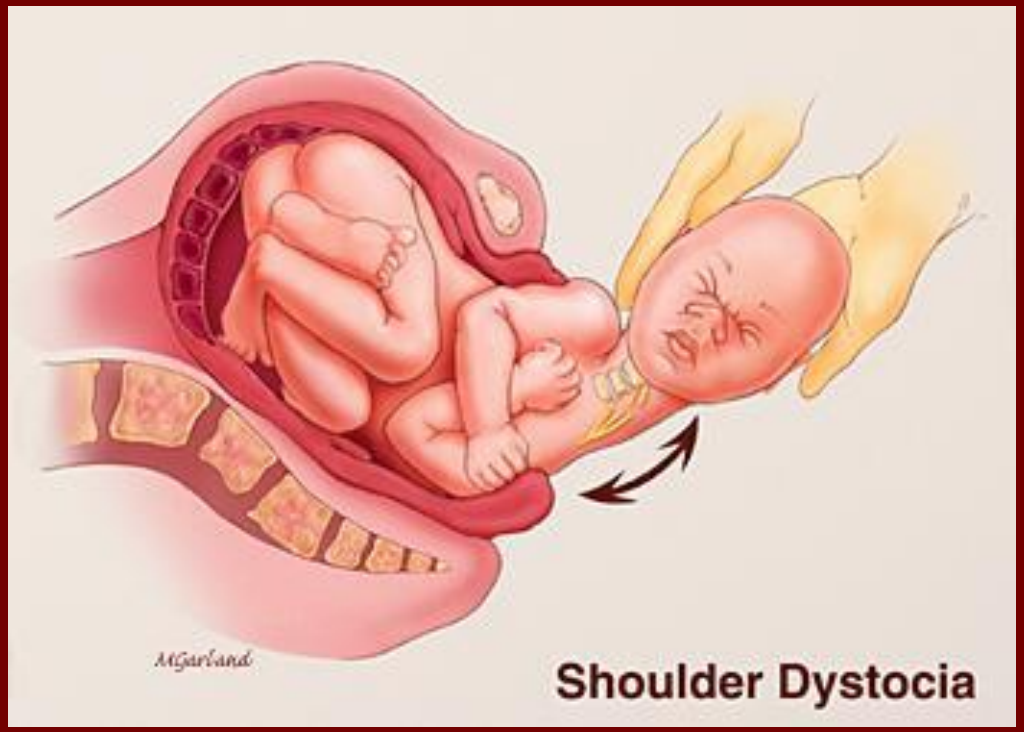
Complications of Sh D

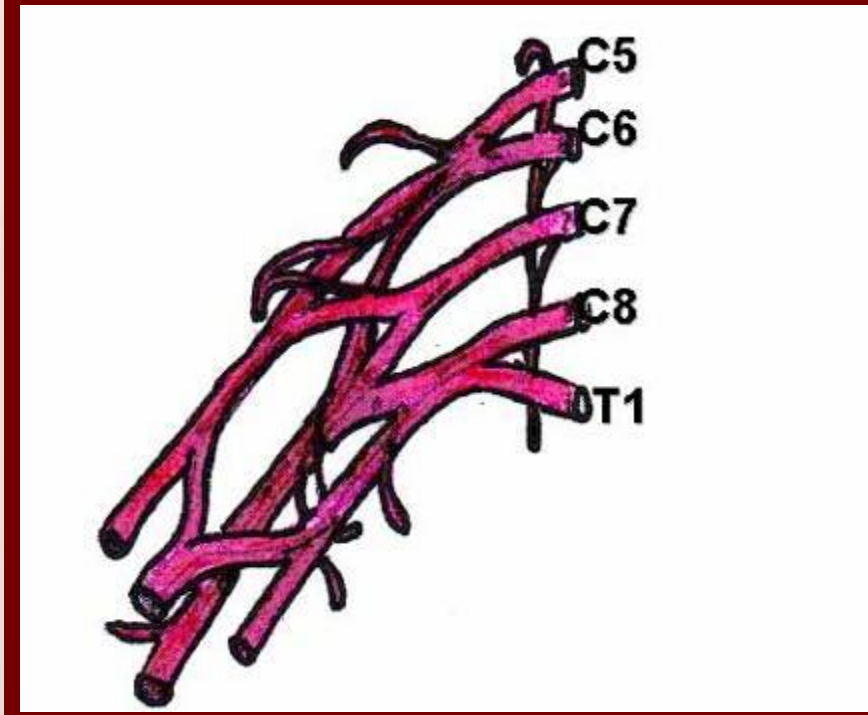
1. Maternal
2. Fetal

Maternal Complications (25%)

