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OB/GYN Mini-OSCE

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أي خطأ او تعديل ارسلوه وبنعدله بإذن الله ومع الوقت يتطور الملف، ,حاولنا كثير انه يكون اغلب الإجابات صح ربنا يكتب أجر جميع الي ساعدوا، نتمنى التوفيق للجميع ,اعذرونا عن أي تقصير.

علاء.د

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Mechanism of Normal Labor

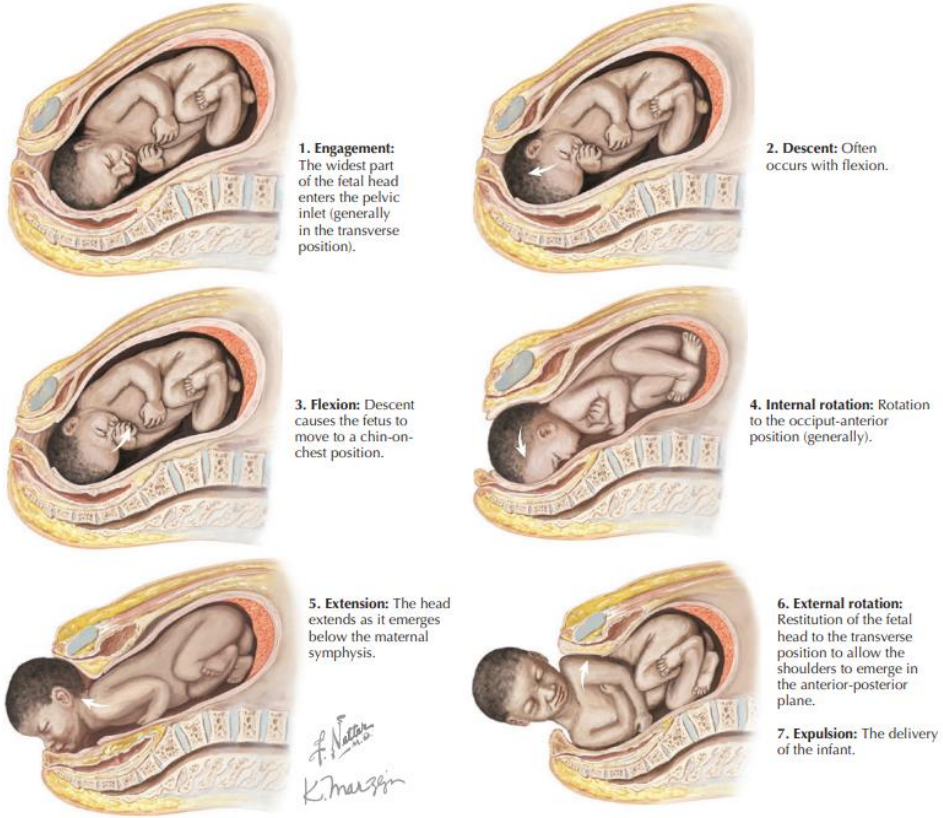
Mechanism of Normal Labor

❖**Definition**: the series of changes in position and attitude that the fetus undergoes during its passage through the birth canal

❖**Cardinal Movements**

1. Engagement
2. Descent
3. Flexion
4. Internal rotation
5. Extension
6. External rotation/restitution
7. Expulsion

- These movements goes on in combination at the same time.



1. Engagement

- The fetal head normally enters the pelvis in the transverse position or some minor variant of this, taking advantage of the widest pelvic diameter.
- Engagement is said to have occurred when the widest part of the presenting part has passed successfully through the inlet
- Engagement has occurred in the vast majority of nulliparous women prior to labor, usually by 37 weeks' gestation, but not so for the majority of multiparous women
- The number of fifths (rule of 5) of the fetal head palpable abdominally is used to describe whether engagement has taken place. If more than two-fifths of the fetal head is palpable abdominally, the head is not yet engaged

2. Descent

- Descent of the fetal head is needed before flexion, internal rotation and extension can occur
- During the **first stage** and **passive phase of the second stage of labor**, descent of the fetus occurs as a result of uterine contractions and retraction, pressure from the amniotic fluid straightening of the fetus, loss of dorsal convexity and closer application of the extremities to the body.
- During the **active phase of the second stage of labor**, descent of the fetus is assisted by voluntary efforts of the mother using her abdominal muscles and the Valsalva maneuver ('pushing')

3. Flexion

- The fetal head is not always completely flexed when it enters the pelvis. As the head descends into the narrower midpelvis, flexion occurs
- This passive movement occurs, in part, due to the surrounding structures and is important in reducing the presenting diameter of the fetal head
- When flexion occurs, the posterior fontanel slides into the center of the birth canal and the anterior fontanel becomes more remote and difficult to feel
- **Importance for differentiate anterior fontanelle site**
  1. Position
  2. Degree of head flexion
     - Will flexed head, you feel the posterior fontanelle
     - Deflexed head, you feel the anterior fontanelle
     - Partially Flexed head, you feel both posterior and anterior fontanelle

4. Internal rotation

- Occurs after the descent between the 2 ischial spines. If the head is well flexed, the occiput will be the leading point, and on reaching the sloping gutter of the levator ani muscles it will be encouraged to rotate anteriorly so that the sagittal suture now lies in the AP diameter of the pelvic outlet (i.e., the widest diameter).
- If the fetus has engaged in the OP position, internal rotation can occur from an OP position to an OA position. This long internal rotation may explain the increased duration of labor associated with OP position.
- Alternatively, an OP position may persist, resulting in a ‘face to pubes’ delivery. Furthermore, the persistent OP position may be associated with extension of the fetal head and a resulting increase in the diameter presented to the pelvic outlet. This may lead to obstructed labor and the need for instrumental delivery or even caesarean section.

5. Extension

- Following completion of internal rotation, the occiput is beneath the symphysis pubis and the bregma is near the lower border of the sacrum.
- The well-flexed head now extends and the occiput escapes from underneath the symphysis pubis and distends the vulva. This is known as 'crowning' of the head.
- The head extends further and the occiput underneath the symphysis pubis acts as a fulcrum point as the bregma, face and chin appear in succession over the posterior vaginal opening and perineal body.
- This extension process, if controlled, reduces the risk of perineal trauma. However, the soft tissues of the perineum offer resistance, and some degree of tearing occurs in the majority of first births

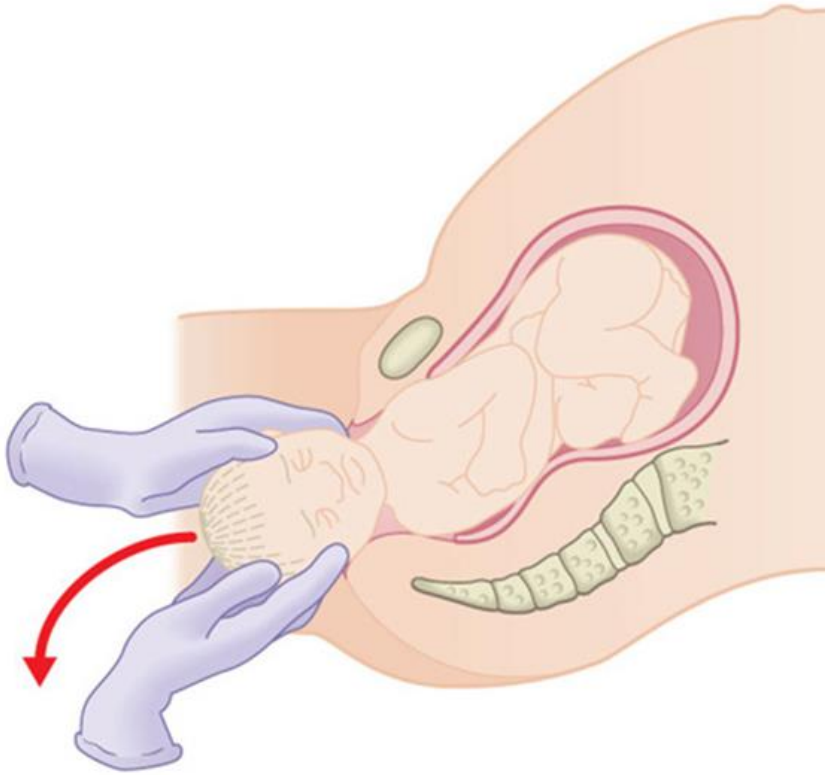
6. Restitution & External rotation

- When the head is delivering, the occiput is directly anterior. As soon as it crosses the perineum, the head aligns itself with the shoulders, which have entered the pelvis in the oblique position. This slight rotation of the occiput through one-eighth of the circle is called ‘restitution’.
- In order to be delivered, the shoulders have to rotate into the direct AP plane (remember, the widest diameter at the outlet). When this occurs, the occiput rotates through a further one-eighth of a circle to the transverse position. This is called external rotation.

7. Expulsion

- After the external rotation, the anterior shoulder appears under the symphysis pubis (we apply downward retraction to facilitate anterior shoulder delivery) and soon the perineum becomes distended by the posterior shoulder (we apply upward retraction to facilitate posterior shoulder delivery)
- After delivery of the shoulders, the rest of the body is easily extruded.
- This marks occur at the end of the 2nd stage of labor
- Difficult shoulder delivery is called Shoulder Dystocia which is an Obstetric Emergency

Mini-osce :which part of the mechanism of labor



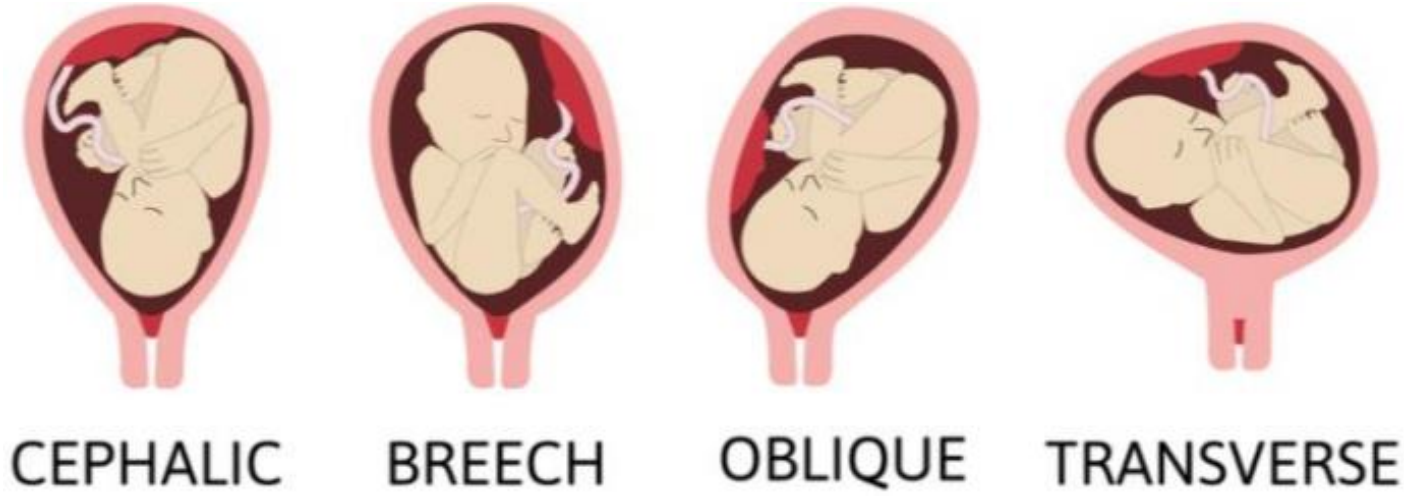
Answer : restitution (external rotation) to deliver the anterior shoulder

Orientation in utero

Lie, Presentation, Position & Engagement

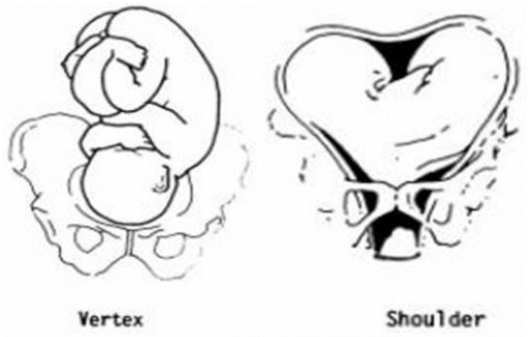
Fetal Lie

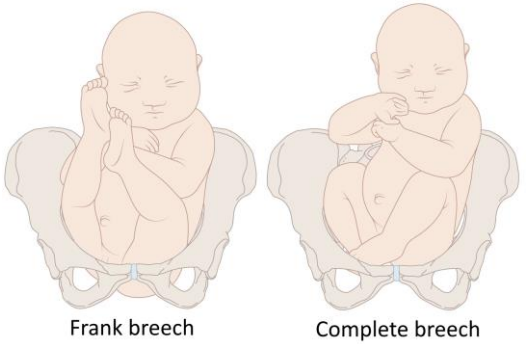
- **Definition**: relation of the fetal long axis to the long axis of the maternal uterus
- **Types**
  - Longitudinal lie: fetus is in the same axis (most common)
  - Transverse lie: fetus is at a 90° angle
  - Oblique lie: fetus is at a 45° angle

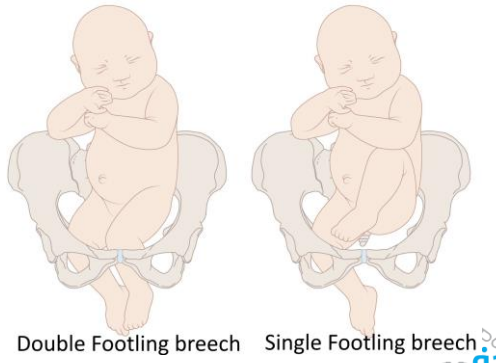


Fetal presentation

- **Definition**: part of the fetus that overlies the maternal pelvic inlet
- **Types**
  - **Cephalic presentation**: head (most common)
  - **Breech presentation**: buttocks or feet
    - Frank breech 65%: flexed hips and extended knees
    - Complete breech 10%: thighs and legs flexed
    - Single Footling breech: hip of one leg is flexed and the knee of the other is extended
    - Double Footling breech: both thighs and legs are extended
  - **Compound presentation**: ≥ 1 anatomical presenting part (e.g., cephalic or breech presentation with presentation of an extremity)
  - **Shoulder presentation**: shoulder presentations combined with a transverse or oblique lie
- **Abdominal examination**; determine (identify) presentation
- **Vaginal examination**; determine (identify) presenting part







Fetal Attitude

❖**Definition**: degree of extension/flexion of the fetal head during cephalic presentation

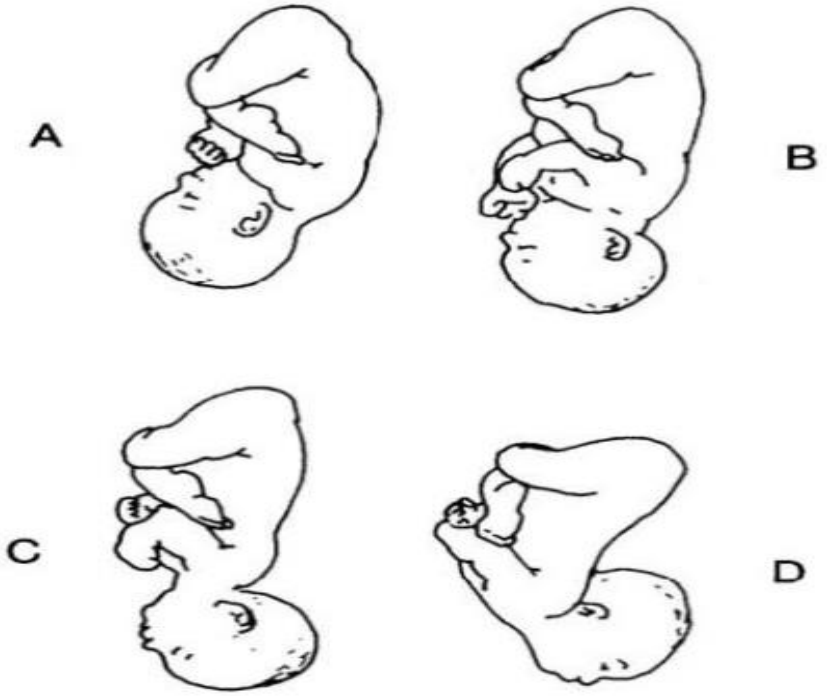
❖**Types**

A. Vertex presentation **(maximally flexed)**
   - most common attitude

B. Forehead presentation (**partially flexed**)
   - Spontaneous vaginal delivery is possible

C. Brow presentation (**partially extended**)

D. Face presentation (**maximally extended**)
   - Mentum anterior face presentation: **Spontaneous vaginal delivery is possible**
   - Mentum posterior face presentation

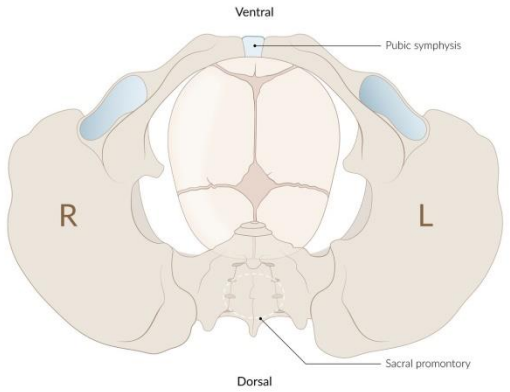


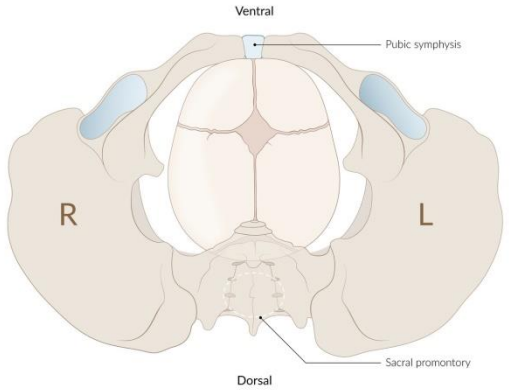
Fetal position (Denominator or Indicator)

❖**Definition**: relationship and orientation (i.e., fetal occiput pointing towards maternal left or right) of the presenting fetal part to the maternal pelvis

❖**Types**

1. **Occiput anterior position**: Fetal occiput points towards maternal symphysis pubis; fetus faces downwards.
2. **Left occiput anterior (LOA)**: Fetal back faces the maternal left, anterior fontanelle faces the maternal right, sagittal suture lies in the right oblique diameter; (most common position).
3. **Right occiput anterior (ROA)**: Fetal back faces the maternal right, anterior fontanelle faces the maternal left, sagittal suture lies in the left oblique diameter.
4. **Occiput posterior position**: Fetal occiput points towards the maternal sacral promontory with face to pubis symphysis; the fetus faces upward





Fetal Engagement & Station

❖Fetal Engagement

- When the widest transverse diameter of the head (presenting part) passes through the pelvic inlet
- In cephalic presentation, the largest transverse diameter of the presenting part it is the Bi-parietal diameter
- Once the head is engaged, it will go out
- Use the **rule of fifths**: engagement is clinically identified when ≤ 2/5 of the fetal head are felt above the symphysis pubis through the maternal abdomen

❖**Station**: measurement (in cm) of the presenting part above and below the maternal ischial spine

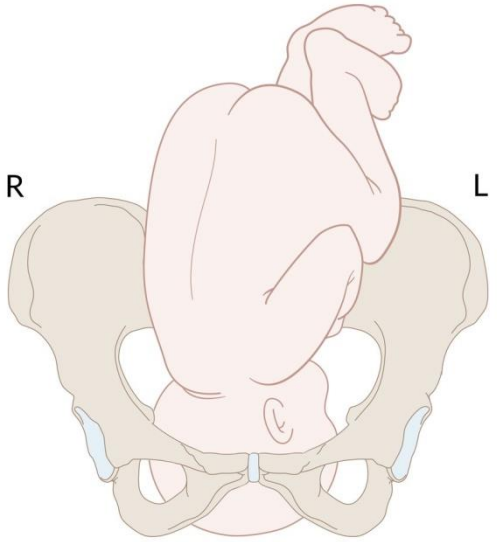
Station	Description
-1, -2, -3	1, 2, and 3 cm above the level of the ischial spines, respectively
0	the presenting part is at the level of the ischial spines
+1, +2, +3	1, 2, and 3 cm below the level of the ischial spines, respectively

Fetal position (Denominator or Indicator)

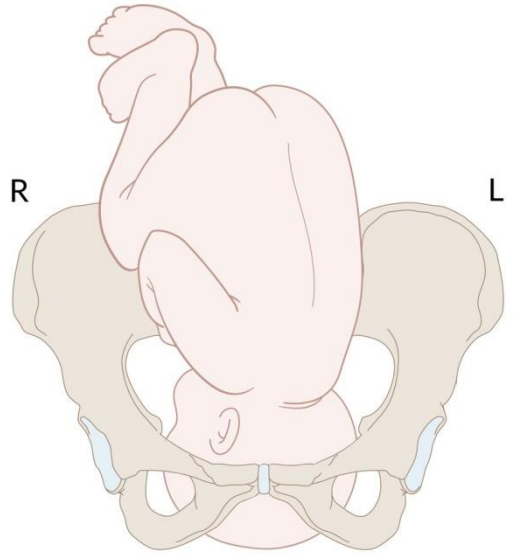
❖**Types**

5. **Sacrum** in **breech** presentation
6. **Mentum** (chin) in extended cephalic (**face**) presentation
7. **Sinciput** in partially extended cephalic (**brow**) presentation
8. **Acromion** in **shoulder** presentation

❖Fetal position is **important for vertex and face presentation** because it will change the way of delivery



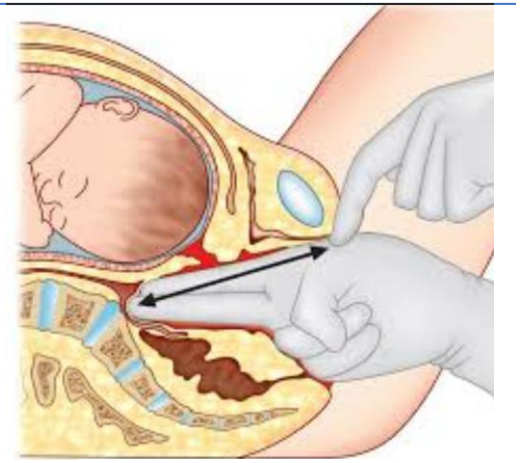
Right occiput anterior position



Left occiput anterior position

مهم

❖How we assess pelvic cavity clinically :



#Pelvic inlet :

1-By sacral promontory reaching :diagonal conjugate diameter(13cm)

(you can examine it by digital vaginal examination towards promontory of sacrum)

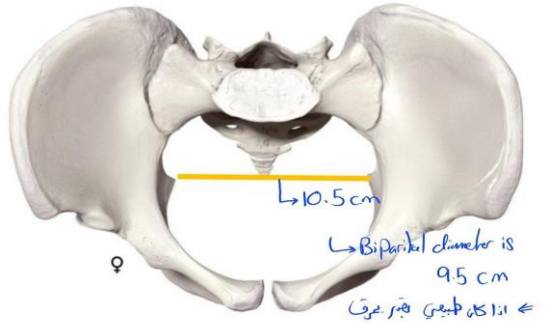
if we reach the sacrum =too small pelvis

if not reach = adequate pelvis

#midpelvis

1-Inter spinous diameter(10.5)

لانه اصغر diameter حرج يمر منه الطفل biparital diameter 9.5– لو كان ال interspinous diameter اصغر من 10 صعب الطفل يمر

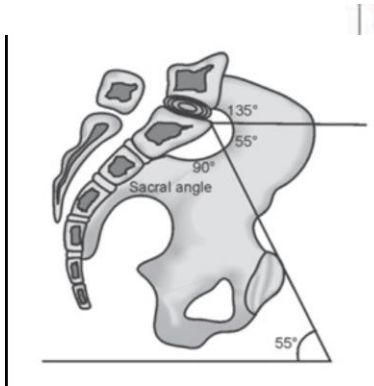


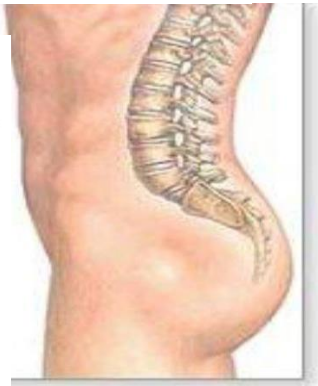
By PV: if interspinous diameter matched with my 2 fingers→ inadequate pelvis على الأكيد

if not matched with my fingers→ might be adequate/ inadequate

2-Sacral curvature (angle of inclination) الزاوية اسفل الظهر والتي كل ما زادت الزاوية زاد صعوبة الولادة طبيعي

usually =55-60





#Pelvic outlet:

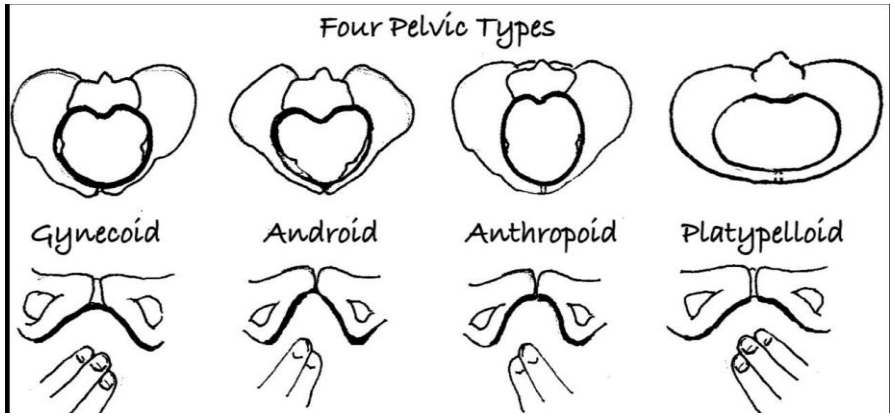
1-Sacro-sciatic notch:

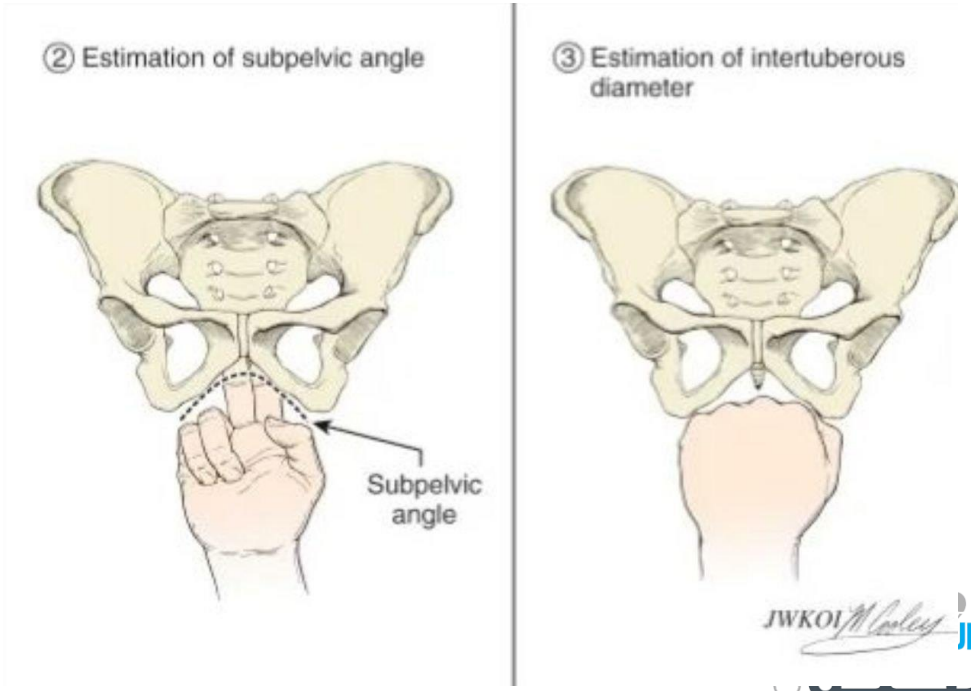
wide=gynecoid pelvic form or anthropoid /narrow=plateylpelloid or android

2-Pelvic arch and pubic angle

Wide=gynecoid /medium=anthropoid/ narrow: android or platypelloid

3--inter-tuberous diameter(~8cm) by Drag your fist out to measure





Station 1

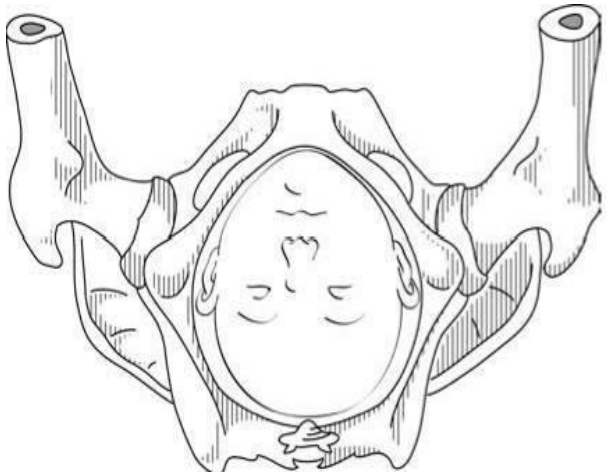
1.what is the presentation and position? Incidence? **face/ mentoanterior- position: direct occiptopost./ 2%**

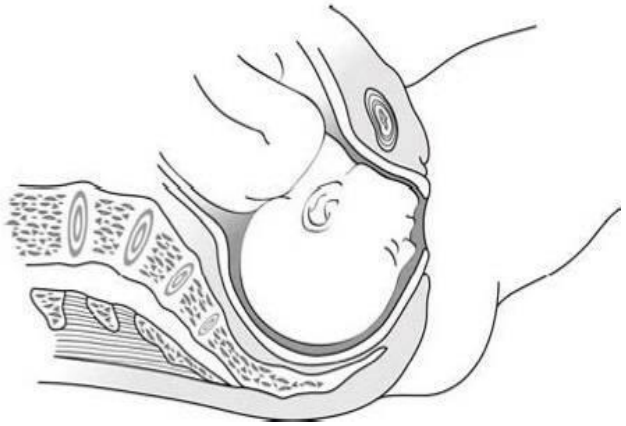
2.Head attitude? **maximally extended/ Hyperextended**

3.presenting diameter and its length? **submento- bregmatic/ 9.5 cm**

4.method of delivery? **vaginal delivery**

5.if there is prolonged 2nd stage of labor how to deliver? **Instrumental vaginal delivery by forceps only**





Station 2

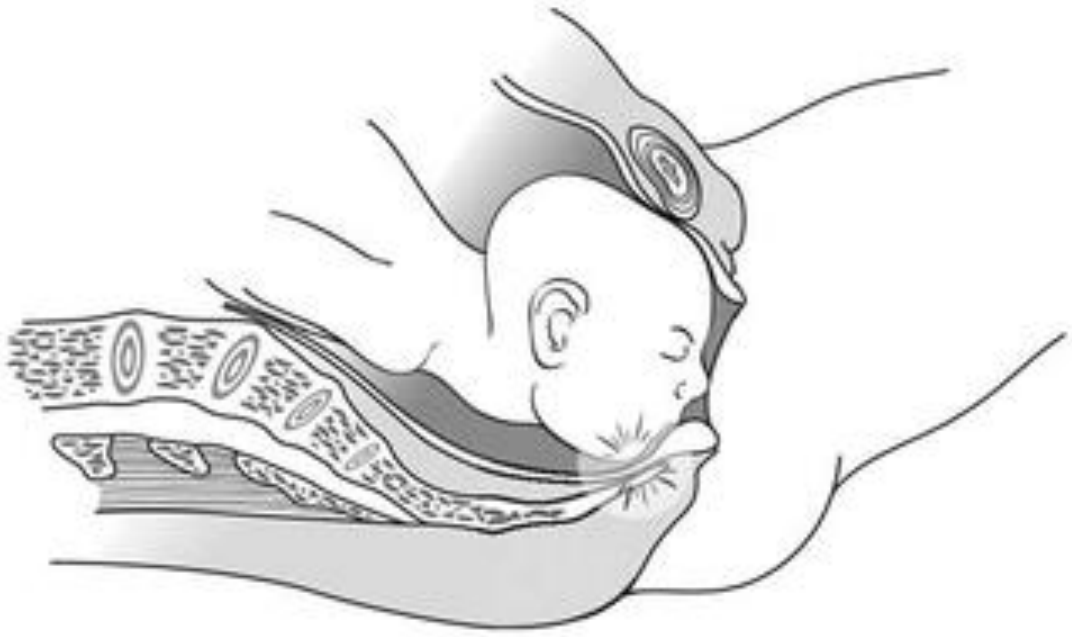
- your interpretation about picture

cephalic lie, maximally extended face presentation /mentoposterior position.

- findings in abdominal/vaginal examination

Abdominal exam: soft irregular non ballotable parts in the fundus (buttocks)+ back is felt to the front by lateral grip+ firm round fixed part which is the head in pelvic grip+ By rule of 5: engagement

Vaginal exam: nasal bridge station



- engagement diameter: **bregma-sternal/ 18 cm**
- if this patient come at 37 week ,station -3 , no cervical changes ..your next step: **elective cs**
- if this patient deliver vaginally ,mention complication: **fetal distress/prolonged labor/ birth canal trauma**
- mention four things you should follow up

station, dilatation, fetal monitoring,

سؤال
سادسة

Station 3

- What is the the diameter of pelvis that the baby's head enter through and why? **Pelvic inlet (transverse diameter-13cm), taking advantage of the widest pelvic diameter**
- Level station the baby do internal rotation and why? **station 5 at the level of ischial spines- pelvic floor/ The pelvic floor has a gutter shape with a forward and downward slope, encouraging the fetal head to rotate**
- What is the diameter of

Transverse of pelvic inlet? **13cm**/ interischial? **10.5 cm**/ AP of outlet? **12-13 cm**

- How do we assess the pelvic outlet clinically (this qs was from the record)?

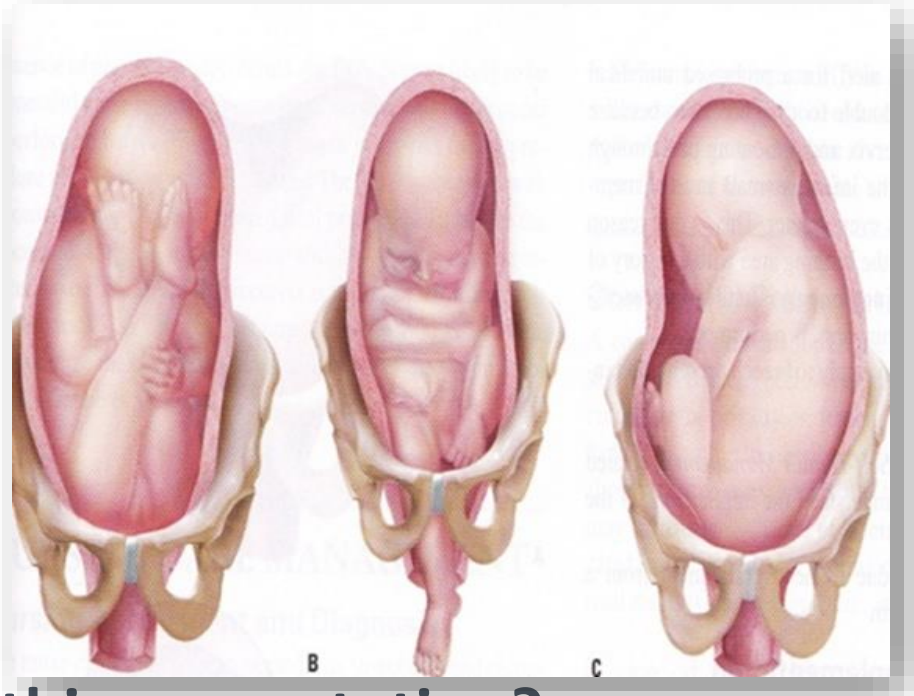
inter-tuberous diameter/Pelvic arch and pubic angle/ Sacro-sciatic notch

Station 4

1-What is the difinition of :

Lie :The relationship of the long axis of the fetus to the long axis of the mother

Denominator: arbitrary part of the presentation



2-Whats the presentation?

A)Frank breech

b)Footling breech

c) Complete breech

3-What are findings by abdominal examination for this presentation?

1_Ballotable head at fundus

2_Soft presenting part/not ballotable

3_Fetal heart auscultated more commonly above umbilicus

Mini-Osce

4-Whats the dominator for this presentation ?

Sacrum

5-Engagement diameter?

10 cm/ bi trochanteric

6-What is the risk found in (b) more than other ?

cord prolapse-15%

7-Pregnant women comes to obstetric room by examination she has presentation in picture (c) and she want to deliver vaginally>>>

****Can you deliver it vaginally and how ?**

by external cephalic version if it succeeds, Yes.

Station 5

1- What's the lie of this presentation? Face presentation with Vertical lie

2- What's the presenting diameter? And its length? Submentobregmatic in mento-anterior 9.5 cm/ Face mento-posterior bregma-sternal diameter 18 cm

3-mention 4 causes of this presentation?

- ❖Pelvic block (pelvic tumor,fibroid,pelvic shape)
- ❖decreased uterine polarity (Grand multiparty,Uterine malformation)
- ❖altered fetal mobility (•IUGR •Prematurity •Macrosomia •Polyhydramnios or oligohydramnios •Multiply gestation •Fetal abnormality)

4- how can You deliver this patient vaginaly? spontaneous vaginal delivery in case of mento- anterior only

5- If you deliver this pt vaginaly. What's the Instrument you want to use? forceps only

6- What's the causes that lead to deliver her CS? Mento-posterior only by cs

Station 6

1) Dx:

shoulder impaction

2) Presentation:

shoulder presentation

3) Lie:

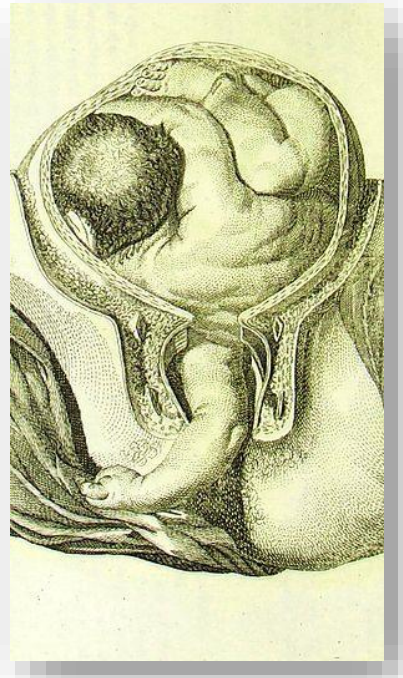
transversals lie

4) 4 causes:

polyhydramnios, abdominal wall laxity, placenta previa, large fibroid

5) 3 maternal and fetal complication:

Asphyxia and death
Brachial plexus injury and clavicular fracture
Pelvic tissue lacerations and postpartum hemorrhage



Station 7

1. What is the presentation?

brow presentation

2.Diameter and it's name: occipitomental/ 13.5 cm

3.finding in examination: supraorbital ridges, anterior fontanelle and frontal suture by PV

4. If she is -2 station with 5cm dilatation and after 6hours she still like that what do you think the cause is ?

1ry dysfunctional labor mostly due to: inadequate uterine contractions/ other possible causes: CPD+ malpresentation

5. How would you deliver her?

cs in persistent brow presentation

Station 8

1)what is the presentation and position? Incidence?

Face presentation, mentoanterior

Incidence: 2%

2)Head attitude? Hyperextended

3)presenting diameter and its length?

Submentobregmatic 9.5 cm

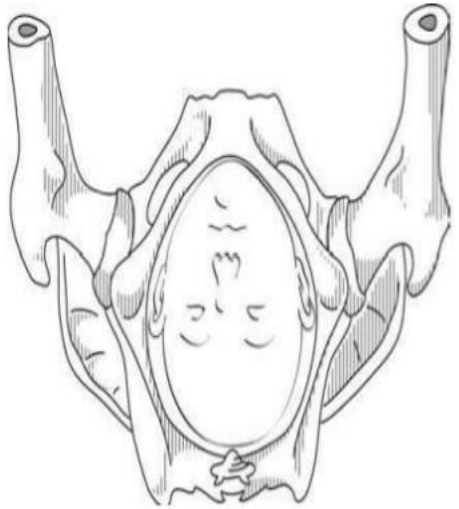
4.method of delivery?

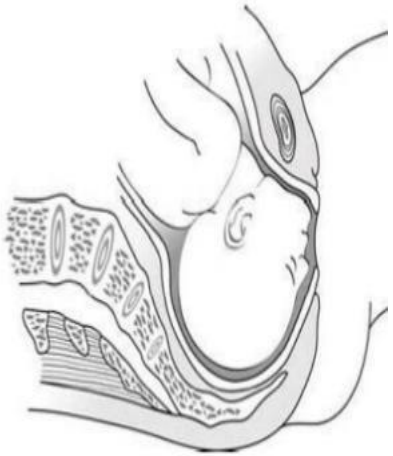
Vaginal delivery

5.if there is prolonged 2nd stage of labor

how to deliver? assess: power passenger passage,

if cpd→ cs, if not→ augmentation by AROM+ oxytocin, if no progress after 4h→ cs





Labor

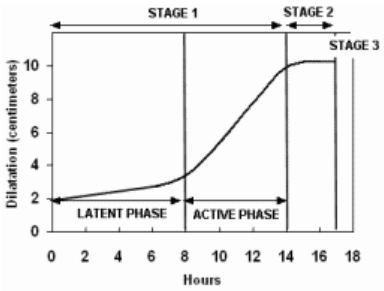
- **Definition**: Progressive effacement > 80% (Shortening of cervical canal length) and dilatation of the cervix > 4 cm in association with regular uterine contractions that increases in frequency and intensity with the progress of time.
- Labor can be either Spontaneous or Induced.

- In Primigravida, effacement may start before the dilatation and sometimes maybe even before labor.
- In Multigravida, effacement and dilatation occur together.

Stages of labor

Stage		Definition	Nulliparous	Multiparous
First	Latent	Onset of labor to 4-6 cm dilation	<20 hours (Average 10-12h)	<14 hours (Average 6-8h)
	Active	4-6 cm to complete 10 cm dilation	4-6 hours (> 1-1.2 cm/hr.)	2-3 hours (> 1.2-1.5 cm/hr.)
Second		From full dilatation to delivery of infant	< 2 hours (< 3 hrs. if epidural)	< 1 hour (< 2 hrs. if epidural)
Third		From delivery of infant to delivery of the placenta	< 30 minutes	< 30 minutes
Forth		The first hour after the delivery of the placenta. Where women should be in close observation because most complication show at the first hour after delivery.		

The duration of labor is variable and depends upon **Parity**, **Gestation**, **Size** of the baby, whether the labor is **Spontaneous or Induced** and **Previous obstetric performance**.



Stages of labor

❖Phases of the First stage

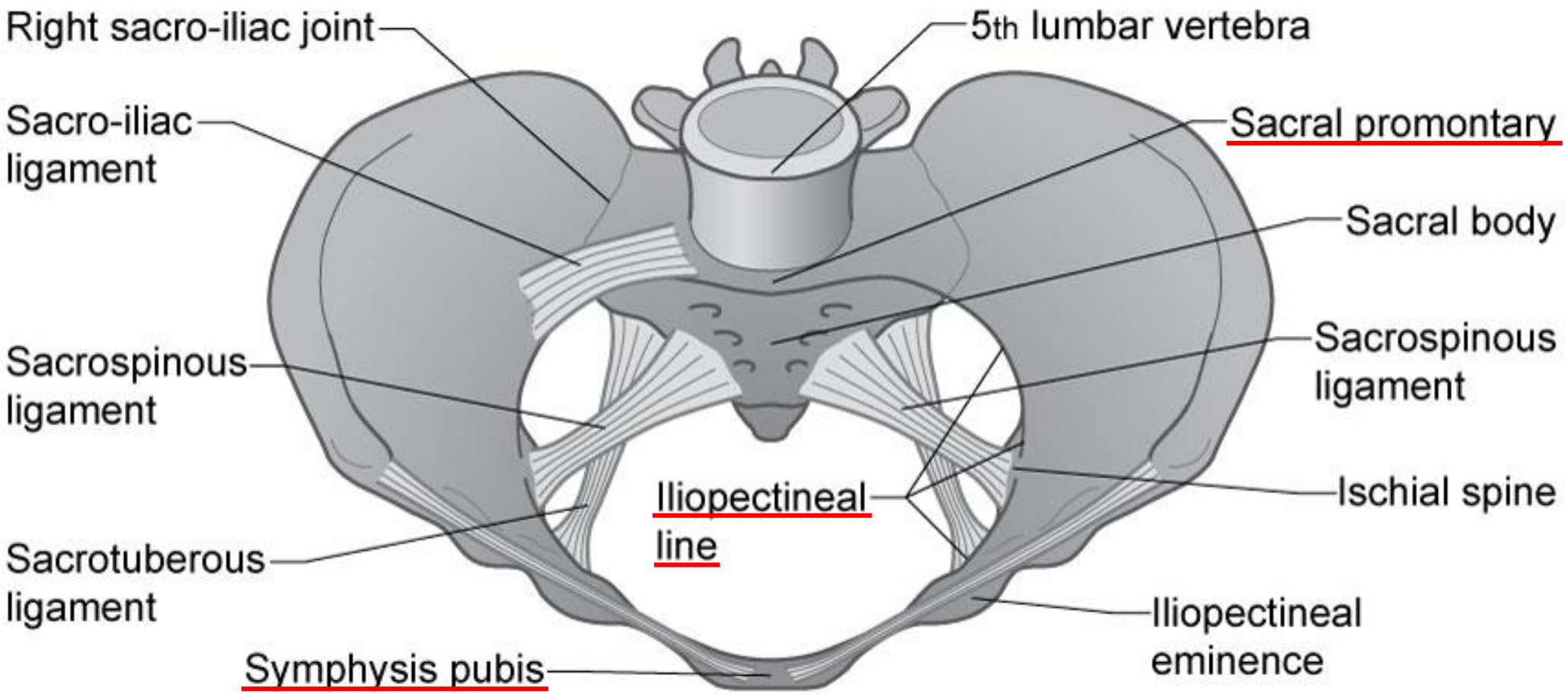
- **Latent phase**: The phase of **slow dilatation** of the cervix (0 cm to 4 cm)
- **Active phase**: The phase of **maximal dilatation** of the cervix (4 cm to 10 cm)

❖Phases of the Second stage

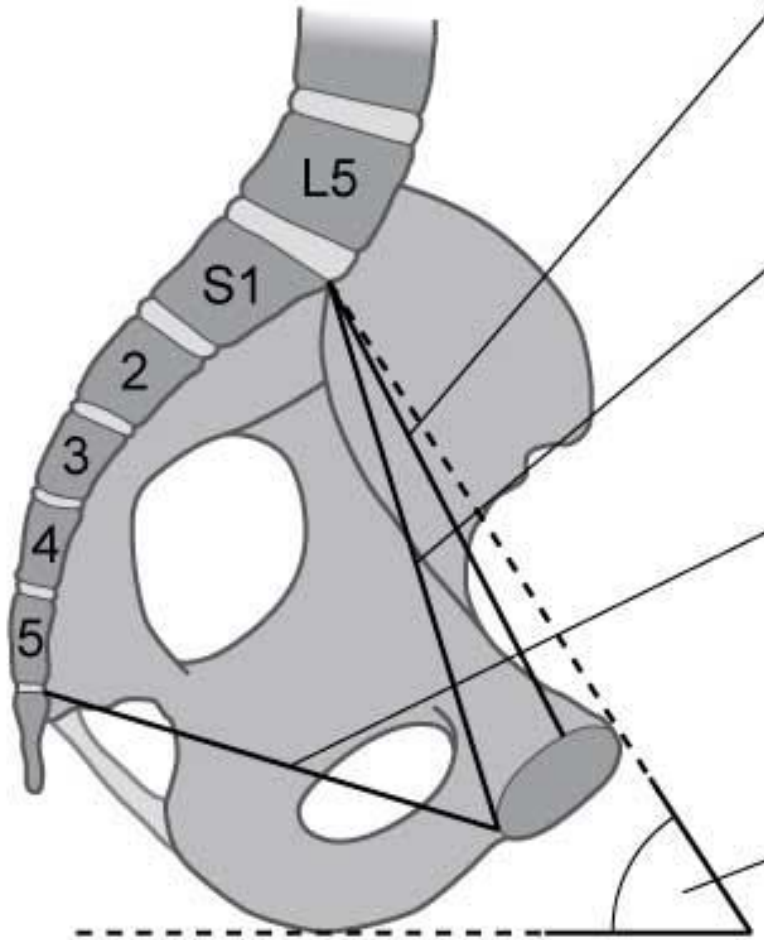
- **Passive (Propulsive) phase**: In which the descent is dependent upon the **uterine contractions** only.
- **Active (Expulsive) phase**: Characterized by **uterine contractions** and **abdominal muscles contraction** (ask patient to push).