1. Postpartum hemorrhage 11%
2. Vaginal laceration 19%
3. Perineal tears 2nd&3rd 4%
4. Cervical laceration 2%

Fetal Complications of Sh D





Fetal Complications of Sh D

- Brachial plexus injuries,injury at level of C5,C6, C7 ,C8 T1 DUE TO over downward traction on the fetal head.(Erb spulsy)
- Fractures of the humerus, and
- Fractures of the clavicle

are the most commonly reported injuries associated with shoulder dystocia

Fetal Complications of Sh D

Traction combined with fundal pressure has been associated with a high rate of brachial plexus injuries and fractures

Fetal Complications of Sh D

Fewer than 10% of deliveries complicated by shoulder dystocia will result in ***a persistent*** brachial plexus injury.

Fetal Complications

Head –shoulder interval > 7min.

→ Brain injury

(sensitivity & specificity :70 %)

- With hypoxic fetus it is much shorter

Can shoulder dystocia be predicted?

RISK FACTORS FOR SHOULDER DYSTOCIA

PRECONCEPTIONAL:

1. Maternal birth weight
2. Prior shoulder dystocia 12%
3. Prior macrosomia
4. Pre-existing diabetes
5. Obesity
6. Multiparity
7. Prior gestational diabetes
8. Advanced maternal age

RISK FACTORS FOR SHOULDER DYSTOCIA

Antenatal:

- Excessive maternal weight gain
- Macrosomia
- G. diabetes
- Short stature
- Post term

RISK FACTORS FOR SHOULDER DYSTOCIA

Intrapartum:

1. Protracted or arrested active phase
2. Protracted or failure of descent of head turtle sign
3. Need for midpelvic assisted delivery

RISK FACTORS FOR SHOULDER DYSTOCIA

Fetal Macrosomia

MANAGEMENT

(Within5- 7 minutes)

Management

1-Suprapubic pressure
2-McRobert manoeuver
3- Woods corkscrew .
4-Rubens manoeuver
5-Delivery of P. shoulder
6-Zavanelli
7-All fours
8-Cleidotomy
9-symphysiotomy

ACOG Issues Guidelines Recommendation 1991

1-Call for help: assistants, anesthesiologist

2-Initial gentle attempt of traction.

3-Generous episiotomy.

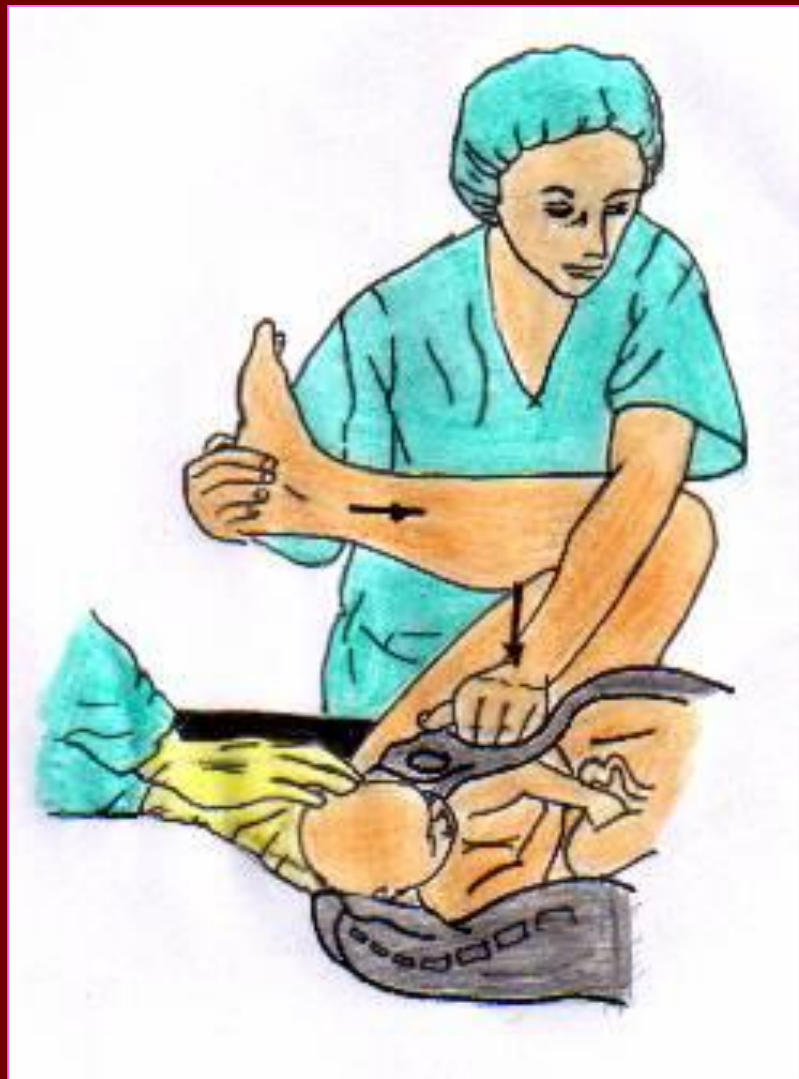
4-Suprapubic pressure.