Female Pelvis & Fetal Skull

Female Pelvis



Pelvic Diameters – Pelvic inlet



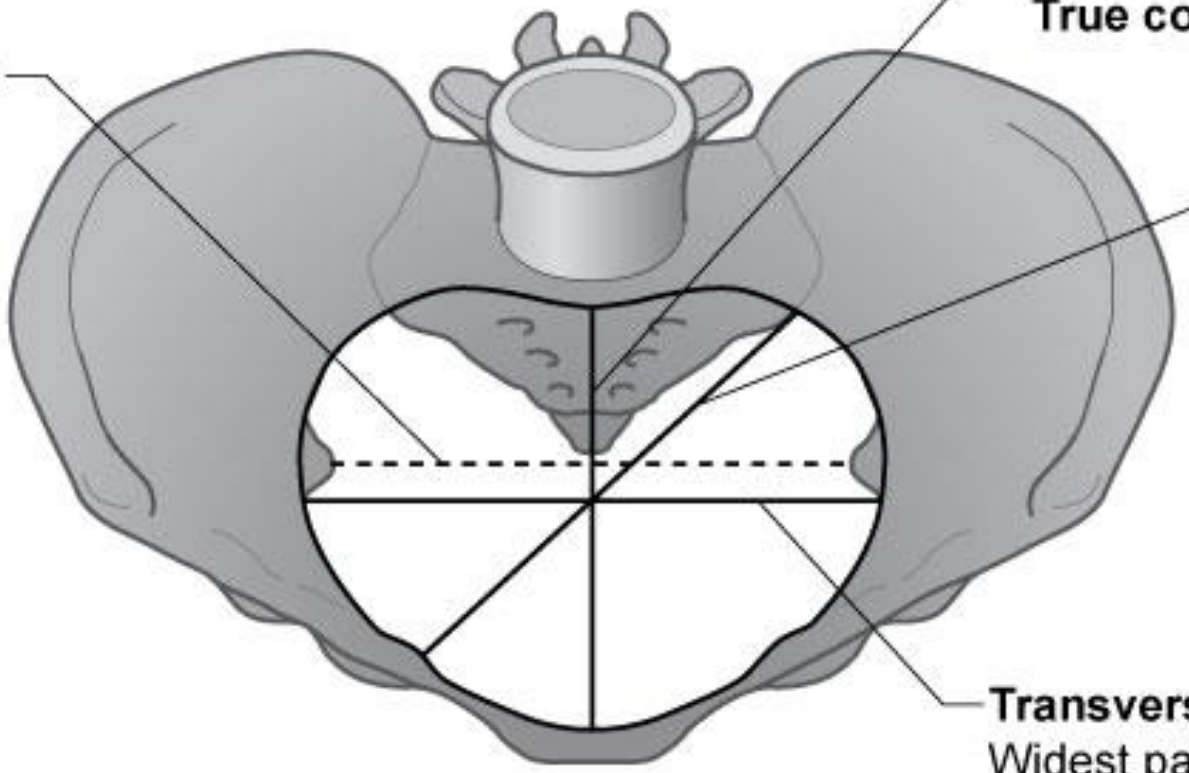
True conjugate of brim
From sacral promontory to upper and inner border of symphysis pubis

Diagonal conjugate diameter of brim
From sacral promontory to under border of symphysis pubis

Antero-posterior diameter of outlet
Under body of symphysis pubis to end of sacrum or coccyx if fused

Inclination of pelvic brim 50°–60° (usually 55°)

Pelvic Diameters – Pelvic inlet



Interspinous diameter
Between tips of ischial spines. This is a diameter of the cavity

Anteroposterior or **True conjugate diameter**

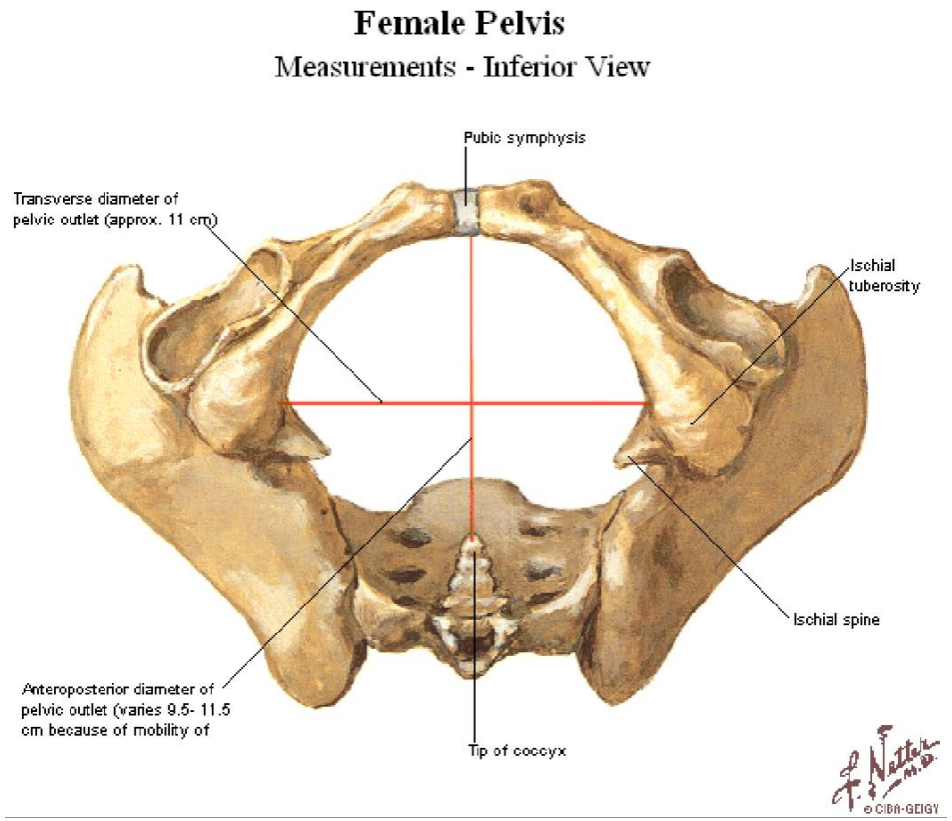
Left oblique diameter
Left sacroiliac joint to right iliopectineal eminence

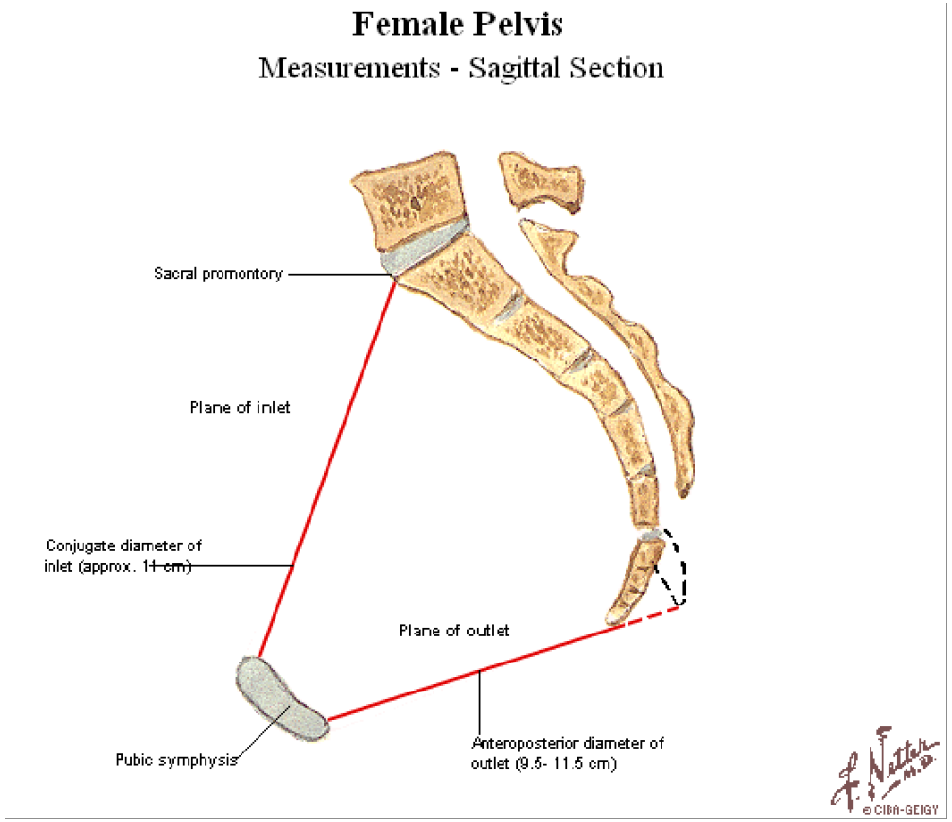
Transverse diameter
Widest part of brim

The plane of the brim is bounded anteriorly by the pubis, laterally by the iliopectineal lines, posteriorly by the alae and promontory of the sacrum

Pelvic Diameters – Pelvic Outlet

- Consists of two triangular areas having the same base (inter-tuberous diameter)
- **AP diameter**; 12-13 cm
- **Transverse (Inter-tuberous) diameter**; 10.5-11 cm





Female Pelvis Varieties

Type	Percent	Inlet	Cavity	Outlet	Notes
Gynecoid	50% of women	Oval Trans > AP	Adequate	Pubic arch >90º	–
Android	33% of women	Heart-shaped AP > Trans	Intraspinous diameter reduced	Narrow pubic arch	Bones are NOT parallel to each other
Anthropoid	• 24% of White • 42% of African	Ovoid AP > Trans	Adequate	Pubic arch >90º	large pelvic in shape of android
Platypelloid	2% of women	Trans > AP	Wide intraspinous diameter	Wide pubic arch	large pelvic in shape of gynecoid

Female Pelvis Varieties

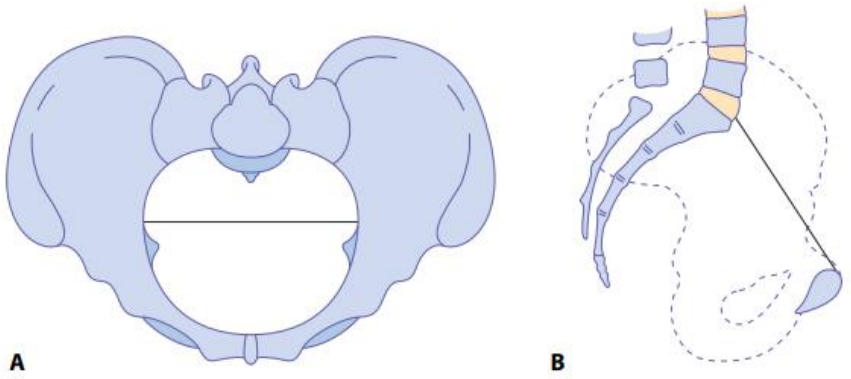


Figure 12.5 The gynaecoid pelvis: (**A**) brim; (**B**) lateral view; (**C**) outlet.

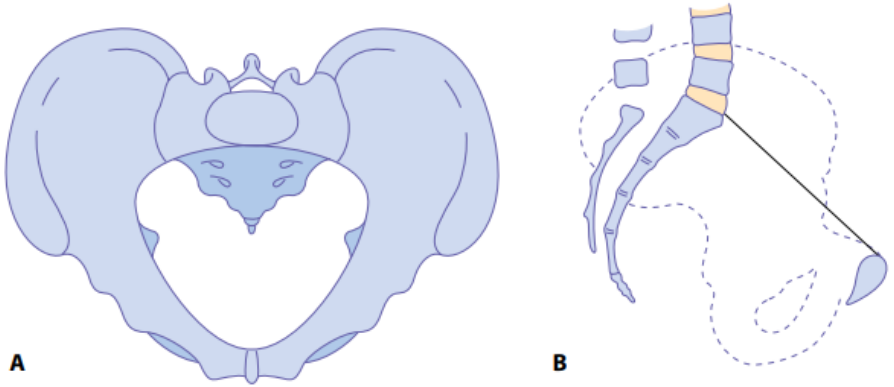


Figure 12.6 The android pelvis: (**A**) brim; (**B**) lateral view; (**C**) outlet.

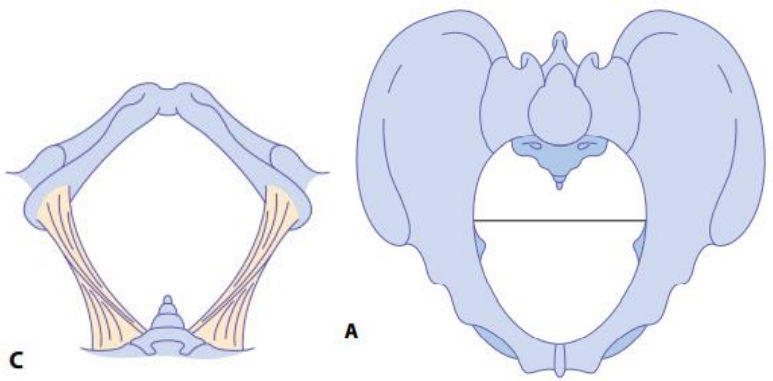


Figure 12.7 The anthropoid pelvis: (**A**) brim; (**B**) lateral view; (**C**) outlet.

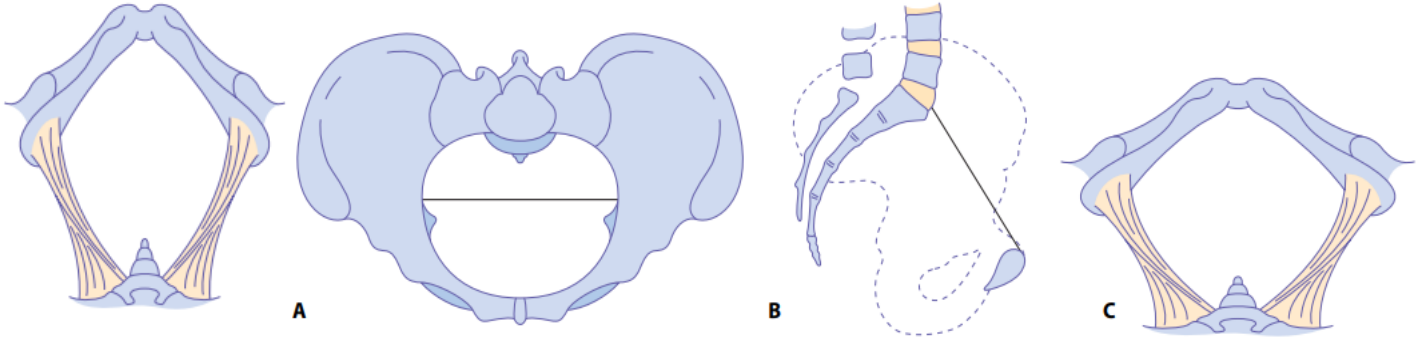


Figure 12.8 The platypelloid pelvis: (**A**) brim; (**B**) lateral view; (**C**) outlet.

How do we assess pelvis clinically ?

1. Sacral promontory reaching
2. Sacral curvature (angle of inclination)
3. Inter-spinous diameter
4. Pubic arch and Pubic angle
5. Sacro-sciatic notch
6. Drag your fist out and Inter-tuberous diameter

Skull Molding

❖Notes

- Molding only occur in head, whereas in the body minimum reduction occur
- The anterior fontanelle (Bregma) disappear with grade 2 and 3 molding

❖Grades of molding

- Grade 0 = suture lines between bones
- Grade 1 = obliterate suture lines but with direct contact
- Grade 2 = can be returned to normal
- Grade 3 = can’t be returned

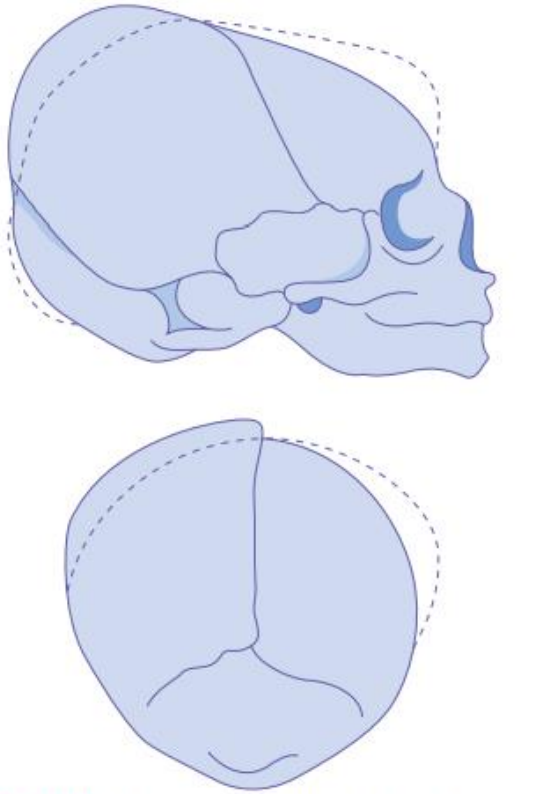


Figure 12.12 Schematic representation of moulding of the fetal skull.

Diameters of Fetal Head

Flexed → Extended

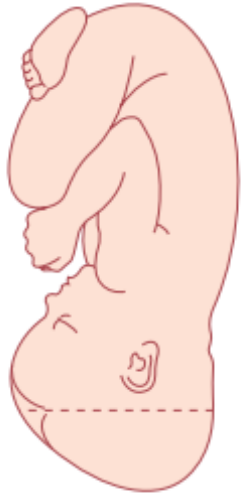
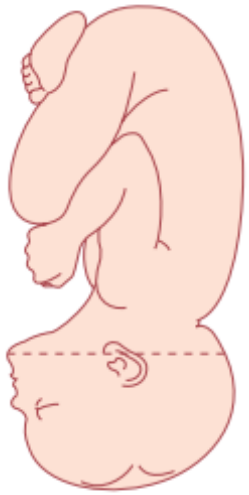
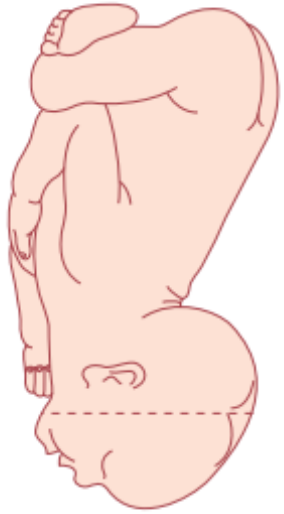
Attitude	Well flexed 'Vertex presentation'	Less well flexed (partially extended) or deflexed	Extended 'brow presentation'	Hyperextended 'face presentation'
Diameter	Suboccipito-bregmatic	Occipito-frontal	Occipito-mental	Submento-bregmatic
Measurement	9.5 cm	11.5 cm	13.0 cm	9.5 cm
				

Figure 12.14 The effect of fetal attitude on the presenting diameter.

Mini-OSCE

1- what is the labeled diameter and it's length ?

a b c d

2- which diameter in normal vaginal delivery and why ?

suboccipitobregmatic

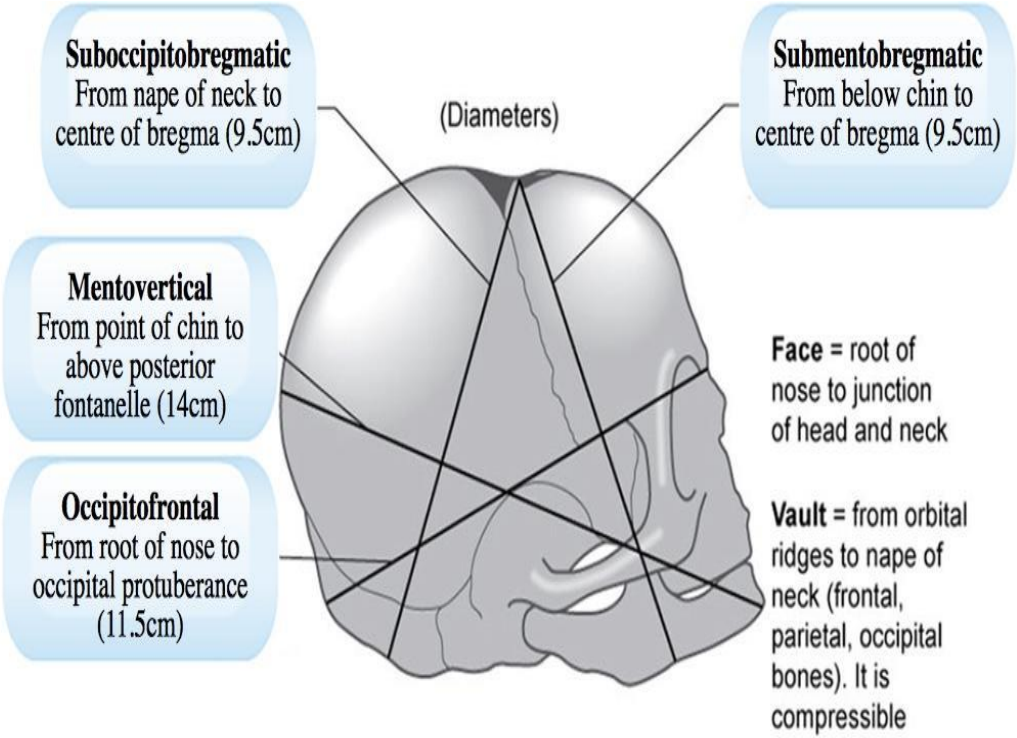
Smallest diameter on flexion

3- which diameter will cause CPD ?

mentovertical

4 – what is the denominator for ?

A b c d



Abnormal labor

Prolonged, Obstructed and Precipitate Labor

Abnormal labor

❖ **Labor becomes abnormal when**

1. There is poor progress (delay cervical dilatation or descent of the presenting part)
2. The fetus shows signs of compromise
3. If there is a fetal malpresentation
4. If there is a multiple pregnancy
5. If there is a uterine scar
6. If labor has been induced

❖ **Progress in labor is dependent on the '3 Ps' (Power, Passage, Passenger)**

- **Power**: Dysfunctional uterine activity
- **Passage**: Pelvic shape anomalies, Mass or Soft-tissue abnormalities of the birth canal
- **Passenger**: Macrosomia, Multiple gestation, Malpresentation and Malposition, Congenital anomalies
- **Cephalopelvic disproportion ('passage' and 'passenger')**

True Labor vs False Labor

	True Labor	False Labor
Uterine contractions	Regular contractions that increase in frequency, duration and intensity	Irregular contractions Infrequency with NO increase duration and intensity
Cervix	Progressive dilatation and effacement	No dilatation or effacement
Show	Yes	No
Fetal movement	No change	May intensify for a short period or Remain the same

❖**Management of false labor**: Discharge patient from labor

Prolonged Labor

	Prolonged latent phase	Primary dysfunctional of active phase	Secondary arrest of active phase	Arrest in the second stage of labor
Definition	• > 20 hours (primi) and > 14 hours (multi) from labor onset • > 6 hours (primi) and > 4 hours (multi) from admission	Poor progress in the active first stage of labor (<2 cm cervical dilatation/4 hours)	Progress in the active first stage is initially good but then slows or stops altogether, typically after 7 cm dilatation	When delivery is not imminent after the usual interval of pushing in the second stage of labor
	More common in primiparous than in multiparous			
Etiology	1. Wrong dx of Labor 2. Excess sedation 3. Abnormal or High-Presenting part 4. PROM 5. Idiopathic	**Most common**: Inadequate uterine contractions **Other causes**: 1. Cephalopelvic Disproportion 2. Malpresentation	**Most common**: Cephalopelvic Disproportion **Other causes**: 1. Malpresentation 2. Inadequate uterine contractions	1. Cephalopelvic disproportion 2. Inadequate uterine activity 3. Malpresentation 4. Resistant perineum 5. In some cases, it may be due to maternal exhaustion, fear or pain
Managment	1. Simple analgesics 2. Mobilization 3. Reassurance 4. Discharge patient from labor	1. Exclude CPD if present ⍰ C/S 2. Augmentation of labor: Artificial ROM + Oxytocin 3. If no progress after 4 hours ⍰ C/S		**Management options** • Continued pushing • Regular reviews of progress and fetal wellbeing. • Oxytocin to augment contractions. • Episiotomy for a resistant perineum. • Instrumental vaginal birth • Caesarean section.

Dysfunctional uterine activity

- The most common cause of poor progress in labor.
- It is more common in primigravidae and in older women and is characterized by weak, irregular and infrequent contractions.
- **Assessment**: by clinical examination and by using external uterine tocography
- **Management**:
  1. When poor progress in labor is suspected, it is usual to recommend repeat vaginal examination at 2 hours rather than 4 hours after the last.
  2. If delay is confirmed, the woman should be offered ARM
  3. If there is still poor progress in a further 2 hours augment the contractions with an oxytocin infusion after ruling out obstructed labor (e.g., cephalopelvic disproportion)
  4. If progress fails to occur despite 4–6 hours of augmentation with oxytocin, a caesarean section will usually be recommended

Cephalopelvic disproportion

- **Definition**: anatomical disproportion between the fetal head and maternal pelvis. It can be due to a large head, small pelvis or a combination of the two relative to each other.
- **Etiology**
  - Women of short stature (<1.60 m) with a large baby in their first pregnancy
  - The pelvis may be unusually small because of previous fracture or metabolic bone disease
  - Rarely, a fetal anomaly will contribute to CPD. (E.g., Obstructive hydrocephalus, fetal thyroid and neck tumors)
  - Relative CPD is more common and occurs with malposition of the fetal head. The OP position is associated with deflexion of the fetal head and presents a larger skull diameter to the maternal pelvis

Cephalopelvic disproportion

❖Management

- Oxytocin can be given carefully to a primigravida with mild to moderate CPD as long as the CTG is normal
- Relative disproportion may be overcome if the malposition is corrected (i.e., rotation to a flexed OA position)
- Oxytocin must never be used in a multiparous woman where CPD is suspected

❖Signs of obstruction

- Fetal head is not engaged
- Progress is slow or arrests despite efficient uterine contractions
- Vaginal examination shows severe molding and caput formation
- Head is poorly applied to the cervix
- Hematuria

Malpresentation	Denominator	Engagement diameter	Clinical findings	Management
Breech Presentation (Most common)	Sacrum	Bi-trochanteric 10 cm	• Ballotable head at fundus • Fetal heart auscultated more commonly above umbilicus • Soft presenting part • Meconium seen mostly in Labor • Often mistaken as Engaged Face Presentation at term	**Possible managements** 1. External Cephalic Version (ECV) at 36 weeks 2. Breech-vaginal delivery, ONLY Flank or Complete breech 3. C/S delivery, better outcomes
Face Presentation	Mentum (chin)	• Face Mento-anterior, Submento-bregmatic diameter 9.5 cm • Face Mento-posterior, Bregma-sternal 18 cm	Via PV you feel Supraorbital ridges, Nose and Mouth	• Vaginal delivery allowed ONLY for face mento-anterior (can used forceps ONLY). • While face mento-posterior ONLY by CS
Brow Presentation (Deflexed head)	Sinciput	Occipito-mental 13.5 cm	Via PV you feel Supraorbital ridges, Anterior fontanelle and Frontal sutures	• Persist brow presentation, the mode of delivery is by CS. • Persistent brow is NOT an absolute indication for CS.
Shoulder Presentation (Transverse Lie)	Acromion	mento-vertical 13.5 cm	Via abdominal examination, head on one flank and the buttocks in the other flank	• Mode of delivery ONLY by CS. • Transverse back-down must be delivered via Classical CS.
Compound Presentation	Cephalic presentation with prolapse of a limb along-side the presenting part • Head with Hand (Most common) • Head with Cord		Very common in premature babies	Mode of delivery according to complex parts; - Hand with head: Never deliver hand before head, to prevent cord prolapse. If persist, CS

Station 1

1. What are the presentation in first picture and the dominator ?

Longitudinal breach, sacrum is the dominator

2. What this maneuver called ?

External cephalic version

3. What you find in your examination in first picture ?

-hard part at fundus

-soft buttock in pelvic inlet

-heart auscultate above umbullicus

4. What are the conditions that prevent us to do this maneuver ?

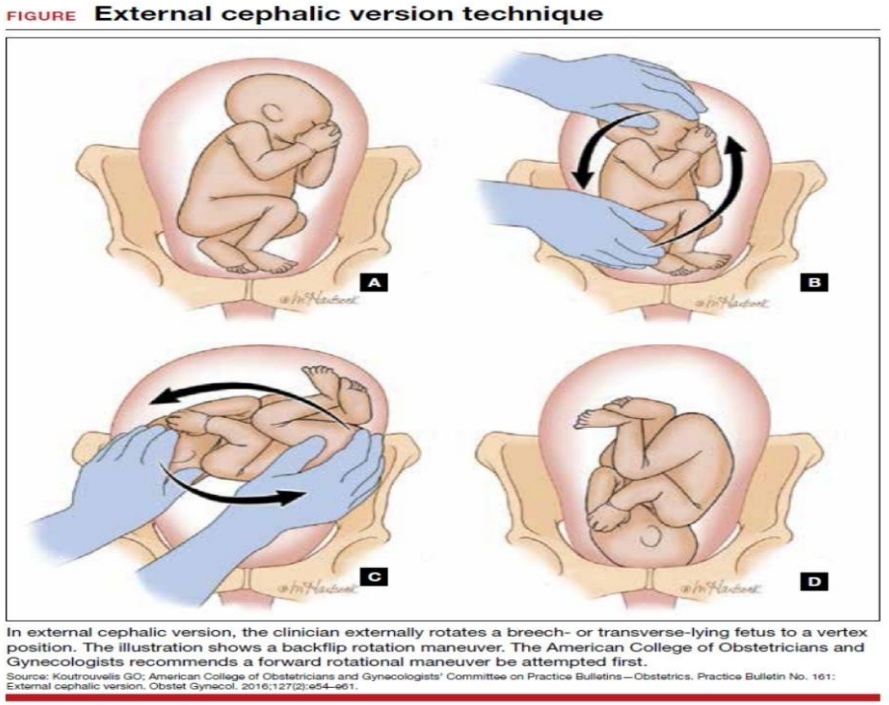
-placenta Previa

-rupture of membrane

-oligohydramnios

5. Management of last picture ?

Can deliver vaginally



AUB

AUB: Notes

- AUB: any deviation in normal character of menstruation women in **reproductive age/ any postmenopausal bleeding**
- How to describe the cycle?