ACOG Issues Guidelines Recommendation 1991

5-The Mc Roberts manoeuvre

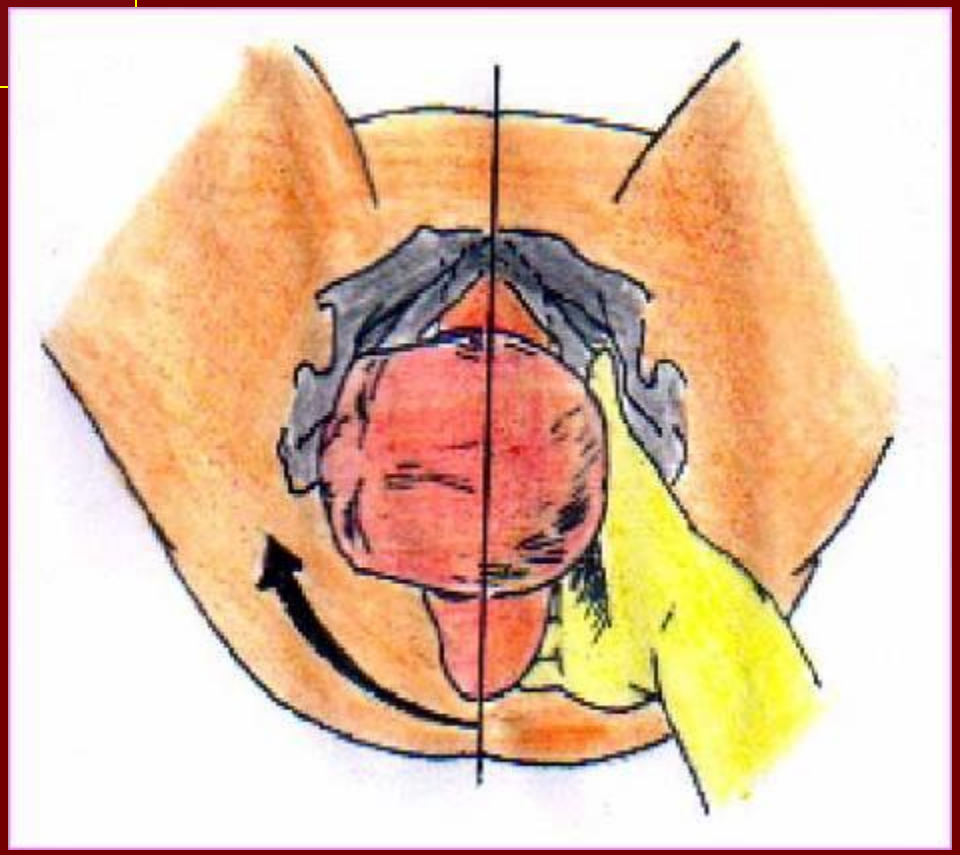
(Exaggerated hyper flexion of the thighs upon the abdomen.)

& Suprapubic pressure in the direction of the Foetal face



ACOG Issues Guidelines Recommendation 1991

If Mc Roberts failed:

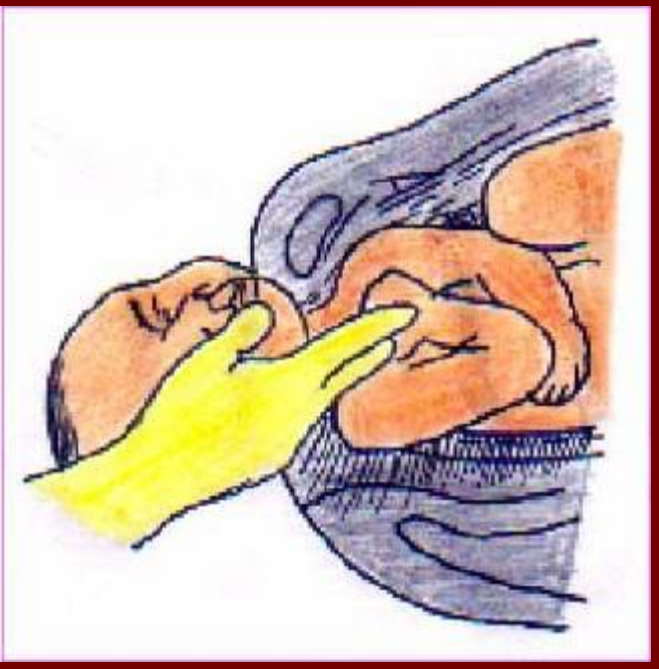


6-Woods manoeuvre :

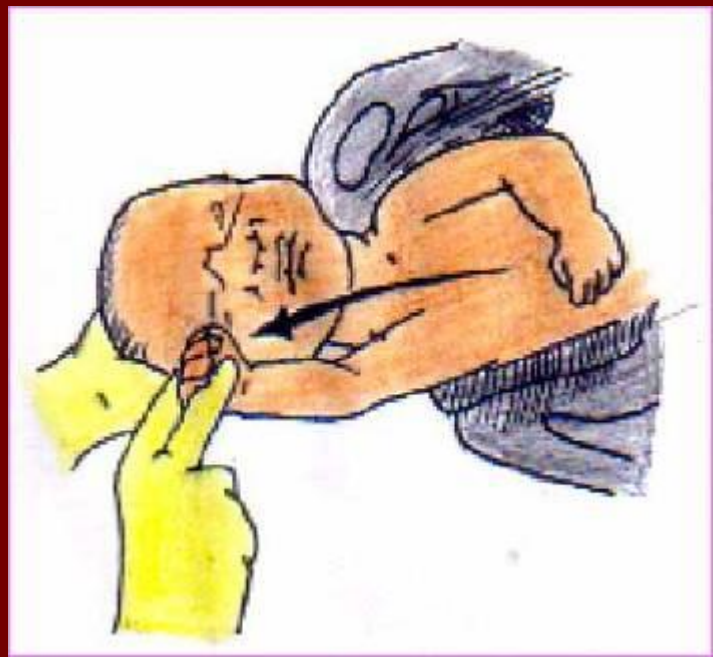
- The hand is placed behind the posterior shoulder of the fetus.
- The shoulder is rotated progressively 180 d in a corkscrew manner so that the impacted anterior shoulder is released.

7-Delivery of the posterior arm :

By inserting a hand into the posterior vagina and ventrally rotating the arm at the shoulder



delivery over the perineum



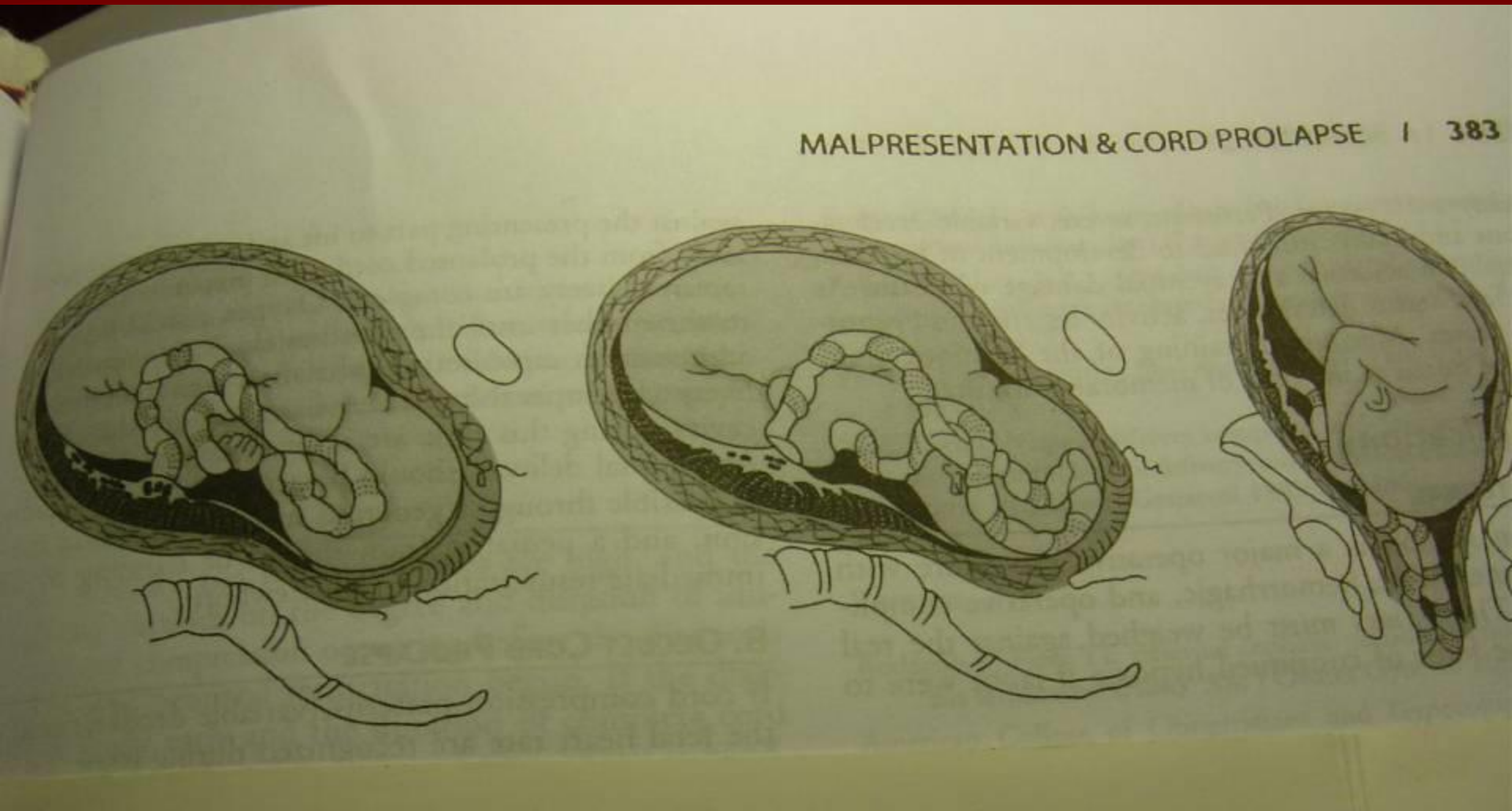
If these all fail, the patient can be moved on to all fours as this increases the anterior–posterior diameter of the inlet. In this position, the posterior arm can be delivered.