  1- Frequency: normal is between 24- 38 day/ average= 28 day→ more than 38 days its **infrequent**, less than 24 days its **frequent**

  2- Duration: normally less than or = 8 days/ average= 5 days→ more than 8 days its **prolonged**

  3- Volume: subjective assessment by the pt. itself according to her baseline→ **light/ heavy**

  4- Regularity: shortest to longest cycle variation is less or =7-9 days→ if the variation is 10 days or more its **irregular cycle**

- **Don't forget to ask about: IMB**, **PCB**, If the pt, uses **anticoagulants, tamoxifen or any contraceptive method** (ex. in case of using mirena the pt. will complain of IMB in the 1st 3-4 months then amenorrhea)
- النقاط المذكورة فوق هي جواب اي فرع بطلب relevant points to ask about in the hx باي كيس

AUB: Causes

FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women

Polyp
Adenomyosis
Leiomyoma
Malignancy & hyperplasia

Submucosal
Other

Coagulopathy
Ovulatory dysfunction
Endometrial
Iatrogenic
Not yet classified

سؤال بكويز سادسة فيه صورة عملة ويد:
بده **(1**اسم نظام التصنيف **(2**وعلى شو بدل

Structural causes

Functional causes

AUB: PALM

- **Polyps:**

  1- Endometrial polyps: mostly **IMB/ Heavy**

  2- Cervical polyp: mostly **PCB**

- **Adenomyosis:** **Heavy regular** menses/ dysmenorrhea and uniformly enlarged ut. by P/E
- **Leiomyomas:**

  1- Submucous: Heavy regular menses, may cause **IMB/** Mx: Hysteroscopic myomectomy

  2- Intramural: Heavy regular menses

  3- Subserus: Pressure symptoms/ Mx: Laparoscopic myomectomy

- **Malignancy** of any part of the genital tract

  → **Endometrial Hyperplasia: IMB** in postmenopausal pt. OR pt. in the reproductive age group with risk factors of unopposed estrogen (obesity, pcos..)

AUB: COEIN

- **Coagulation:** mostly **heavy regular** menses+ bruises, bleeding tendency

  → von willebrand, liver dysfunction, leukemia, thrombocytopenia, warfarin, aspirin.
- **Ovulation dysfunction:** **HMB** or **short cycles**, **periods of amenorrhea followed by painless profuse bleeding/ scanty bleeding**

  →PCOS, Endometriosis, CAD, Cushing, hyperprolactinemia, Thyroid abnormalities
- **Endometrial:** **Heavy regular** menses. → Endometritis
- **Iatrogenic:** **HMB** in Cu- IUD, **IMB** in Mirena, **irregular bleeding** in HRT
- **NOT otherwise specified:**

  →CKD, Hepatic disease, sex hormone secreting ovarian neoplasm

NOTE: the most common cause of **postmenopausal bleeding→ ATROPHIC endometrium, Polyps**

AUM: Mx

- **Unstable pt.** → stabilization
- **Stable pt.** → nonsurgical Mx for COEIN and usually structural (PALM) require surgical

- **Options for medical Mx:** Hormonal (OCPs, Mirena, DMPA, Norethindrone acetate, GnRH agonist), Non hormonal (Tranexamic acid, NSAIDs).
- **Options for surgical Mx:** Myomectomy, Endometrial ablation, Uterine artery embolization, Hysterectomy.

Station 1:

- Case of abnormal uterine bleeding 35 age woman Married for 3 years nulliparous:

1. Indication for performing hysteroscopy: Long Hx of nulliparity

2. if she complains of delayed pregnancy. What would you check for in hysteroscopy: Mullerian congenital anomalies/ structural causes→ fibroids, polyps

3. Diagnosis : Submucous Fibroid

4. Tx : Hysteroscopic myomectomy

5. Complications of the procedures performed in Q3????

→ For hysteroscopy: Infection, Bleeding, Complications from fluid or gas used to expand the uterus.

→ For myomectomy: Infection, Bleeding, Adhesions..

Station 2:

- Hx: 40 y female, para5, complain of heavy menstrual bleeding and dysmenorrhea
- Questions would ask it about her cycle?

Regularty, frequency, duration, volume

- Other investigation you do it for this patient?

Transvaginal ultrasound, CBC

- Your diagnosis? Adenomyosis
- From history what the risk factor that will help you in your dia
- Conservative management? NSAID/ OCP/ mirena
- What your management if conservative treatment failed? Surgical Mx: Ablation/ Hysterectomy

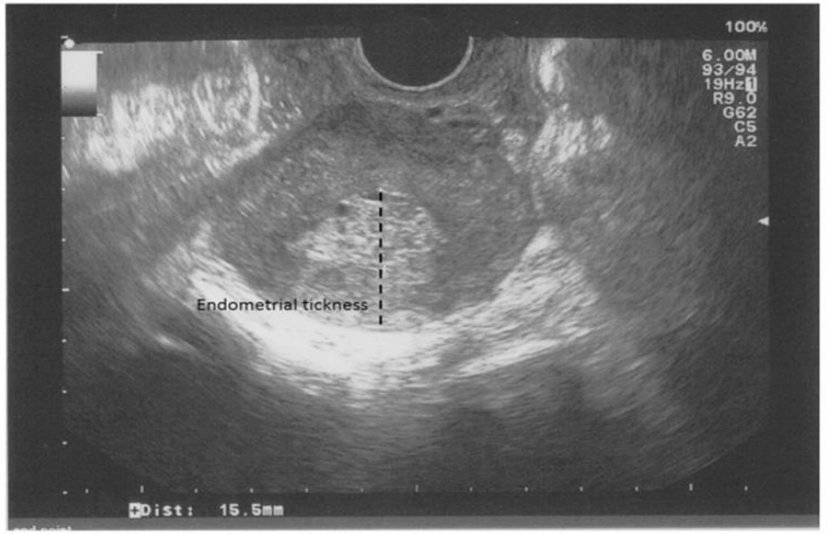
Station 3:

Old age women, menopause for 2 years, complain of bleeding

- What this picture indicate? Increased endometrial thickness
- Differential diagnosis? -endometrial hyperplasia -endometrial cancer -fibroid - adenomyosis
- What are the drugs that women may be took and cause this?

-hormones replacement therapy -tamoxifen - anti-coagulant

- Definitive diagnosis by? Hysteroscopy and biopsy



Station 4:

1st station: a 45-year-old woman G3P3 underwent a hysterectomy due to heavy menstrual bleeding, the following picture shows the uterus.

- **1. If her only complaint is heavy menstrual bleeding how would you describe her period? Regular, normal frequency, prolonged duration, heavy volume**
- **Name the lesion: Intramural leiomyoma**
- **Primary investigation? Ultrasound**
- **Protective factor in history? Multiparity**
- **Less invasive treatment modalities? Myomectomy, uterine artery embolization or medical treatment like Mirena**

Station 5:

57 female, menopause 2 years, complain of vaginal spotting

- What will you ask in history? Clots, amount, SOB, Fatigue, Palpitation, constitutional symptoms, abdominal pain
- Examination? signs of anemia, tenderness, the uterus may be enlarged, masses might be felt
- If tests unremarkable what is the most cause? Atrophic endometrium
- How to confirm your diagnosis?

Diagnostic D&C with histology

Thickness <2mm

Instruments

Kidney Dish

❖**To Receive and holding** :

- Dressing
- Needles
- Medical waste
- Instruments
- Biopsy
- Drainage

Female catheter

- For intermittent catheterization of the urinary bladder , when you went to do a “vaginal examination” while the patient is under GA .
- We can use instead the Folleys Catheter

Univalve vaginal speculum “Sim’s Speculum”

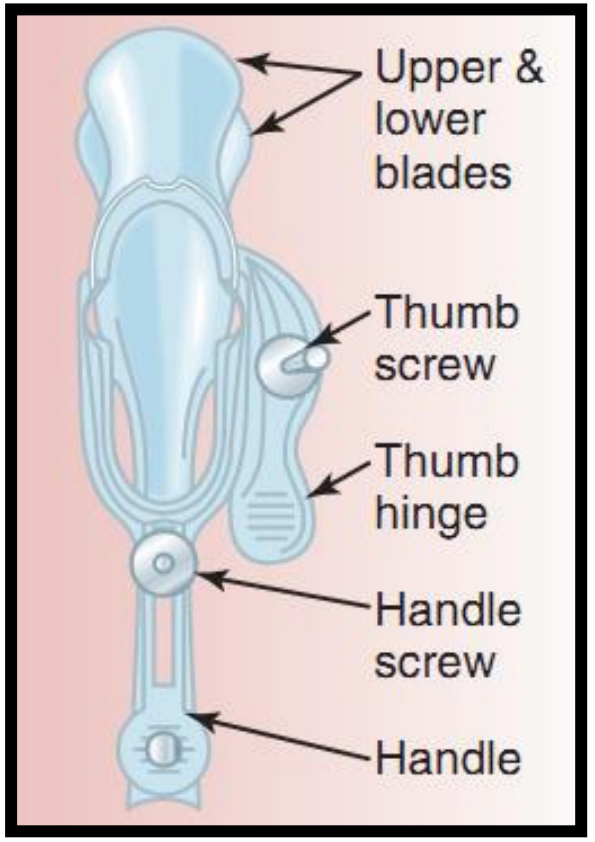
❖**Uses** :

- To examine Genital prolapse “vaginal wall prolapse” and urinary incontinance
- In D & C
- In Hysteroscopy
- In Curettage under anesthesia
- In Vaginal hysterectomy

❖It need assistant during examination (holding the handle) of the vagina and The patient should be in the “left lateral position” .

❖Got 2 shapes , the first with one blade and the other with 2 blades

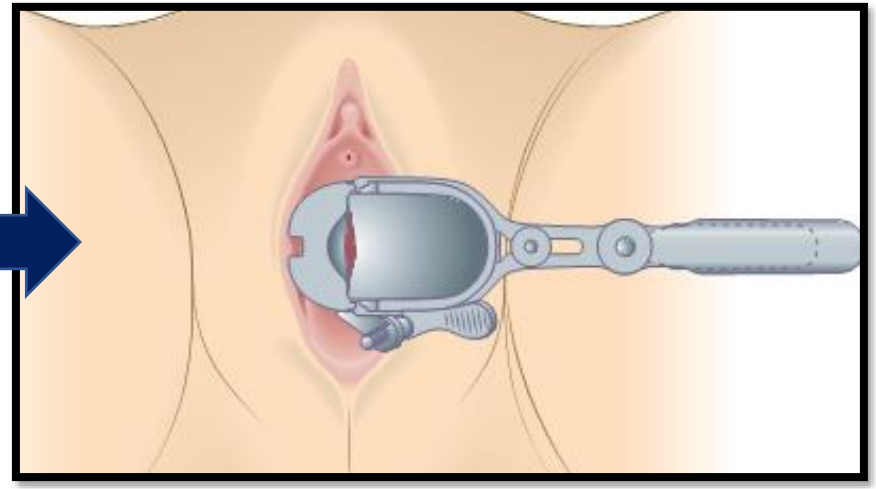
Bivalve vaginal wall self retaining speculum “Cusco's Speculum “

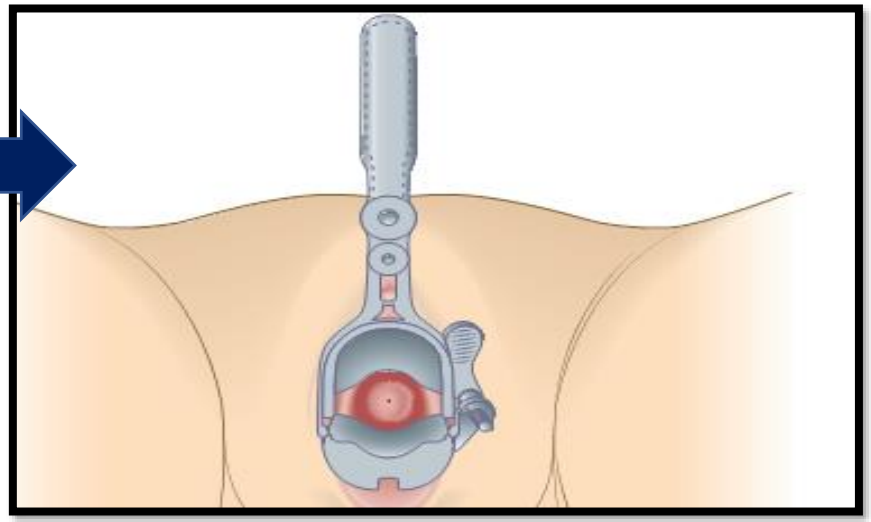


Procedure steps :

❖Should be applied under full aseptic conditions.

- Gently part the labia using your left hand.
- With your right hand gently insert a lightly lubricated** bivalve speculum with the blades **vertical**, fully into the vagina.
- Rotating the speculum 90 degree so that the handles point anteriorly and the blades are now horizontal ,Slowly open the blades and see the **cervix** between them, Note any discharge or vaginal or cervical abnormalities .
- In this tool we can examine both the **cervix and the lateral vaginal walls.**





Indications and uses :

- To perform a cervical smear.
- To inspect the cervix for any lacerations or polyps.
- To examine for vaginal discharge.
- To examine for vaginal bleeding .
- Apical vaginal prolapse
- To take a high vaginal swab or endocervical swab for culture
- To insert, remove and follow up of IUD .
- To confirm potential rupture of membranes.
- For doing hysterosalpingogram HSG
- For embryo transfer in case of “IVF”
- For Office hysteroscope

Mini-OSCE

1. **Identify the instrument**
2. **Show the examiner the principles of its application on the model provided.**

Answer the following questions:

Q1. List three pathologies that you may be able to see in the cervix with the use of this instrument.

Q2. List four minor types of interventions that you can do by the use of this instrument.

Answer:

1- Cusco's speculum (1 mark). ( )

2- Methods of application (half mark for each step) :

No.	Steps of application	Mark
1	The instrument should be applied under full aseptic conditions.	
2	The instrument should be lubricated	
3	Introduce the instrument in the lateral position through the vaginal opening.	
4	Turns the handles upward.	
5	Fix it in self retained position.	

Q1. Any three of the following (one mark for each correct answer).

No.	Types of pathology	Mark
1	Cervical ectropion	
2	Cervical polyp	
3	Carcinoma of the cervix	
4	Pedunculated fibroid or endometrial polyp.	
5	Examination for IUCD thread.	

Q2. Any three of the following (half mark for each correct answer).

No.	Types of interventions	Mark
1	HVS &/or endocervical swab.	
2	Cervical smear.	
3	Cervical cautery.	
4	Application of IUCD.	

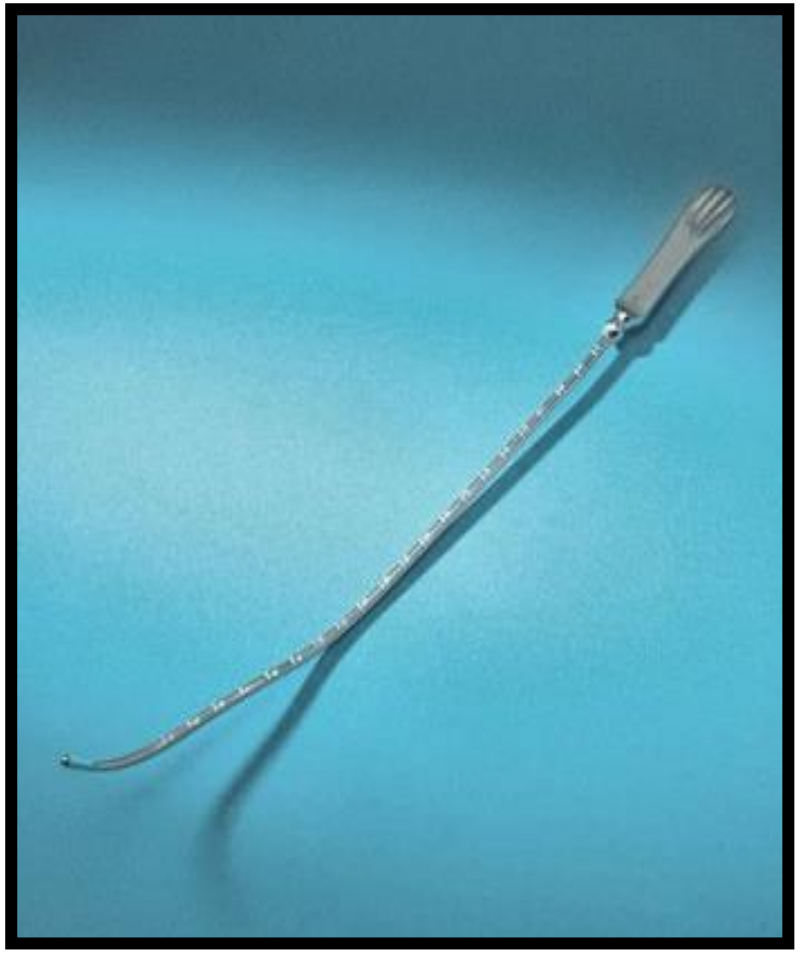
Uterine Sound

❖**To examine the uterine size “non pregnant uterus” before** :

- D&C
- IUD insertion
- Taking endometrial biopsy

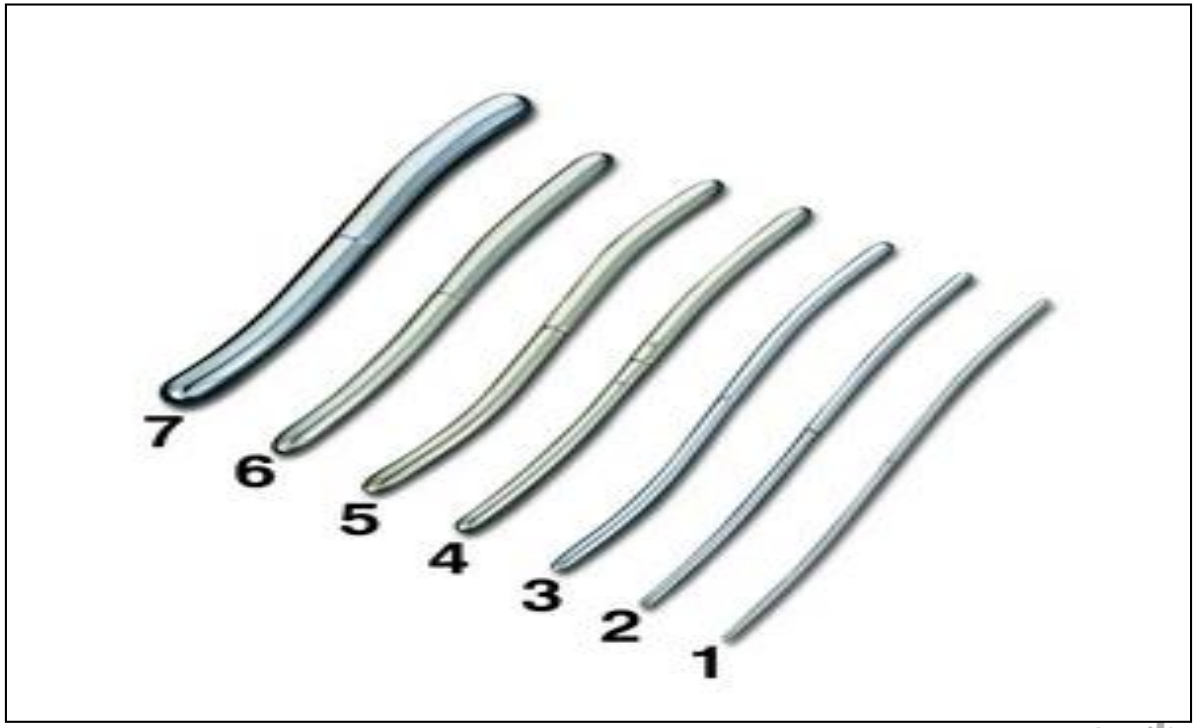
❖The insertion Depends on the bimanual examination “direction of the uterus” to avoid perforation.

- **Complications with wrong use** : perforation and bleeding (see the complaications slides)



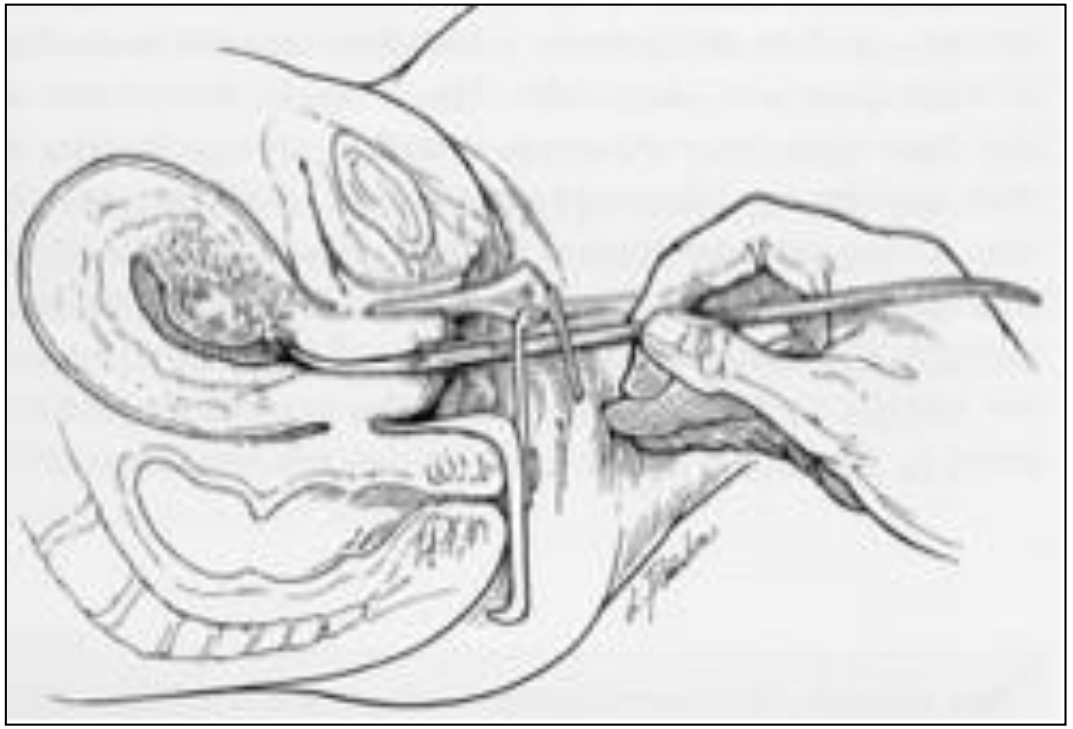
Hegar's dilator

- All dilators used to induce cervical dilation **in order** to gain entry to the interior of the uterus.
- With various sizes , The degree of dilatation will depend on the next procedure .
- Should be insert until it reaches the internal os "resistance"
- One enters by one till we reached the desired dilatation .



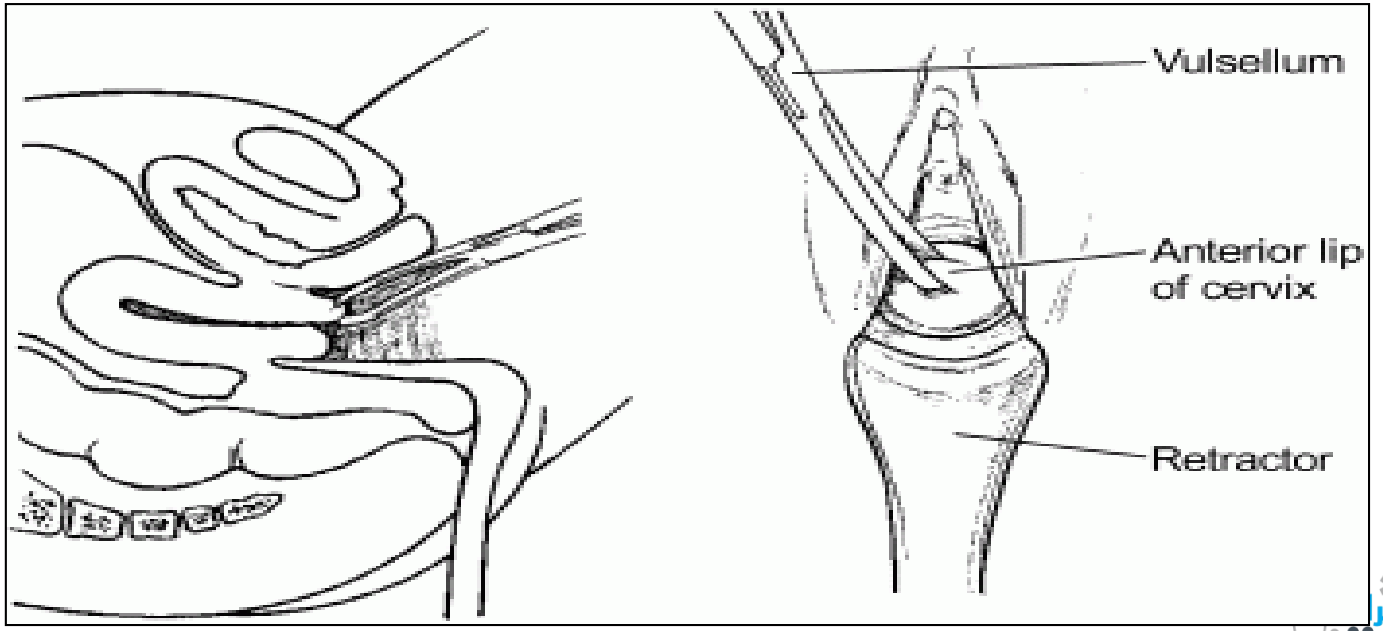
It precede:

- Evacuation of product of conception after missed or incomplete miscarriage .
- Endometrial biopsy.
- Evacuation of molar pregnancy .



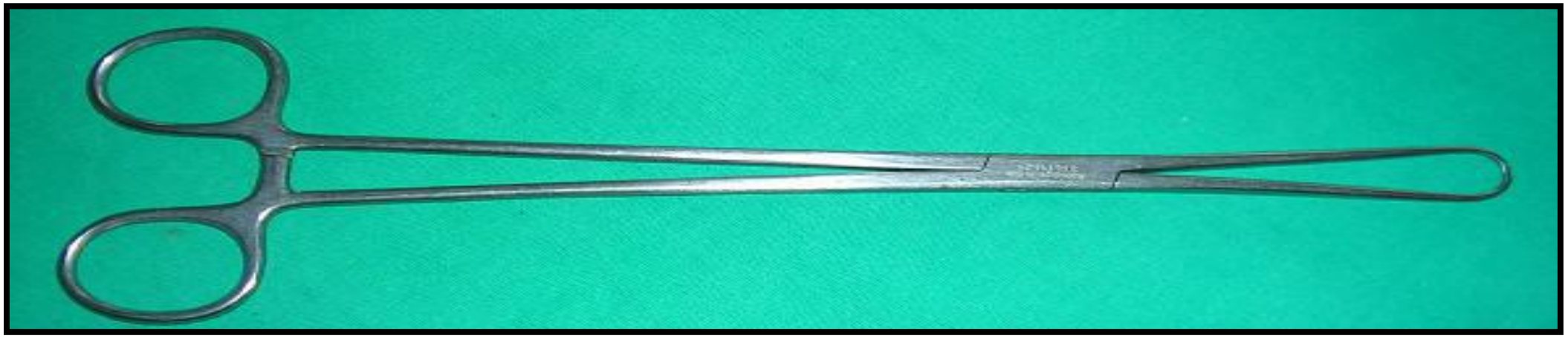
Vulsellum

- It used to catch the anterior lip's of the cervix "fixation" of the uterus as its mobile in nature .



Tenaculum

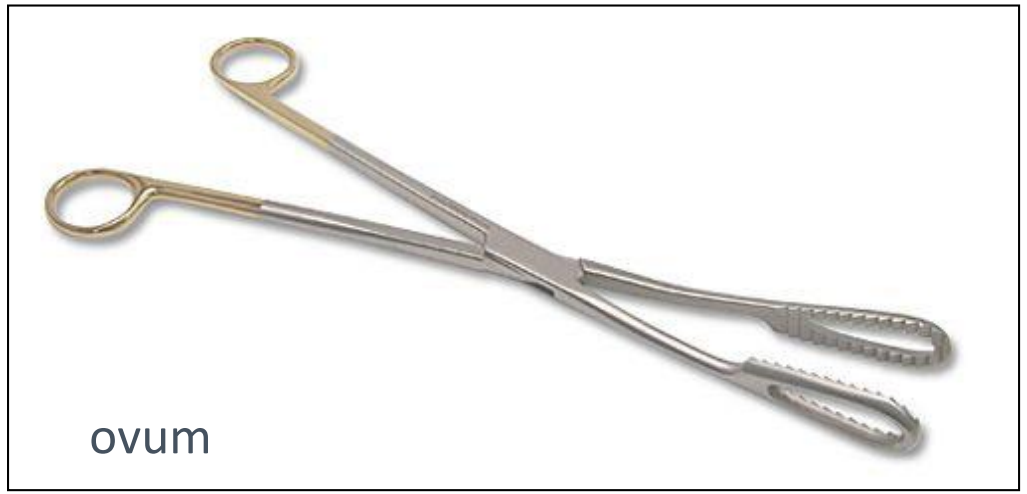
❖It used to <u>grasp the cervix.</u>



Ovum & spongy forceps

❖It will be inserted remains closed, then opened inside the endometrial cavity

- to evacuate the product of conception
- to remove the cervical polyps



- It used at cleaning phase "catch the gauze"
- Used to explorate/clear field the cervix ,

To role out the cervical laceration "in case of PPH"

Uterine Curette

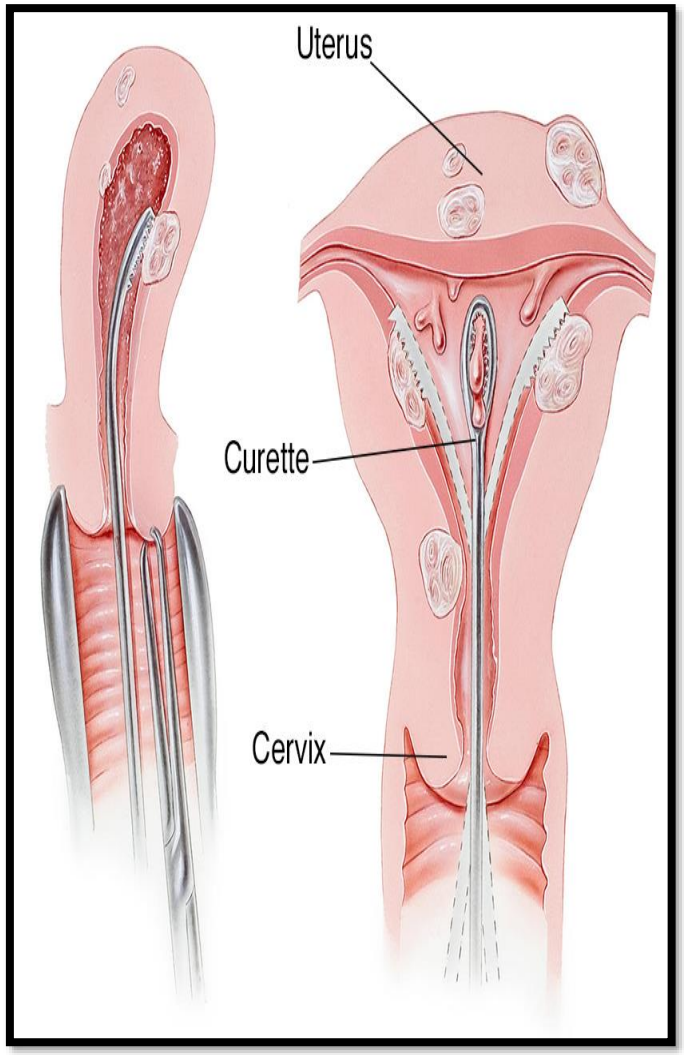
❖**They are two types** :

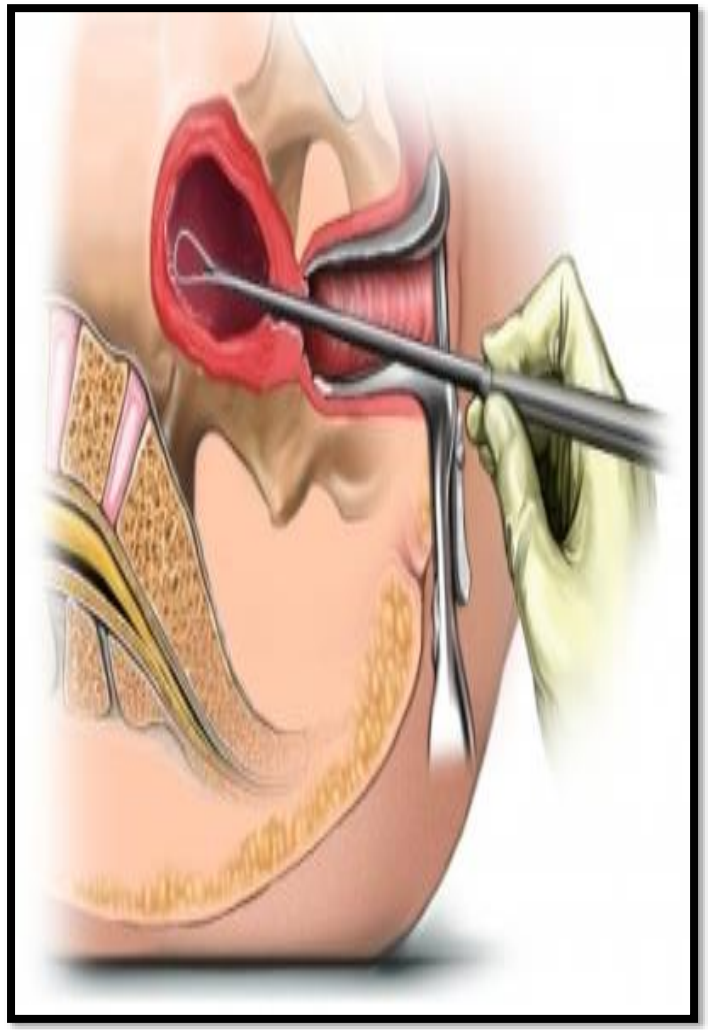
Blunt and sharp “according to the edge of the device “

*blunt edge used in pregnant uterus

Indications:

- Taking endometrial biopsy
- Uterine curettage “anterior , lateral then posterior wall” , There are distinctive sound when the uterus is empty .
- Evacuation
- ****Aggressive curettage can cause uterine adhesion ”Asherman syndrome” ****





Green armytage

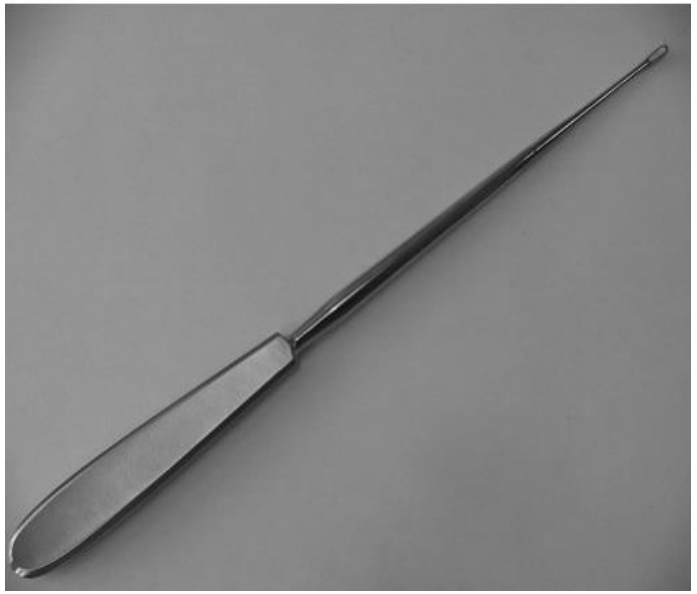
❖**Uses:**

- In case of CS , to catch the angle of the uterus
- to ensure homeostasis.

Endocervical Curette

❖ Indications

- ASC-H ; HSIL.
- Adenocarcinoma in situ.
- Glandular lesion.
- Unsatisfactory colposcopy (Transformation zone not visible by colposcopy).
- ASC-US / LSIL but no visible lesion (Lesion is inside).



❖ Contraindicated in :

1. Pregnancy.
2. Active cervicitis.

Cervical Punch Biopsy Forceps

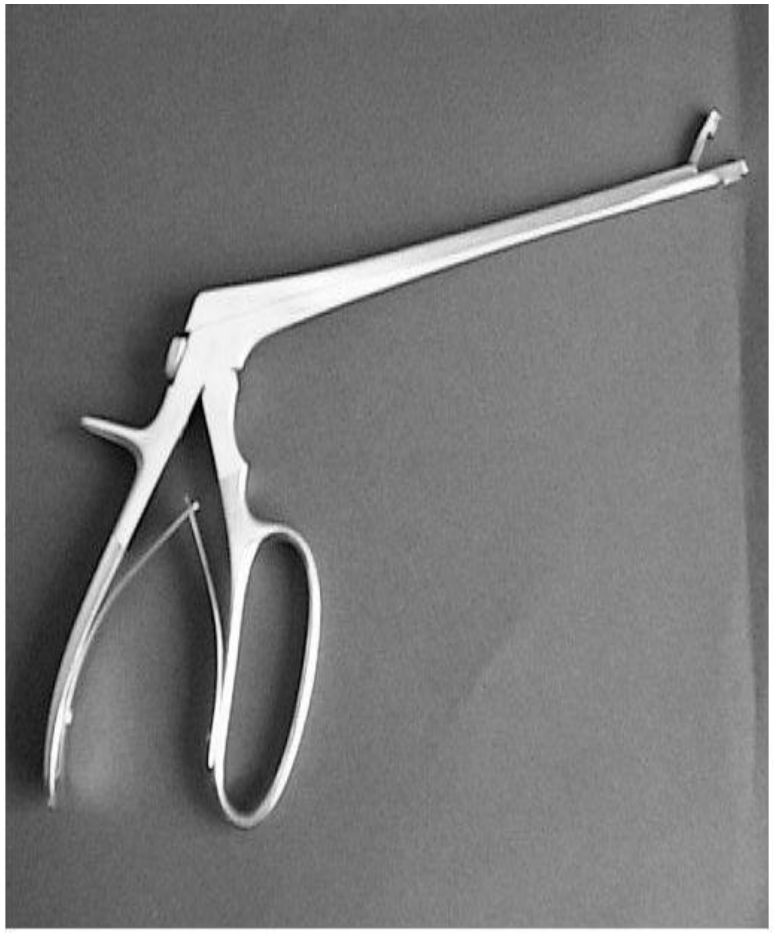


FIGURE 4.8: Cervical punch biopsy forceps with sharp, cutting edges

Mini-0SCE

❖Name these Items :

1

2

3

4

5

- 1. Sims speculum , 2. Uterine sound,3. Ovum Forceps,4.Uterine curette *single ended* ,5. Cervical dilaters"Hegar Dilators"

❖**operation could be used for:**

- dilatation and curettage , Hysteroscope , Evacuation& curettage, Insertion of an IUCD
  "note that if there's no cervical dilator, don't answer D&C "

❖**early and late complications for that procedure** ?
Early : uterine perforation, bleeding, cervical laceration
Late: Asherman syndrome"adhesions", Infection

❖**pre- requests** :
Emptying bladder, Bimanual examination., GA , Lithotomy position and cleaning the area by sponge forceps

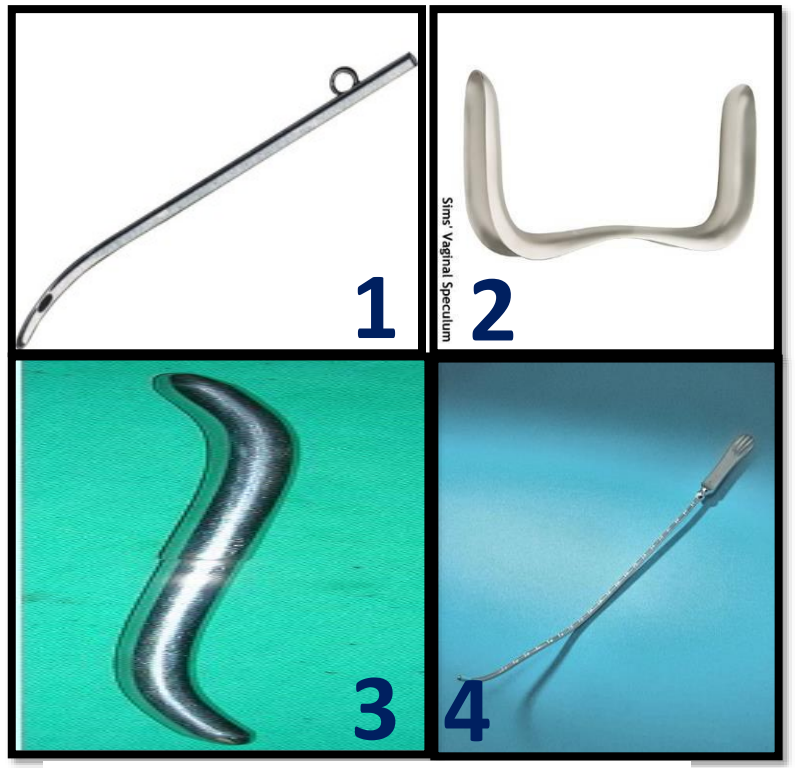
Mini-0SCE

❖ **Name these instruments ?**

- 1- female catheter
- 2- double bladed sims speculum
- 3- hegar dilator
- 4- uterine sound
- 5- uterine curette

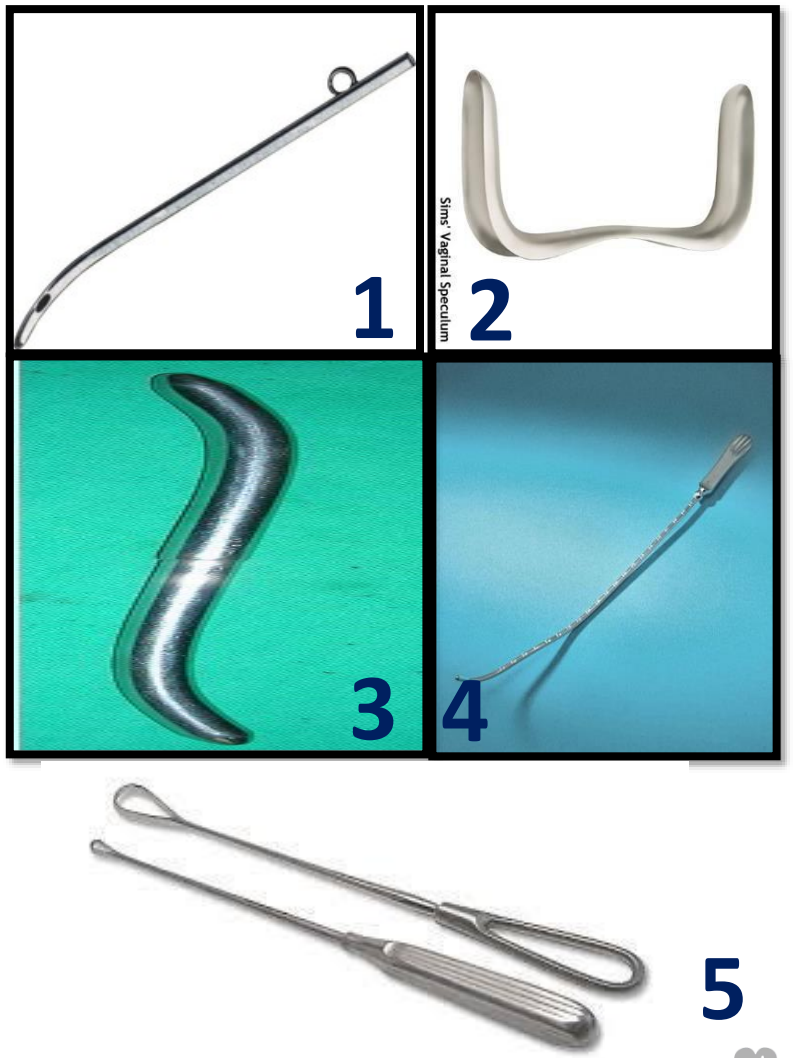
❖ **What is the purpose of instrument no 1 ?**

- Female catheter :For intermittent catheterization of the urinary bladder , when you went to do a “vaginal examination” while the patient is under GA .



Mini-0SCE

- **A.what instrument used to measure the fundal height ?**
  - the uterine sound
- **B.what complication can happen during this procedure?**
  - perforation and bleeding
- **C.how can you asses if these complication happened?**
  - 1- change in vital signs of mother (hypothermia and tachycardia)
  - 2- bleeding (large, new onset of bleeding , if happen : call the blood bank for Blood , go for laparotomy and laproscopy for defining the direct cause and managing it)
  - 3- when using the uterine sound , you can asses if perforation happened if the tool gone further than expected .



Mini-OSCE

You are about to do a diagnostic curettage. Check the following instruments on the table. Identify and name each of the following:

1- Instrument used to visualize the cervix when you are doing a diagnostic curettage.
2- Instrument used to fix the cervix in position.
3- Instrument used to measure the length of the uterine cavity.
4- Instrument used to dilate the cervix.
5- Instrument used to explore the cavity of the uterus.
6- Instrument used to take endometrial biopsy.

Answer:

No.	Type of instrument
1	Sim's speculum
2	Vollesulum forceps
3	Uterine sound
4	Hegar's dilators
5	Sponge forceps
6	Uterine curette

Forceps

❖It is double-bladed metal instrument used for extraction of the fetal head, commonly used in **preterm delivery .**

❖It consist of 4 parts:

1. blade :

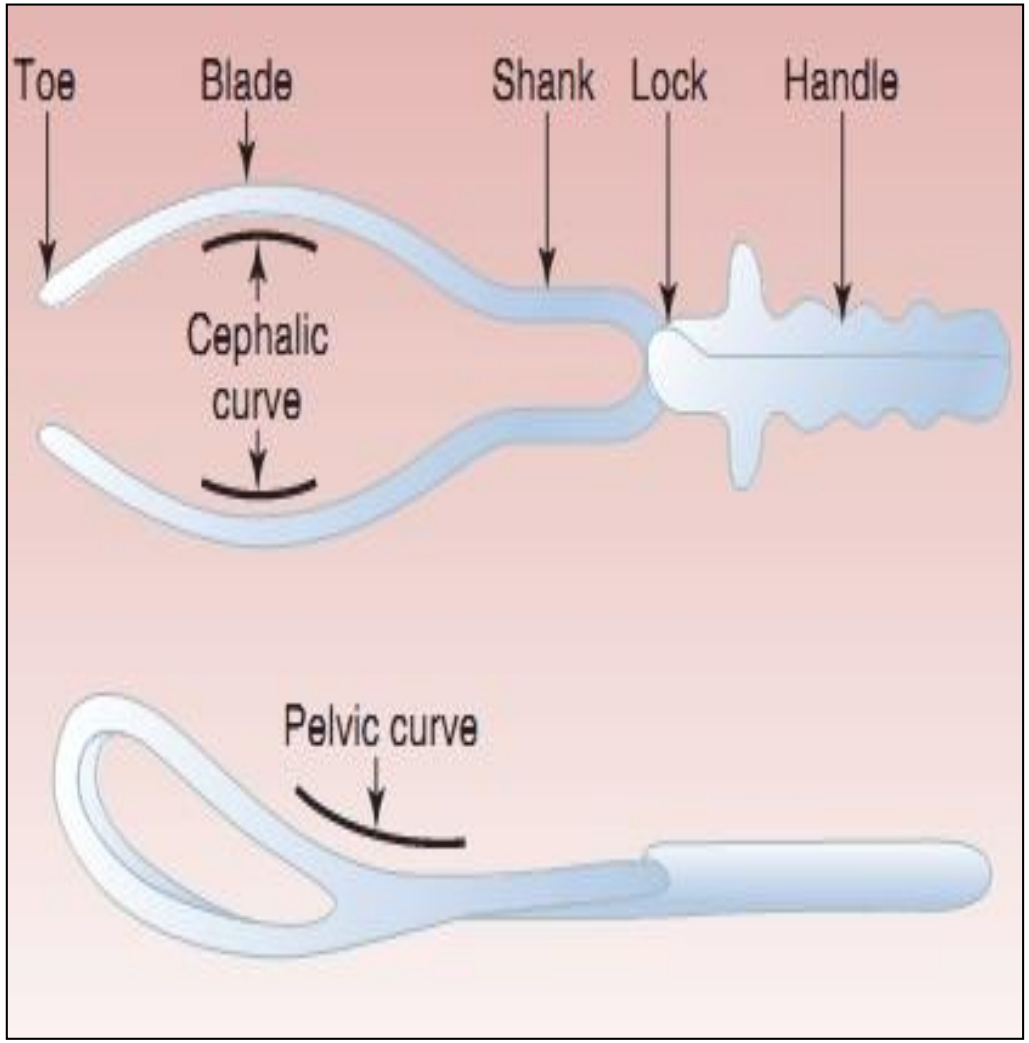
The blades grasp the fetus "fits on the head", can be fenestrated (with a hole in the middle) or solid

***Fenestrations helps** in :

- minimize compression
  - make its weight lighter
  - prevent slipping as the parietal eminences protrudes through the fenestration

***It cantaions two curves** :

- Cephalic curve : fit fetus head
- pelvic curve : fit the maternal pelvis



2. **Shanks**:

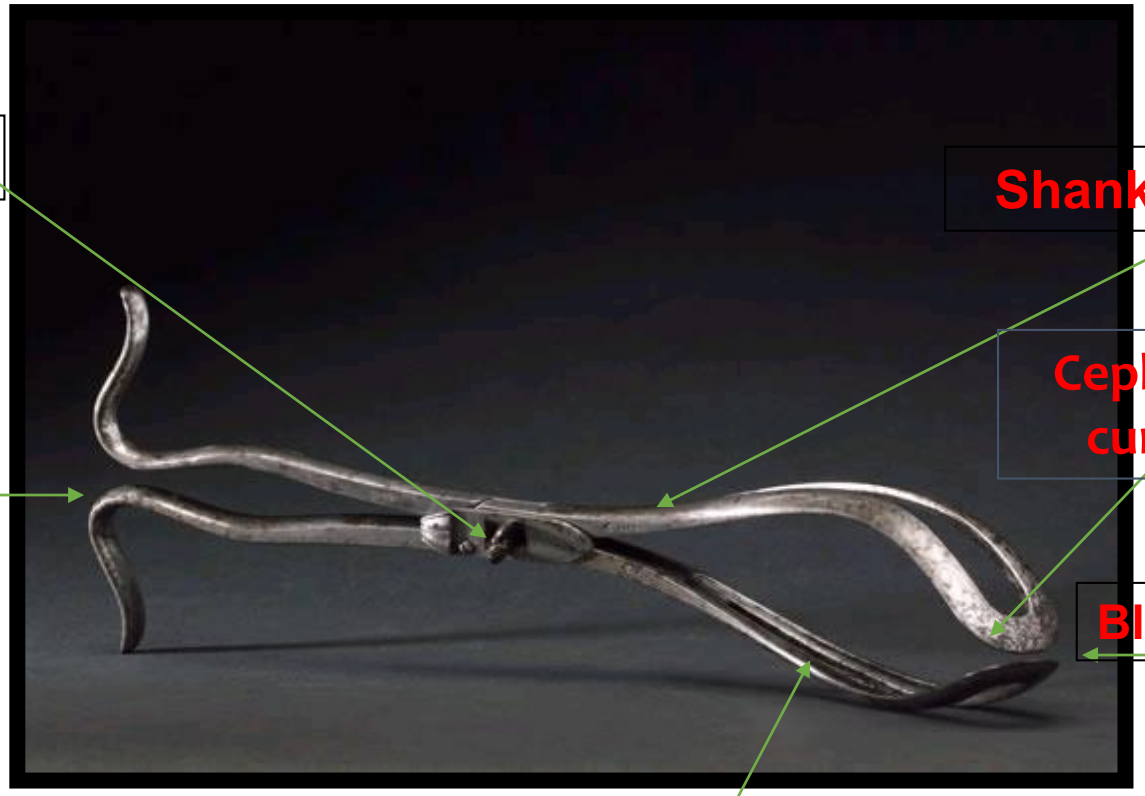
that connects the blade to the handle.