After this, manoeuvres of last resort include a symphysiotomy, in which the maternal symphysis is divided, Zavanelli's, in which the head is reduced back into the vagina and a Caesarean section performed and intentional fracture of the fetal clavicle.

After delivery of the baby, the risks of maternal morbidity should be remembered: prevent the PPH and check for vaginal trauma.

Women will require debriefi ng after the delivery, and most obstetricians would suggest a Caesarean

UMBILICAL CORD PROLAPSE



Umbilical Cord Prolapse

- Etiology
  - 1-275 deliveries
- Classification
  - Complete: cord is seen or palpated ahead of presenting part (OB Emergency)
  - Fundic: cord felt through intact membranes ahead of presenting part (cord presentation)
- Definition: umbilical cord that lies below/beside presenting part

Umbilical Cord Prolapse

- Precipitating factors:
  - Long umbilical cord
  - Abnormal location on placenta
  - Small or preterm infant
  - Polyhydramnios
  - Multiple gestation
  - Breech presentation mainly footlig and to less extent frank breech
- Precipitating factors:
  - Amniotomy before fetal head is engage
  - External cephalic version

Umbilical Cord Prolapse

- Clinical Manifestations:
  - Cord observed or palpated
  - Bradycardia following ROM
  - Repetitive, variable decelerations that do not respond to medical intervention
  - Prolonged decelerations (>15 bpm lasting 2 mins or longer yet <10 mins)

Risk

- Increase perinatal mortality and morbidity
- Compression of the cord between the presenting part of the fetus and maternal pelvis lead to decrease in umbilical blood flow
- Exteriorization of the umbilical cord leads to vasoconcertiction of it s blood vessels
- Fetal hypoxia and birth asphyxia and intrapartum death closely releated to time occurrence of prolapsed and application of correct treatment

Umbilical Cord Prolapse

- Nursing interventions:
  - Assess fetal viability
  - Call for assistance
  - Relieve pressure from cord (usually presenting part)
    - Continuous manual relief of pressure from presenting part
    - Avoid excessive manipulation of cord
    - Re-position : Trendelenburg, , or knee-chest
    - Prepare for emergency delivery
    - Administer oxygen by mask 10-12 L/min
    - Fill maternal bladder with 500-700 cc NS(to raise the presenting part and decreases the pressure on cord)
    - Continuous fetal monitoring
    - Possible neonatal resuscitation (notify neonatal team per hospital protocol)

Umbilical Cord Prolapse

- Aim of Medical management:
  - Immediate delivery of viable infant
  - Hallmark treatment: C-section
  - When the cervix is fully dilated the vaginal delivery is expedited by instrumental delivery is possible
  - if associated with shoulder presentation should be mange by emergancy S/C
  - If the fetus is dead in longitudinal lie and there is no contraindecation for vaginal like repeated scare so vaginal delivery is advisable