3. **Lock :**

is the articulation between the shanks. Many different types have been designed

4. **Handle :**

are where the operator holds the device and applies traction to the fetal head



classification of forceps operations

❖**Outlet forceps:**

- Fetal head is at the perineum,,(The scalp is visible at the introitus, without separating the labia.)
- Sagittal suture in anterior or posterior diameter (DOA-DOP).
- Rotation is < 45º (ROA-LOA).

❖**Low-cavity Forceps:**

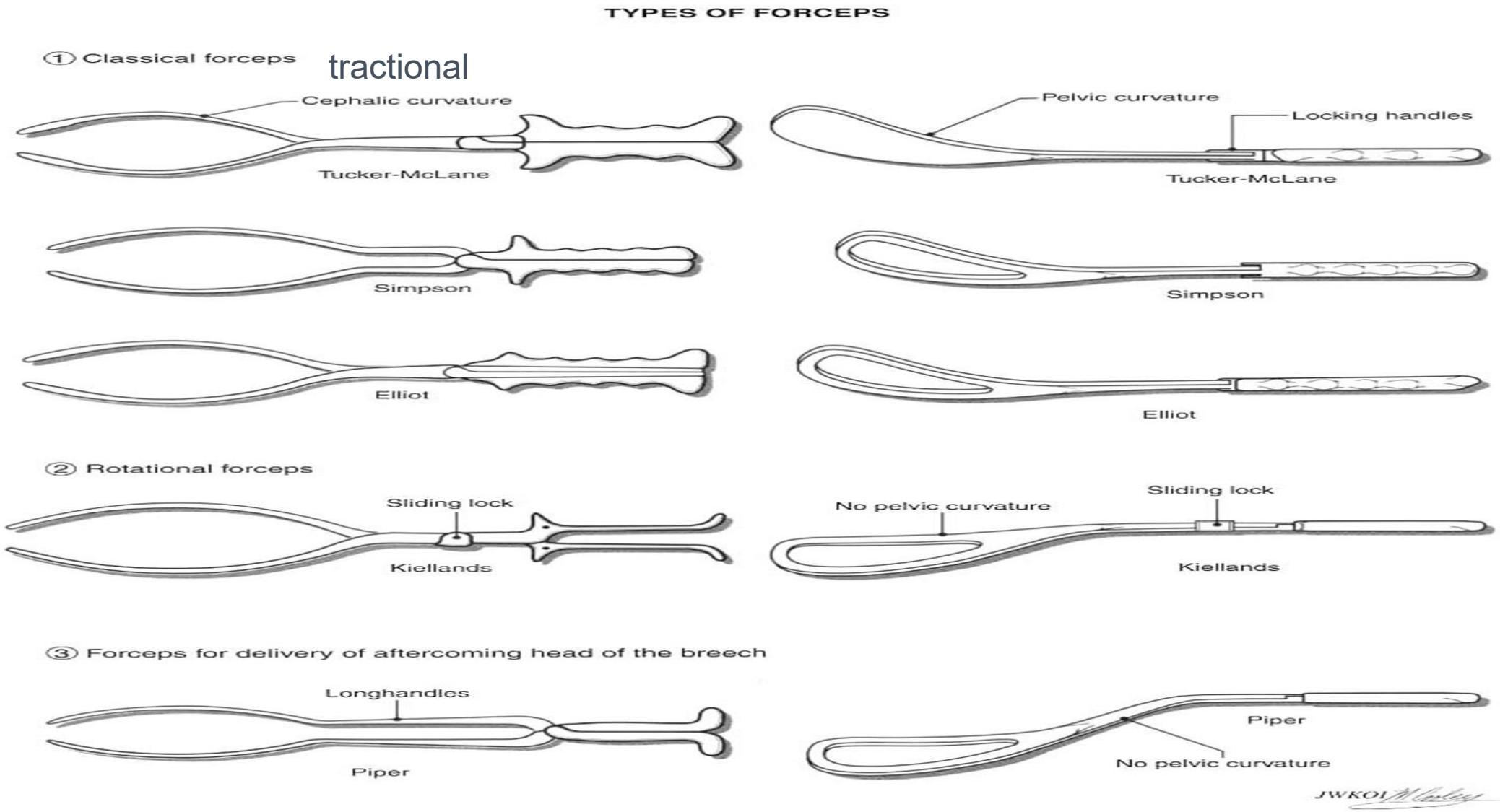
- Fetal head is at station (+2, or more), but not on perineum, any degree of rotation maybe present
- Rotation is > 45º

❖**Mid-cavity forceps:**

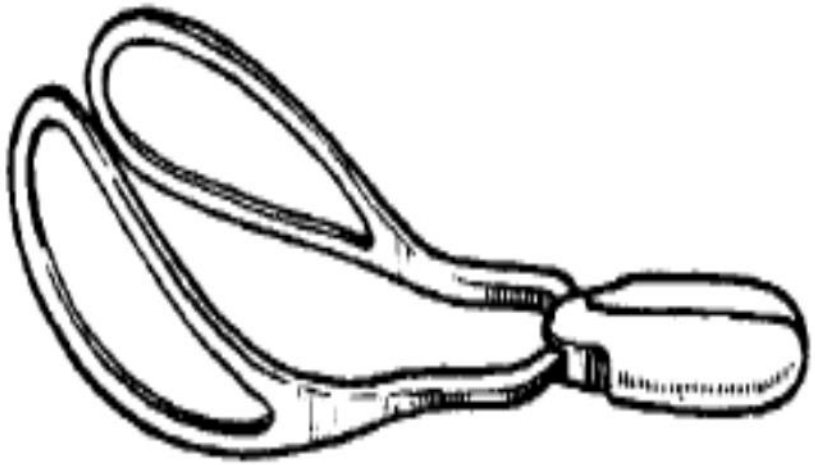
- fetal head at station (0 to +1) head engaged
- high forceps : (head is not engaged not used anymore)

1-Outlet forceps. **(Wrigley's)**	1) Fetal scalp is visible at the introitus, without separating the labia. 2) Fetal skull has reached the pelvic floor Most forceps used here
2-Low forceps. **(Simpson)**	The leading point of the fetal skull is at a station >/= +2 cm below the ischial spine and is not on the pelvic floor.
3-Mid forceps. **(Simpson)**	The station is above +2 cm, but the head is engaged.
4-High forceps **(killand)**	Head is not engaged Not included and not recommended

Types:

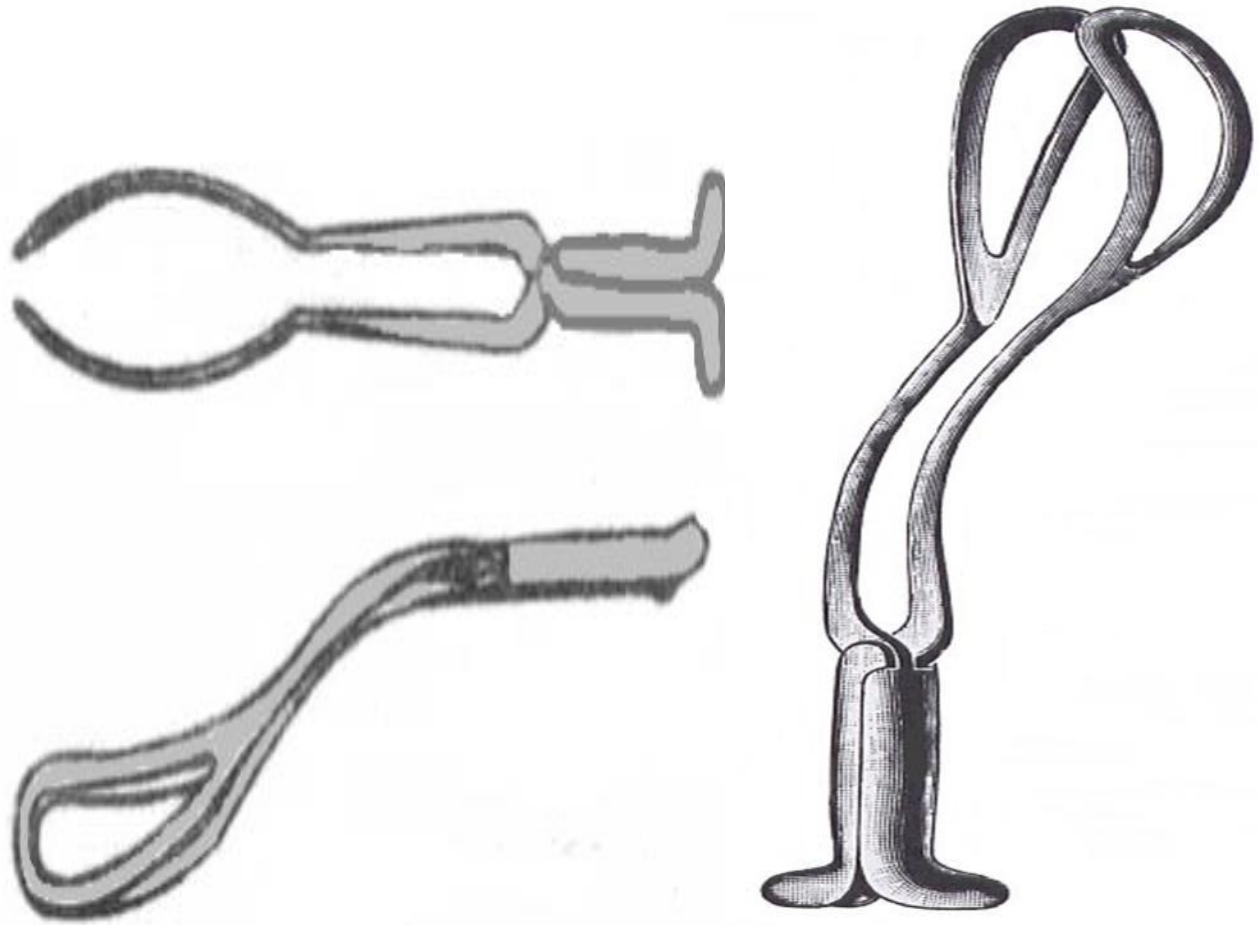

TYPES OF FORCEPS
① Classical forceps
tractional
Cephalic curvature
Tucker-McLane
Pelvic curvature
Locking handles
Tucker-McLane
Simpson
Simpson
Elliot
Elliot
② Rotational forceps
Sliding lock
Kiellands
No pelvic curvature
Sliding lock
Kiellands
③ Forceps for delivery of aftercoming head of the breech
Longhandles
Piper
Piper
No pelvic curvature
JWKOI

❖**Wrigley's Forceps:** is designed for use when the head is on the perineum and local anaesthesia is being used. It is a short light instrument with pelvic and cephalic curves, commonly used



❖**Pipper Forceps** : It is a long forceps designed to facilitate delivery of the after coming head in breech presentation, it doesn't had a pelvic curvature

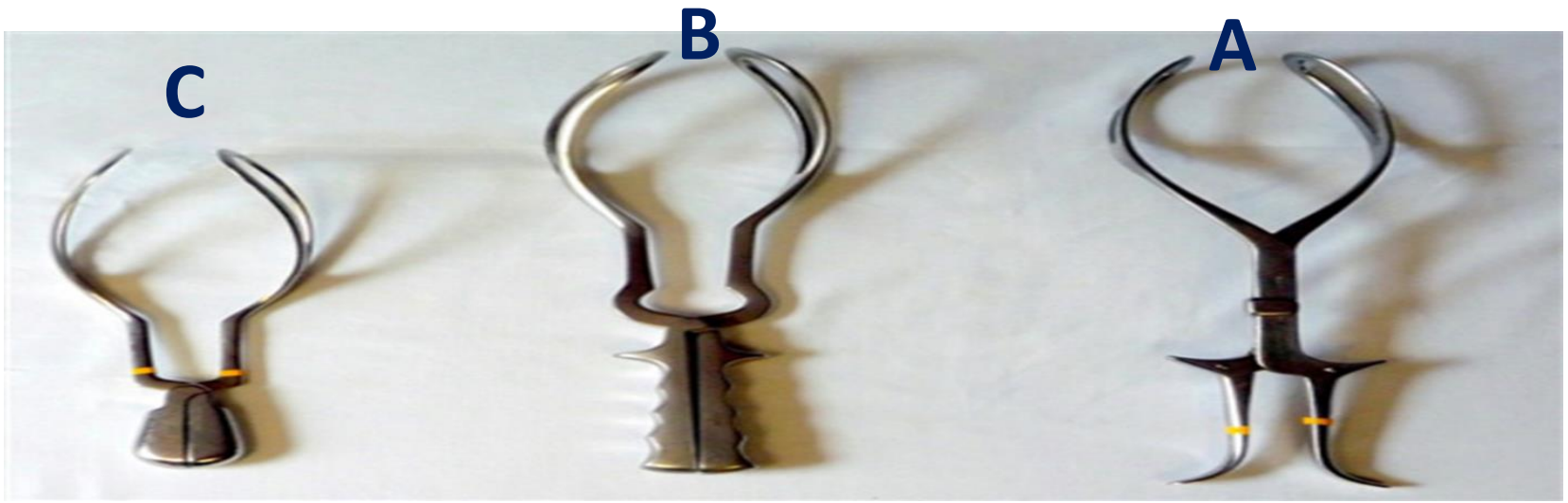
- characterized by a long shank
- It promotes flexion of the fetal head.
- It prevents sudden compression and decompression on the fetal head.
- It allows safer traction on the after coming head and not on the fetal neck.



Function:

1. **Traction**: the most important function, Should be steady (not rocking) and in the line of the birth canal, Should be exerted with each contraction and in conjunction with maternal expulsive efforts,“Forceps can be relaxed between contractions to reduce fetal cranial compression”.
2. **Rotation of head**: (Kielland's forceps) never done now .
3. **Protective cage:** When applied on a premature baby it protects from the pressure of the birth canal, and when applied on the after-coming head it reduces the sudden decompression effect “”commonly used in case of preterm baby “”

Station :



- 39 weeks primgravida , who has been in labour for 8 hours , next step?
  - Operative delivery , using forceps C “Wrigley's Forceps because the baby in the perineum “

Station :

Have a close look at the instrument in front of you and answer the following questions:

Q1. Identify the instrument.

Q2. What are the landmarks present in the instrument that confirms your identification?

Q3. Mention three indications for the use of this instrument.

Q4. At what station the presenting part of the fetus should be when you apply this instrument.

Answer:

Q1. Mid cavity obstetric traction forceps. ( )
(Two marks).

Q2. One mark for each correct answer.

- Presence of pelvic curvature. ( )
- It has a locked axis (fixed lock). ( )

Q3. Any three of the following (One mark for each correct answer).

- Prolonged second stage of labour. ( )
- Fetal distress. ( )
- Maternal distress (exhaustion). ( )
- Shortening the second stage of labour ( )
- Delivery of after coming head in breech Presentation. ( )

Q4. At station 0 or more (one mark). ( )

Vacuum

Has different sizes (according to the size of the fetal head and whether the mother is multi or primi)

❖Indications :

- Prolonged second-stage labor.
- Fetal distress

❖Prerequisite :

- Verbal consent from the patient
- Adequate pelvis with empty bladder .
- Ruptured membranes ,and engaged head .
- Vertex presentation . ○ Fully dilated cervix .


Metal Vacuum

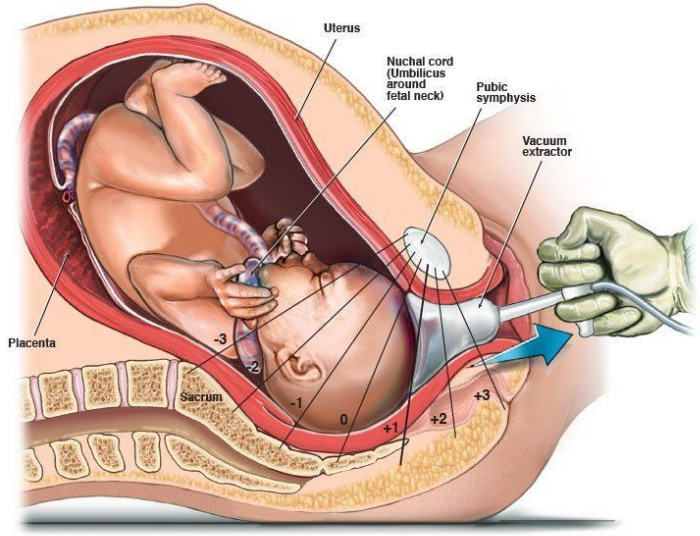
Vacuum Cont. (Rigid Vs Soft cups)

❖**Soft Cups** (polyethylene or silastic)

are associated with less scalp injuries and appropriate for occipito-anterior position .

❖**Rigid cups** (Metal or Plastic)

are more suitable for occipito-posterior , transverse , and difficult occipito-anterior position where the infant is larger.

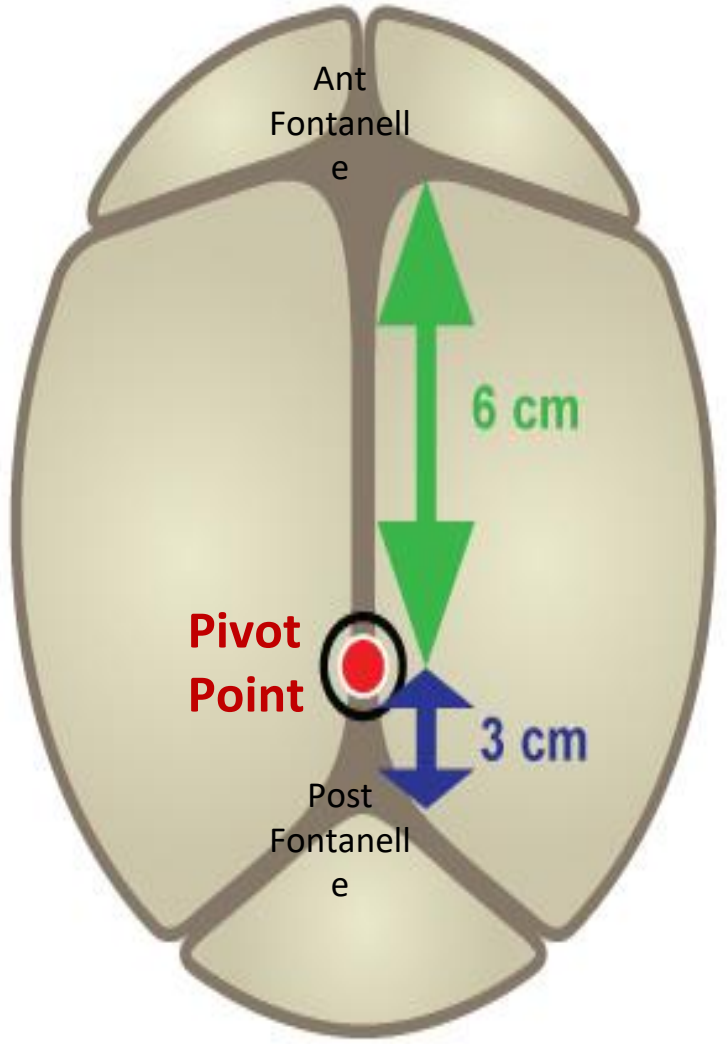


Cut-away View of Mother with Fetus at +1 Station In Occiput Posterior Presentation

❖There is higher rate of failure with soft cups .

Vacuum Cont. (Technique)

1. The woman is placed in the **Lithotomy** position and assises throughout the process by pushing.
2. The suction cup is placed onto the head of the baby.
3. Correct placement of the cup directly over the flexion point **(Pivot Point)** “about 3 cm anterior to the posterior fontanelle ,and 6 cm posterior to the anterior fontanelle”



❖ **For proper use :**

- The maternal cervix has to be fully dilated.
- The head engaged in the birth canal.
- The baby shouldn’t be preterm.
- Not previously exposed to scalp sampling or failed forceps delivery , if the ventouse (vacuum) delivery

Vacuum Cont.

❖ Advantages

1. Less training.
2. No risk of excessive traction.
3. Clear cut roles.
4. Less injury to the mother

❖ Disadvantages

1. Cannot be used for :preterm , face or breech presentation , and the mother is unable to assist the delivery with expulsive effort.
2. Need more complex equipment
3. More trauma for baby

Vacuum Cont.

❖ The **ventouse** compared to forceps **is more likely to be associated with :**

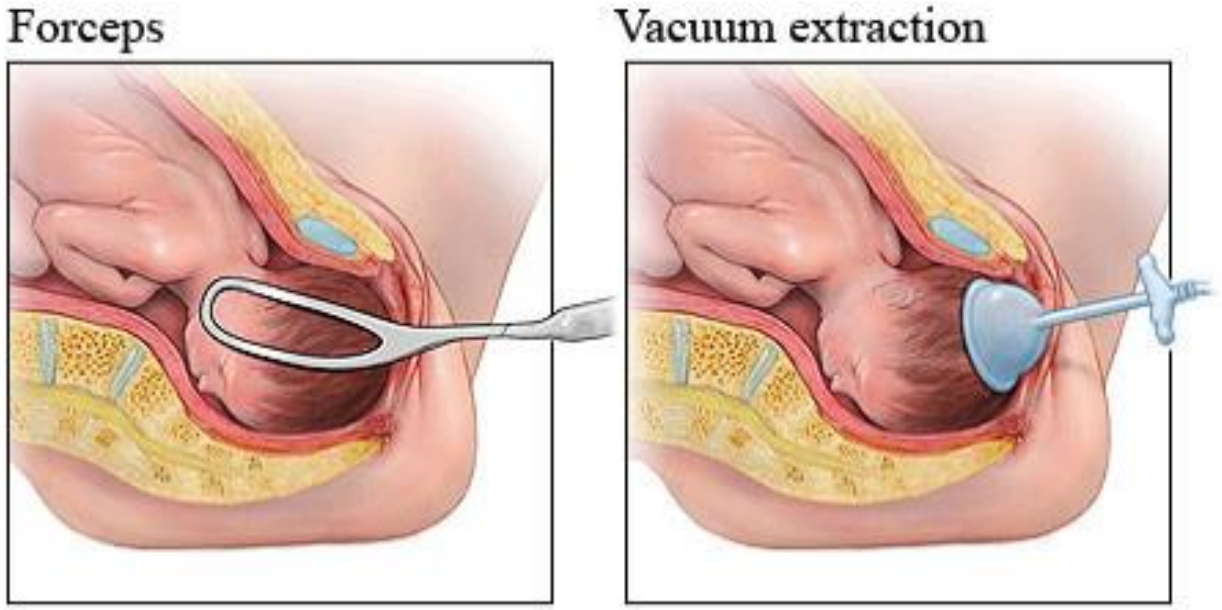
- Failure to achieve a vaginal delivery.
- Cephalo-haematoma (subperiosteal bleed).
- Retinal hemorrhage.
- Maternal worries about the baby.

❖The **ventouse** compared to forceps is **significantly less likely to be associated** With:

- Use of maternal regional/general anaesthesia.
- Significant maternal perineal and vaginal trauma.
- Severe perineal pain at 24 hours.

❖The ventouse compared to forceps is **similar in terms of:**

- Delivery by caesarean section (where failed vacuum is completed by forceps).
- Low 5 minute Apgar scores.



Complications of Instruments in Examination

GYN Exam. Complications (Curette or Sound)

- perforation and bleeding .
  - How to asses if this happened ?
    1. Changes in the vital signs of the mother (hypotension and Tachycardia).
    2. Bleeding (large, new onset of bleeding) , call the blood bank for blood , go for laparotomy / laparoscopy to define the direct cause of bleeding and manage it.
    3. When using the uterine sound , you can asses if perforation happened if the tool goes further than expected.

Maternal Comlications of Forceps

- **Early**
  1. **Injury** : (acute)
     - Extension of the episiotomy involving anus & rectum or vaginal vault.
     - Vaginal lacerations and cervical tear if cervix was not fully dilated.
  2. **Post partum hemorrhage :** due to trauma or atonic uterus.
  3. **Shock:** due to blood loss, dehydration or prolonged labour.
- **Long term**
  1. **Urinary incontinence** has been reported in up to 24% of women within 6 months of a forceps delivery.
  2. Decrease in pelvic muscle strength, as a result increase in **fecal incontinence** and in a general index of pelvic floor disorders (incontinence of urine and feces and pelvic organ prolapse).
  3. **Fistula**

Fetal Complications (more in vacuum)

1. Asphyxia.
2. Trauma:
   - Intracranial haemorrhage.
   - Cephalic haematoma.
   - Facial / Brachial palsy.
   - Injury to the soft tissues of face & forehead.
   - Skull fractures.
3. Cerebral palsy ,mental retardation ,and behavioral problems.
4. The risk for serious morbidity is 1.5% and the risk of fetal or neonatal death is 0.05%.

Analgesia in Vacuum and Forceps

- Analgesic requirements are **greater for forceps** than for ventouse delivery.
- Where rotational **forceps** or midpelvic direct traction forceps are needed **regional analgesia** is preferred.
- For a **rigid cup ventouse** delivery, a **pudendal block with perineal infiltration** may be all that is needed.
- If a **soft cup** is used analgesic requirements may be limited to **perineal infiltration with local anaesthetic**

- If one fails don't try another.
- If 2 tries with vacuum without descent go for C/S.
- Max pressure vaccum is 400-600 mmhg.
- Max time vacuum is 15- 20 minute .

	OVD	Vacuum	Forceps
Indications	1- delay in 2nd stage of labor (eg. Uterine inertia) .1 2-**Maternal indications** (Pre-eclampsia , Intrapartum infection , bleeding , Cardiac or pulmonary diseases) 3-**Fetal indications** (Fetal distress or compromise "Abnormal heart rate pattern , Abnormal scalp blood pH " ,Fetal malposition including the after-coming head in breech vaginal delivery)		
Prerequisites	1- Informed consent 2-Vertex , Engaged 3-Fully dilated cervix 4-Membranes ruptured 5-Adequate maternal pelvis 6-Adequate anaesthesia 7-Maternal empty bladder 8-fetal and maternal assessment	1- Informed consent 2-Prepared physician 3-Prepared patient 4-Acceptable analgesia/anesthesia (regional (eg, pudendal block) or a conduction anesthetic (eg, epidural, spinal, saddle block)	1- head must be engaged 2-cervix must be fully dilated and retracted 3-position of the head must be known 4-no CPD 5-membranes must be ruptured 6-patient must have adequate analgesia

	OVD	Vacuum	Forceps
Containdictions	1-Non-verex presentation 2-non-engaged vertex 3-Incompletely dilated cervix 4-Clinical evidence of CPD 5-< 34 weeks gestation 6-Need for device rotation 7-Deflexed attitude of fetal head 8-Fetal conditions (e.g. thrombocytopenia)	1-Inability to achieve a correct application 2-lack of a standard indication 3-Uncertaint fetal position or station 4-Suspicion of CPD 5-inappropriate presentation 6-known or suspected fetal bleeding diathesis or demineralizing bone disease	1-Any contraindication to vaginal delivery 2-Inability to obtain adequate verbal consent 3-A cervix that is not fully dilated or retracted 4-Inability to determine the presentation and fetal head position 5-Inadequate pelvic size 6-Confirmed CPD 7-insufficiently experienced operator

Analgesia in Vacuum and Forceps

1. What is the procedure and type ?

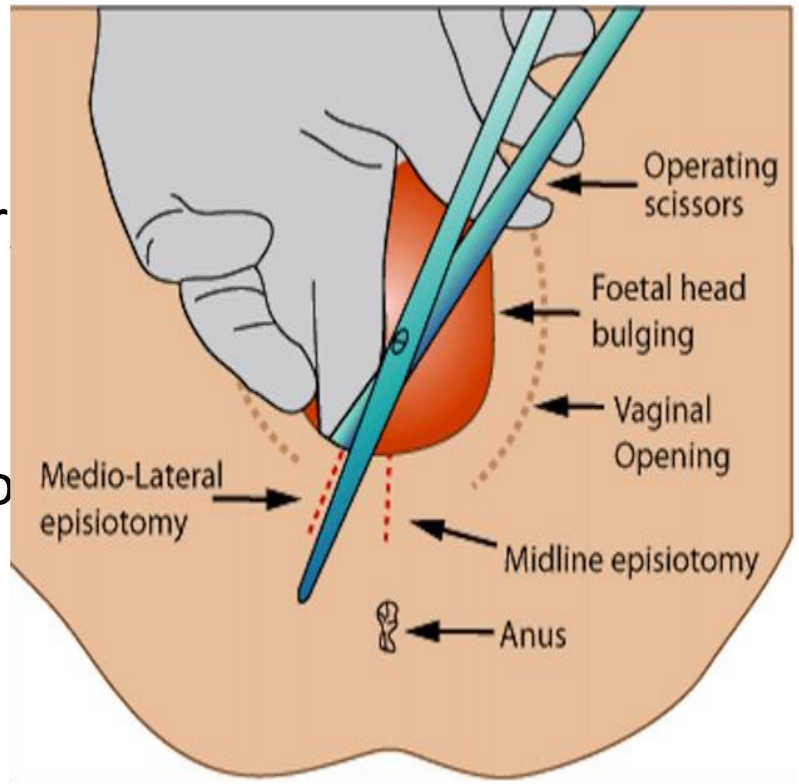
epsiotomy, mediolateral

2. Instruments used

kidney dish, local anaesthetic (lidocaine),syringe, sponge forceps,epsiotomy scissor, artery forceps,needdle holder absorbent sutures

3. If she complain after 3 hours of perineal pain what do u think the cause?

vulval hematoma



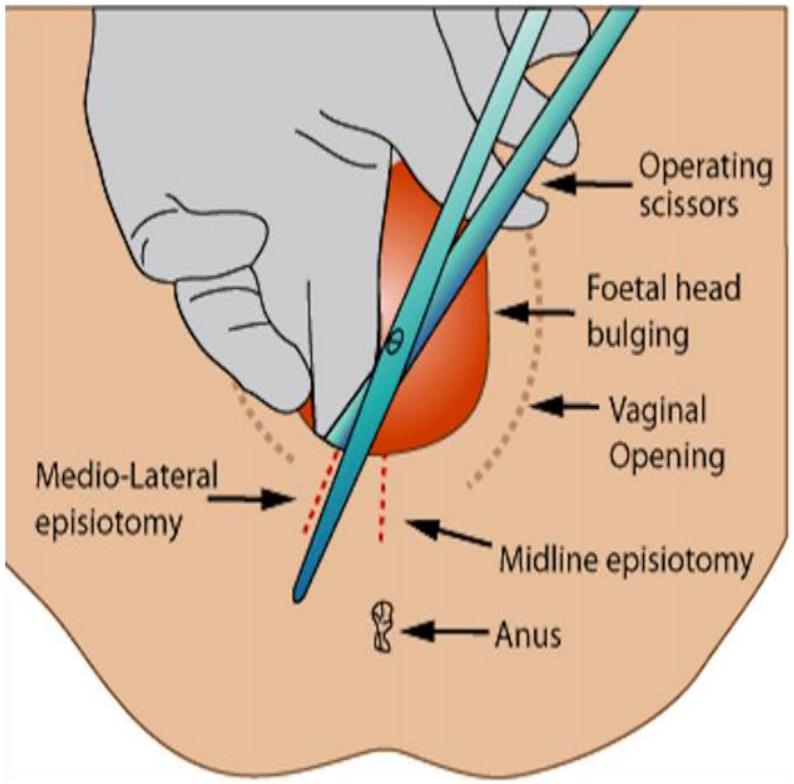
Analgesia in Vacuum and Forceps

4. How to confirm?pelvic examination

by inspection (mass) and palpation (tenderness,tense swelling)

5. Mangment

- **incision and drainage of hematoma**



Obstetric Examination

❖ Introduction

- Introduce yourself to the patient.
- Wash your hands.
- Explain to the patient what the examination involves and why it is necessary.
- Obtain verbal consent.

❖ Preparation

- Measure the patient's **height** and **weight**
  - In the UK, this is performed at the **booking appointment**, and is not routinely recommended at subsequent visits.
- Patient should have an **empty bladder**
- Expose the abdomen from the **xiphisternum to the pubic symphysis**
  - Cover above and below where appropriate
- Ask the patient to lie in the supine position with the head of the bed raised to 45 degrees
- Prepare your equipment: measuring tape, pinard stethoscope or doppler transducer, ultrasound gel

❖General Inspection

- General wellbeing – at ease or distressed by physical pain.
- Hands – palpate the **radial** pulse.
- Head and neck – melasma, conjunctival pallor, jaundice, oedema, hirsutism, malar rash, acanthosis nigricans.
- Legs and feet – calf swelling, oedema and varicose veins.

❖ Abdominal Inspection

In the obstetric examination, inspect the abdomen form the **foot of the bed**:

- Distension compatible with pregnancy, symmetry, umbilicus, abdominal movement with respiration

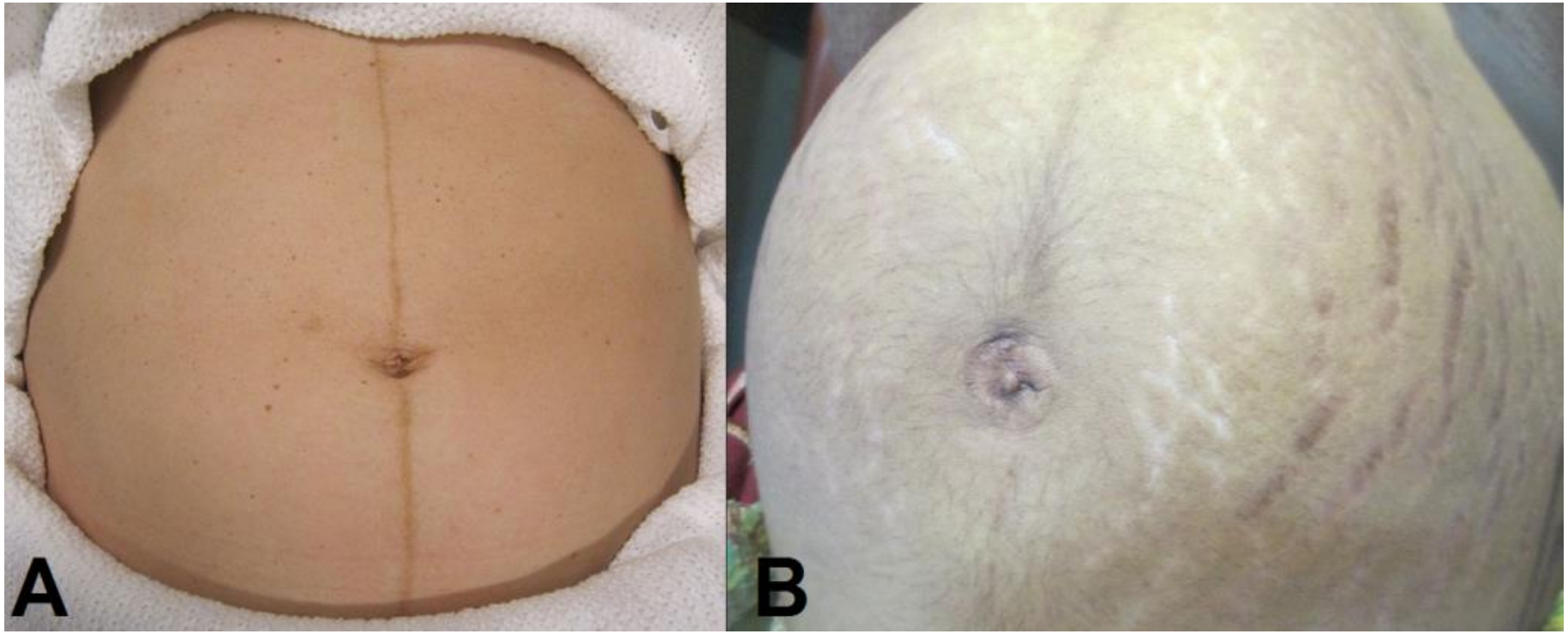
from the right side:

- Fetal movement (>24 weeks)
- Surgical scars – previous Caesarean section, laparoscopic port scars
- Skin changes indicative of pregnancy – **Linea nigra** (dark vertical line from umbilicus to the pubis), **striae gravidarum** ('stretch marks'), **striae albicans** (old, silvery-white striae)
- Excoriation marks, Bruises, Hair distribution

Skin Changes in Pregnancy

Linea nigra

Stria gravidarum ,albicans



❖ Palpation

- Ask the patient to comment on any tenderness and observe her facial and verbal responses throughout. Note any guarding.

1. **<u>Fundal Height</u>**
   - Use the medial edge of the left hand to press down at the xiphisternum, working downwards to locate the fundus.

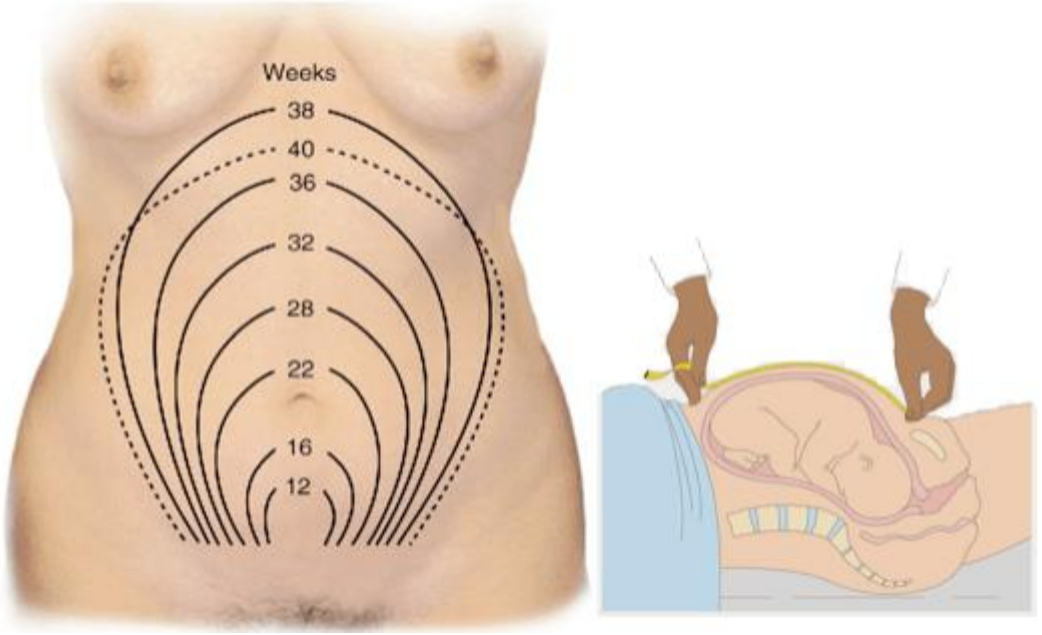
   - Measure from here to the pubic symphysis in both cm and inches. Turn the measuring tape so that the numbers face the abdomen (to avoid bias in your measurements).

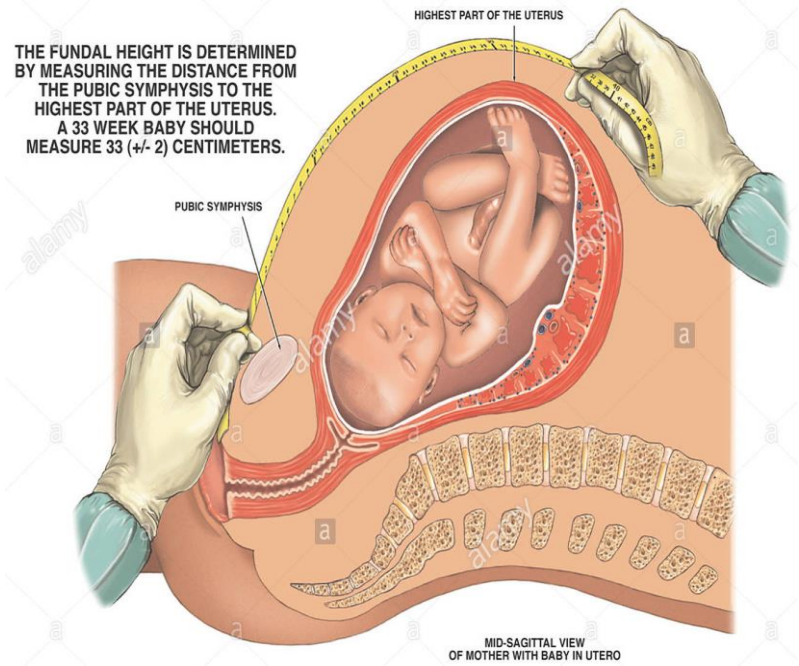
- Uterus should be **palpable after 12 weeks**, **near the umbilicus at 20 weeks** and **near the xiphisternum at 36 weeks** (these measurements are often slightly different if the woman is tall or short).

- The distance in cm should be similar to the gestational age in weeks (+/- 2 cm).

fundal height in cm = GA in weeks

Fundal Height





Approximation of Fundal Height	
Gestational age	**Fundal Height Landmark**
12 wks	Pubic symphysis
20 wks	Umbilicus
36 wks	Xiphoid process
37 - 40 wks	Regression of fundal height b/w 36 - 32 cm
Postpartum (≤ 24 hrs)	Umbilicus

- GA at the level of the umbilicus is 20–22 wks , and every cm above this level = 1 week
- or measure the whole distance in cm and this is equal to the GA (for e.g : 29 cm = 29 wks)
- **Notes :**
  - A **primiparous** uterus fundus at **term** (40wks) is at the level of the **xiphysternum**
  - While a **multiparous** uterus fundus is at the same level at **36 wks** (the uterus of primipara is at a lower level than multipara) .
  - in primipara the head gets down at 36-37wks (engagement then labor). While for multipara the head gets down in labor (engagement at the same time of labor).

Leopold’s Maneuvers

- Leopold's Maneuvers are a common and systematic way to determine the position of a fetus inside the woman's uterus; they are named after the gynecologist Christian Gerhard Leopold.
- The maneuvers consist of **four** distinct actions, each helping to determine the position of the fetus.
- The maneuvers are important because they help determine the position and presentation of the fetus, which in conjunction with correct assessment of the shape of the maternal pelvis **can indicate whether the delivery is going to be complicated**, or **whether a Cesarean section is necessary .**

- To aid in this, the health care provider should first ensure that the woman has recently **emptied her bladder**

- Leopold's Maneuvers are difficult to perform on :
    1. Obese women
    2. Women who have polyhydramnios

1st Maneuver : Fundal Grip

❖ While **facing** the woman, palpate her upper abdomen with **both** hands.

❖ Findings :

1. The level of uterine fundus and GA
2. **which part of the fetus is occupying the fundus?**
   - The fetal head is hard, firm, independently of the trunk i.e. ballotable
   - the buttocks feel softer
   - shoulders and limbs have small bony processes; unlike the head, they move with the trunk.

2nd Maneuver : Lateral Grip

- Attempts to determine the **location of the fetal back.**
- Still facing the woman ,both hands are placed on the lateral surfaces of uterus at the level of umbilicus .
- First the right hand remains steady on one side of the abdomen while the left hand explores the right side of the woman's uterus. This is then repeated using the opposite side and hands.

2nd Maneuver : Lateral Grip Cont.

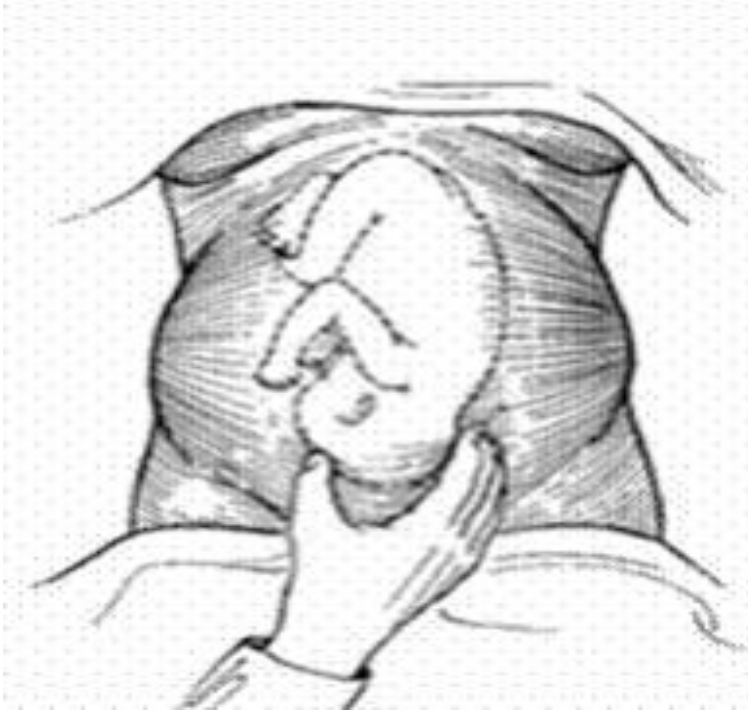
❖ **Findings :**

1. Lie
2. Position
3. Uterine tone
4. Quantity of amniotic fluid
5. fetal movement

- The fetal back will feel firm and smooth
- fetal extremities (arms, legs, etc.) should feel like small irregularities and protrusions.

3rd Maneuver : Pawlick's Grip (1st Pelvic Grip)

- Your thumb is placed on one side of the pelvis while the remaining 4 other fingers are placed on the other side.
- **Deep** but gentle palpation is required till the presenting part is felt. In the majority of cases we can palpate a round and hard object (the fetal head) .



❖ **Findings :**

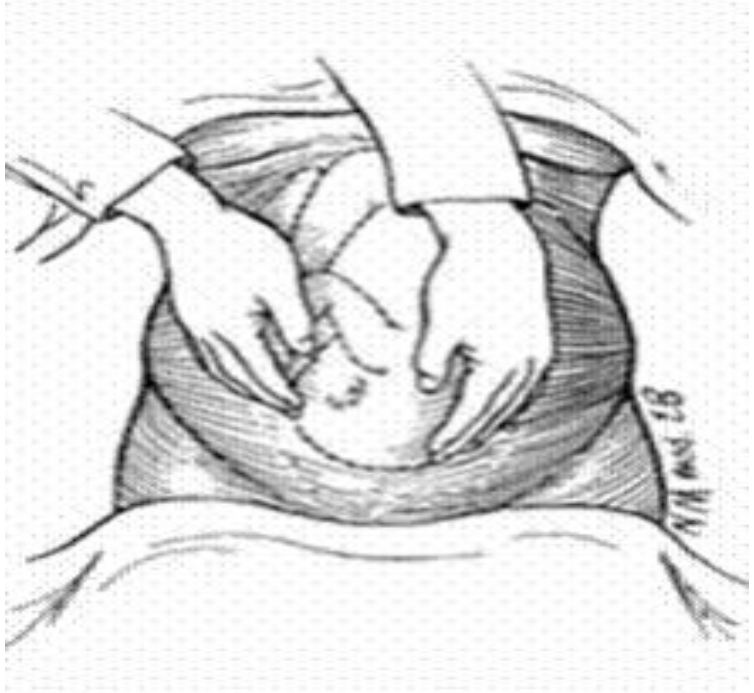
1. **Identify the presenting part.**
2. **Assess if the presenting part has engaged or not.**

3rd Maneuver : Pawlick's Grip (1st Pelvic Grip) Cont.

- **Notes :**
  - A **primiparous** uterus fundus at **term** (40wks) is at the level of the **xiphysternum**
  - While a **multiparpus** uterus fundus is at the same level at **36 wks** (the uterus of primipara is at a lower level than multipara) .
  - in primipara the head gets down at 36-37wks. While for multipara the head gets down in labor.

4th Maneuver : 2nd Pelvic Grip

- A doctor is standing **towards the Pt.'s feet.**
- The fingers of both hands are located on the lateral surfaces of lower uterine segment and carefully try to insert the fingers between presented part and pelvic inlet.



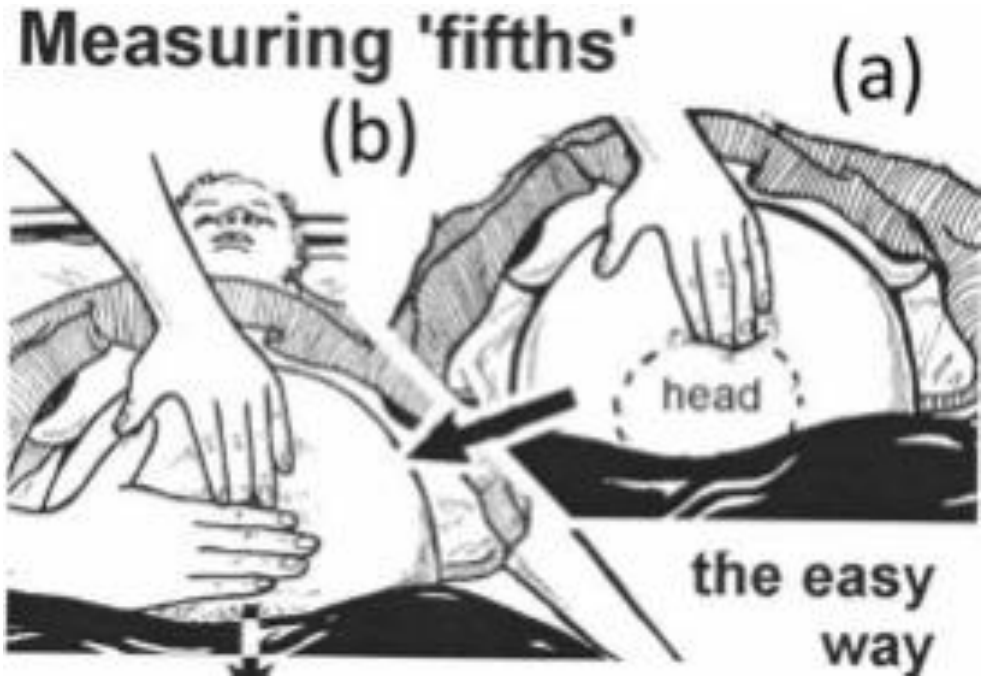
❖ **Findings** ,we can determine :

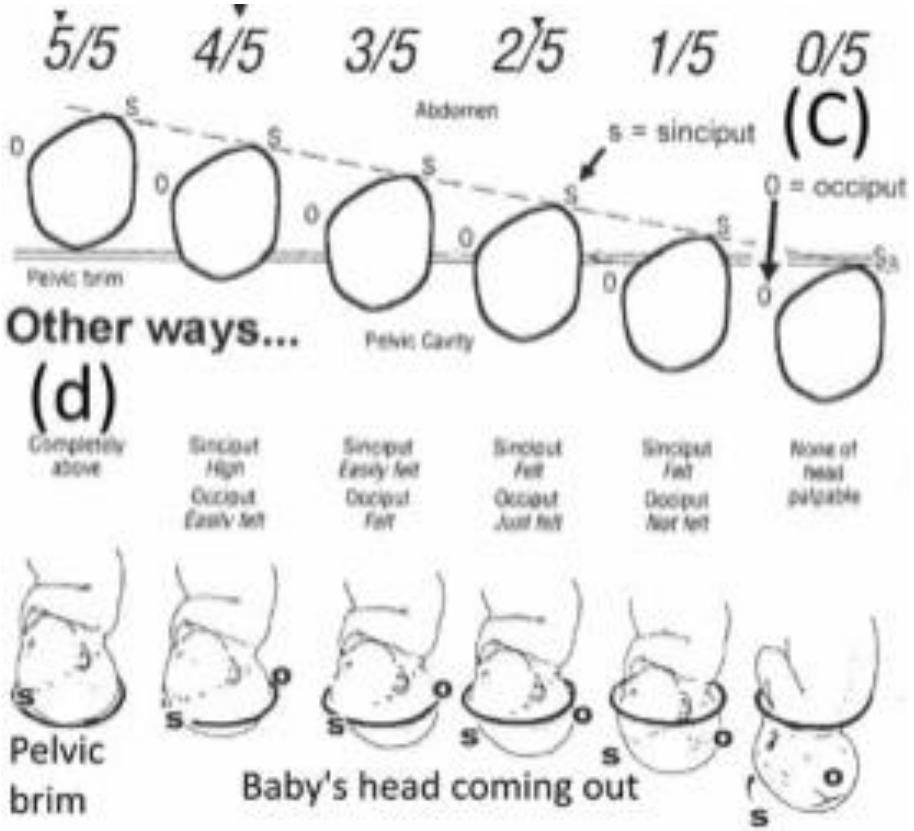
1. The presenting part
2. Station .
3. **Attitude**

- If the head of the fetus is **well flexed**, it should be on the opposite side from the fetal back.
- If the fetal head is **extended** though, the occiput is instead felt and is located on the same side as the back.

Rule of 5

- If you can feel the whole of fetus head above the pelvic brim so it is (free) and recorded as 5/5.
- But it is (engaged) if you feel only 2/5th or less (method for diagnosis of engagement on abdominal exam).





❖ to complete the obstetric examination you have to mention :

- Measure blood pressure (It's very Important and has it's own mark on the check list/OSCE)
- Auscultating the baby’s heart :
  - This is best heard over the baby’s shoulder. If you have correctly identified the lie ,you should roughly know where this is.
  - Put either your Doppler ultrasound or Pinard stethoscope over this area and listen.
  - The baby’s heart rate should be between 110-160bpm (ensure you are not incorrectly hearing the transmission of mum’s, remember hers will be slower).
- Perform a vaginal examination ONLY IF INDICATED

Station

❖ **33 years old , primiparous , GA 41 wks , planned for induction of labor.**

1. What are the relevant points in Hx you want to ask about? **sure date, fetal movement, ROM, bleeding, abdominal pain**
2. Name the maneuvers in

A→ **1st pelvic grip**, B→ **lateral grip**, C→ **symphyseal fundal height**

1. What are the findings on physical exam on

B→ **fetal back location**, C→ **uterine size (any discrepancy with GA)**

1. what are the relevant physical exam findings in this patient? **engagement+ fetal attitude to confirm presentation, fetal lie, discrepancy between ut. size and GA**
2. CTG pic ? It was Reactive
3. before proceeding into (induction of labor) what do you want to make sure of? **sure date, if the pt. candidate for vaginal delivery**

Pelvic Examination
(Bimanual ,Speculum Examination)

Bimanual Examination

Bimanual Examination :

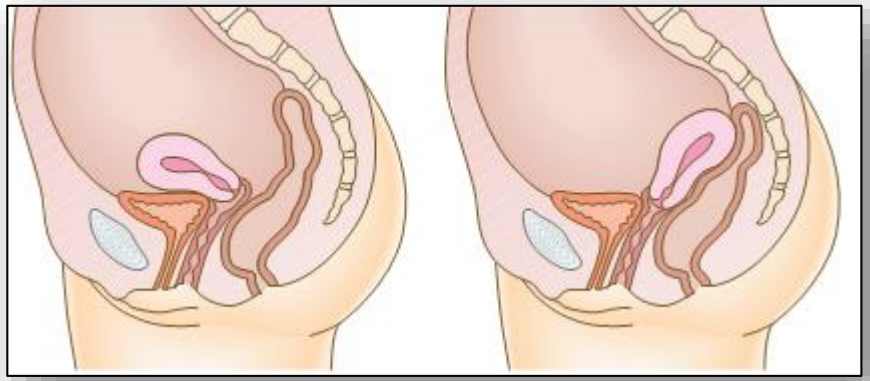
❖**After emptying the urinary bladder , bimanual examination Should be done before doing any procedure introducing to the uterus** .

- Sterile hands with gloves then :-

1- Apply lubricating gel to your right index and middle finger.

2- Gently insert them into the vagina and feel for the firm cervix.

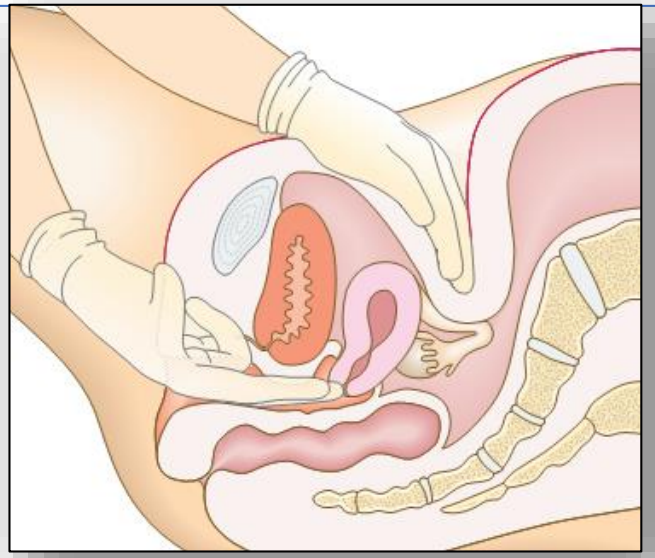
- The uterus is usually anteverted and you feel its firmness anterior to the cervix.
- If the uterus is retroverted and lying over the bowel, feel the firmness posterior to the cervix .

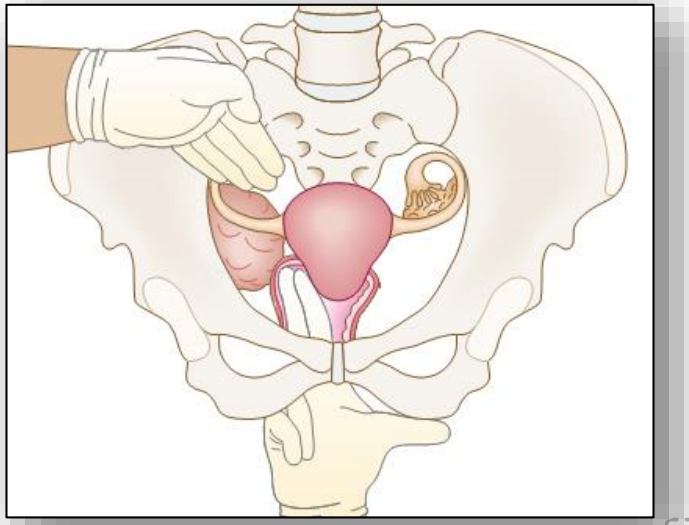


3- Push your fingers into the posterior fornix and lift the uterus while pushing on the abdomen with your left hand.

4- Place your left hand above the umbilicus and bring it down, palpating the uterus between both hands and note its size, regularity and any discomfort.

5- Move your fingers to the lateral fornix and , with your left hand above and lateral to the Umbilicus, bring it down to assess any adnexal masses between your hands on each side.

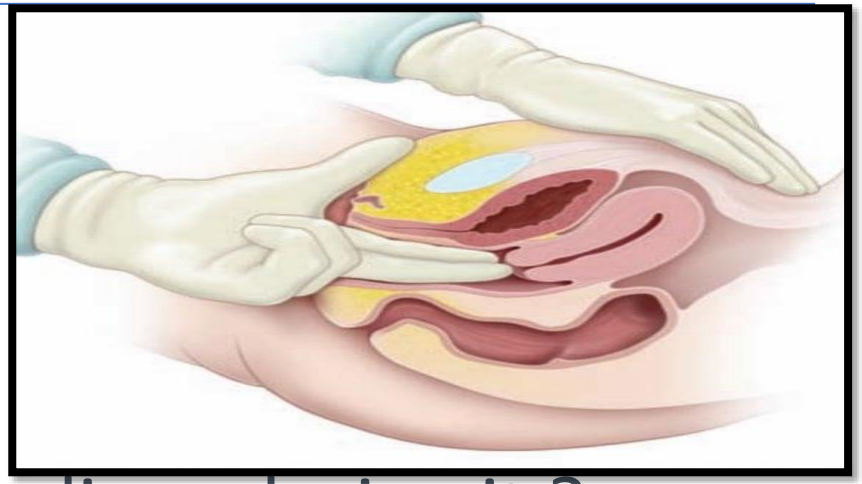




❖**So from the bimanual examination we can determine :**

- The consistency of the cervix , The size of the cervix , if there is any tenderness to motion.
- The size of the uterus , SHAP-REGULARITY-masses in uterus , mobile or fixed “as in endometriosis” ,the direction of the uterus “we should know it to avoid the uterine perforation”
- If there is any adnexal masses .

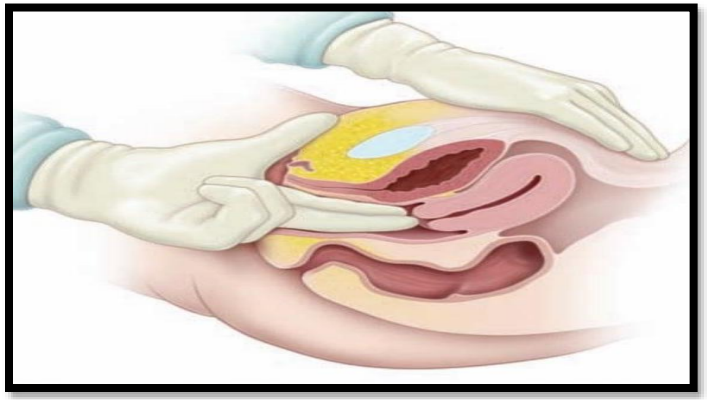
Station :



- ❖What is the name of this examination ?
  - **Bimanual Pelvic Examination**
- ❖what is the position of patient during it ?
  - **Lithotomy position**
- ❖3-what are the structures and related findings during it ?
  - **Uterus: Size, shape, direction and position, Tenderness**
  - **Ovaries and Fallopian Tube (Adnexa): Masses (cyst), Size, shape, Tenderness**
  - **Uterosacral ligament Nodularity**
  - **Cervix: Masses, Polyp, motion Tenderness, size, consistency.**
  - **After that inspect your gloves.**

Cont.

❖your findings with :



- A- Acute pelvic inflammatory disorder
- B-10 Weeks Incomplete miscarriage
- C- Adenomyosis

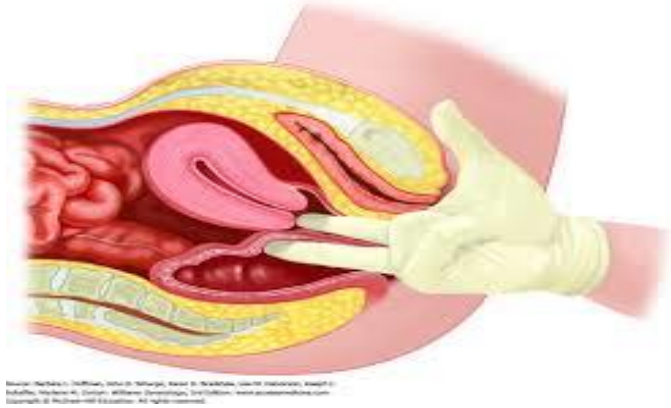
○A: **purulent endocervical discharge and/or acute cervical motion and adnexal tenderness, Adnexal masses**

○B: **dilated cervix, small uterus not well contracted, conception tissues.**

○C: **Regular enlarged uterus, boggy tender uterus, Mobile.**

Station: this method is used for?

- Answer : to assess the rectovaginal septum for scarring or peritoneal studding. to exclude masses , The uterosacral ligaments are also palpated to determine if they are symmetrical, smooth, and nontender (as normally), or if they are nodular, slack, or thickened. The rectal canal is evaluated, as are the integrity and function of the rectal sphincter. **combined rectal and vaginal digital exam, we can differentiate between rectocele and enterocele**
- ***Bimanual recto-vaginal examination***



Speculum Examination

❖ **A speculum** is a device used to look inside in the vagina and observe the cervix. A speculum examination is often performed alongside a bimanual examination, as part of a complete gynecological workup.

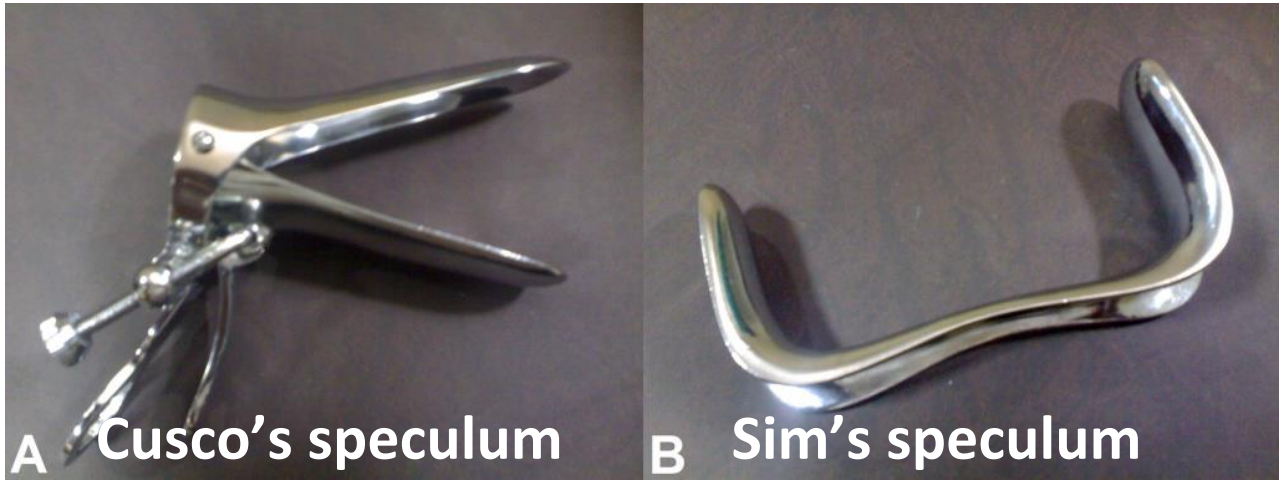
❖In these slides , we shall look at how to perform an speculum examination in an OSCE-style setting.

❖ Introduction

- Introduce yourself to the patient.
- Wash your hands.
- Explain to the patient what the examination involves and why it is necessary.
    - For example: *“I will be passing a speculum, which is a plastic/metal instrument, through the vagina to visualize the neck of the womb.”*
    - Reassure them that this should not be painful, but you will stop immediately if it becomes too uncomfortable.
- Obtain verbal consent.
- Request a chaperone.

❖ Preparation

- The patient ought to have an **empty bladder**.
- **Exposure** : ask the patient to remove all clothing from the waist down and any sanitary protection (Cover with a sheet when appropriate)
- Prepare your equipment: gloves, lubricant, speculum (for example Cusco's speculum) +/- smear, swabs, Pipelle biopsy.

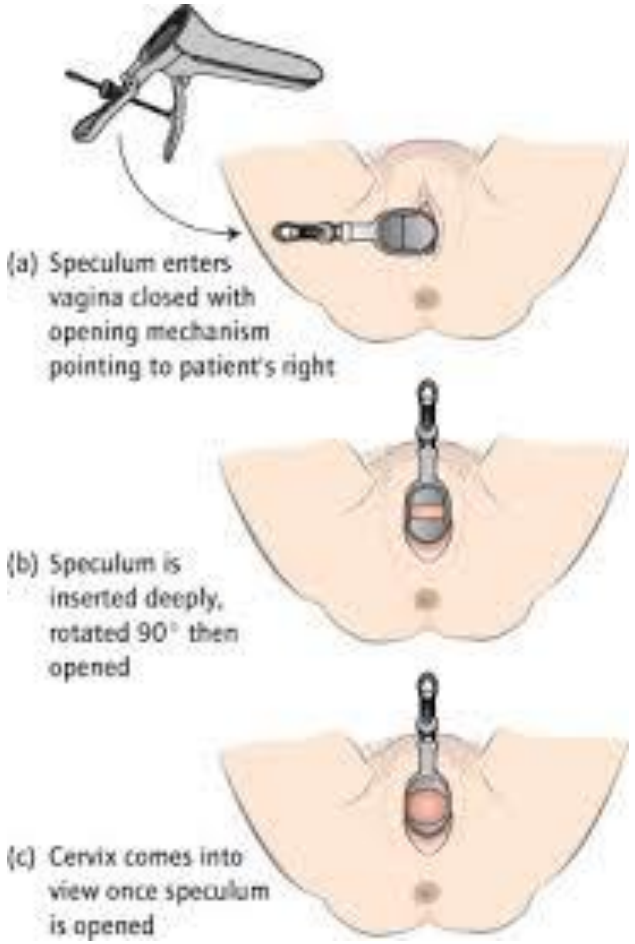


❖ External examination

- The patient should be laid on their back, with legs bent at the hip (feet towards their buttocks), and asked to flop their knees apart.
- Put on a pair of gloves.
- Inspect the external genitalia for:
  - Deficiency associated with childbirth.
  - Abnormal secondary sexual characteristics – hair distribution, cliteromegaly.
  - Skin abnormalities – lesions, warts, erythema
  - Discharge – colour, consistency / Bleeding
  - Swellings of the vulva – tumours, cysts (sebaceous, Bartholin's)
- Ask the patient to cough or strain to observe any incontinence or prolapse.
- Palpate the labia majora with the index finger and thumb for any swellings.

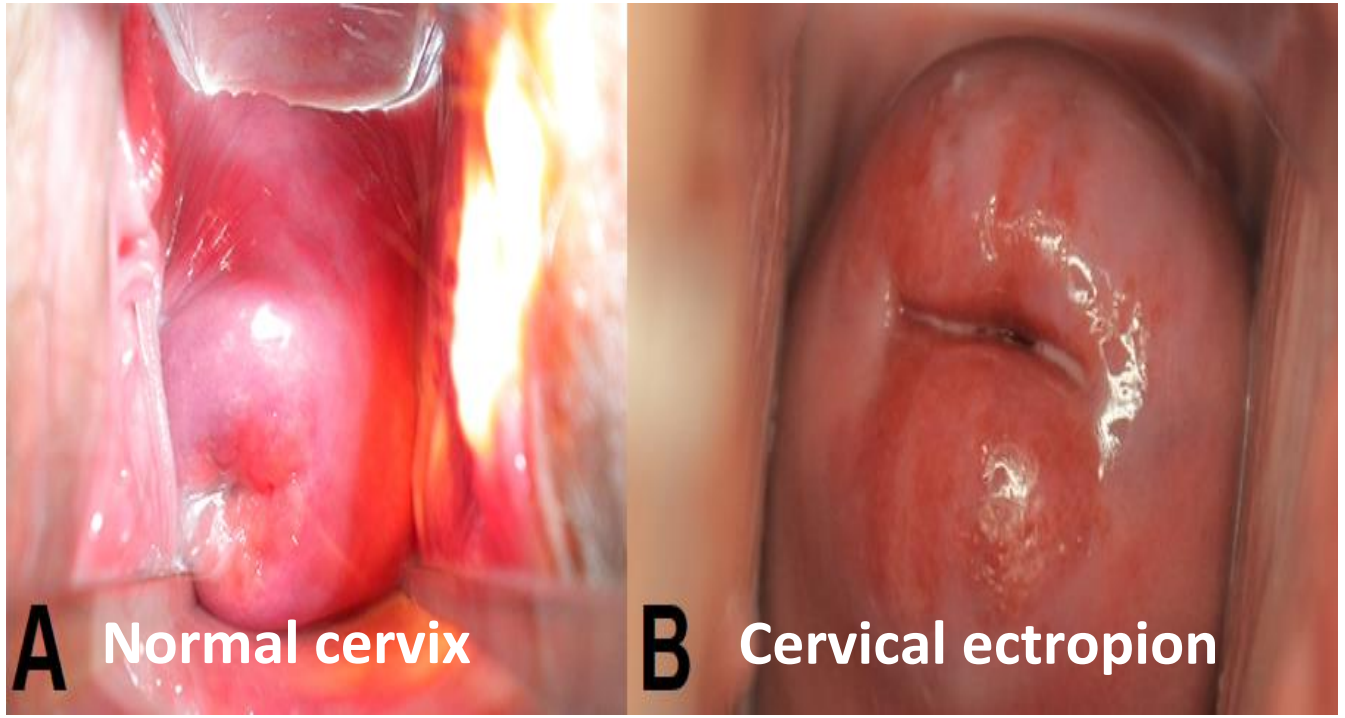
❖ Speculum examination

- Lubricate the speculum and warn the patient.
- Part the labia using your left hand.
- Gently insert the speculum with your right hand:
  - Fully insert the speculum with the screw facing sideways and the blades vertical.
  - Rotate 90 degrees during insertion so the screw faces upwards and the blades become horizontal.
- Slowly open the blades and use light to inspect the cervix.
  - Tighten the screw to hold open the speculum so you can use your right hand for swabs or Pipelle biopsy if necessary.



❖ **Look for :**

- Abnormal discharge
- Erosions
- Ulcerations
- Growths
- Inflammation
- Bleeding
- Polyps
- Ectropion



❖At this point swabs/endometrial biopsy should be taken if required.

❖To remove the speculum, undo the screw to allow the blades to close (leave open slightly to not pinch the vaginal walls), rotating back 90 degrees and gently remove.

Sims Speculum

- A Sim's speculum can be used to assess prolapse :
  - Ask the patient to lie on her left side and bring her knees to her chest.
  - Insert the blade of the speculum along the posterior wall of the vagina to hold it back.
  - Ask the woman to cough whilst looking for uterine descent and cystocele.
  - Repeat whilst holding back the anterior wall, looking for rectocele/enterocoele.

Obtaining Swabs

- Swabs are often required in cases of suspected infection:
  - Pick up the sample tube with the right hand and place it in the left hand (with the speculum secured with the screw) and remove the lid if a separate one is present. Sometimes using the chaperone is useful.
  - Take out the swab with the right hand and perform swabs in this order
    - Hi-vaginal charcoal media swab – circle around the high vaginal wall once (*BV, TV, Candida, group B strep)*
    - Endocervical charcoal media swab – place in endocervical canal and do a 360-degree sweep (*gonorrhea)*
    - Endocervical chlamydia swab – scrub endocervical region for 10-30 seconds
  - Place the used swab back into the tube in your left hand, close the lid and label the specimens.

Endocervical Smear

❖ **Goal of Pap smear :**

- Cervical cancer screening detects pre-invasive neoplasia, thereby making treatment possible before the disease becomes invasive (Before the development of cancer).

❖**Screening is performed using :**

1. Cervical cytology under microscope (Pap test).
2. Human papillomavirus test (The pathogen).
3. Or a combination of the two tests.

➢The specimen is taken from the **Transformational zone** of the cervix (The area between the old and new **squamo-columnar junction**).

➢This area has high mitotic activity and thus the cells don't get mature enough , so its liable for infection and transformation to cancer.

Techniques for Obtaining Specimens

❖ How to obtain a sample ?

- Cell samples for cervical cytology and HPV testing are obtained during the speculum examination.
- The same specimen can be used for both tests or separate specimens can be obtained.

❖Collection device :

Several collection devices are available for cervical cytology sampling :

1. **Ayre Spatula.**
2. **Endocervical brush.**

* Cotton tipped swabs should be avoided because they collect **fewer** endocervical cells and do not detect CIN as well as other devices.

Collection Device

❖ **Ayre spatula** : Its end has 2 heads :

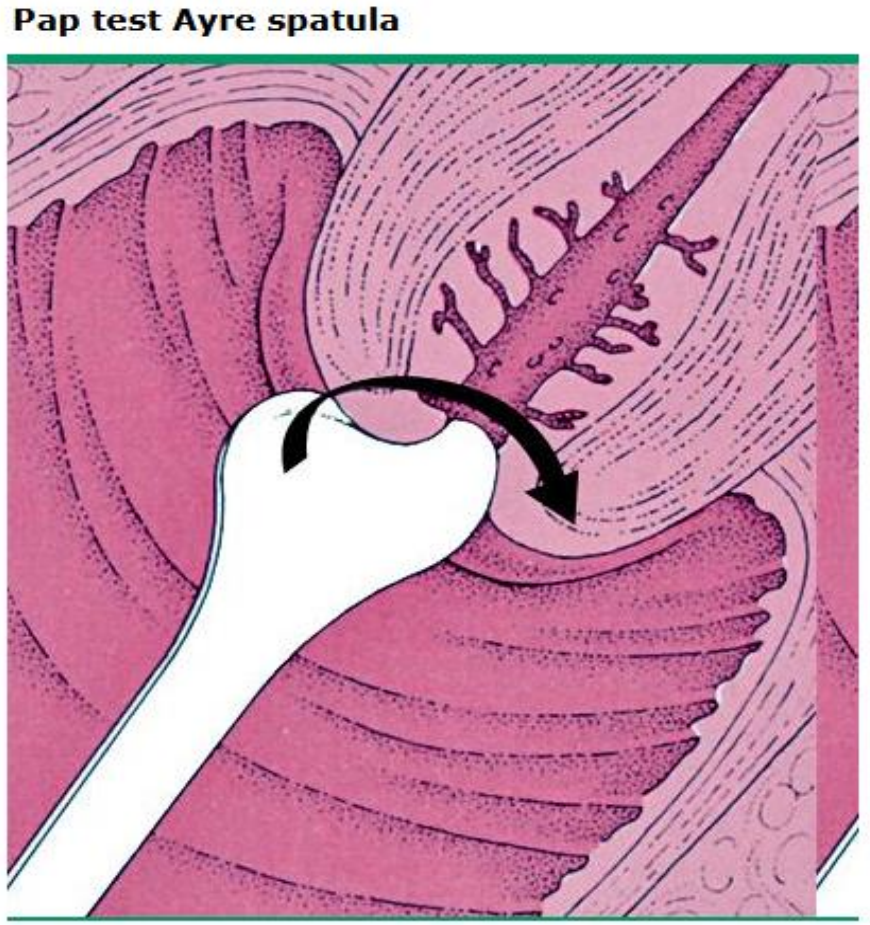
- Long head : introduced in the cervical canal.
- Short head : outside the canal.
- Should be rotated 360°.

❖ **Endocervical brush :**

- The brush is introduced inside the cervical canal and rotated 360°.
- In menopause : the squamocolumnar junction is located deeply inside so the Endocervical brush is better in this case for obtaining cytology.

❖ **Specimens** for cytology , There are two methods for preparing a specimen for cervical cytology :

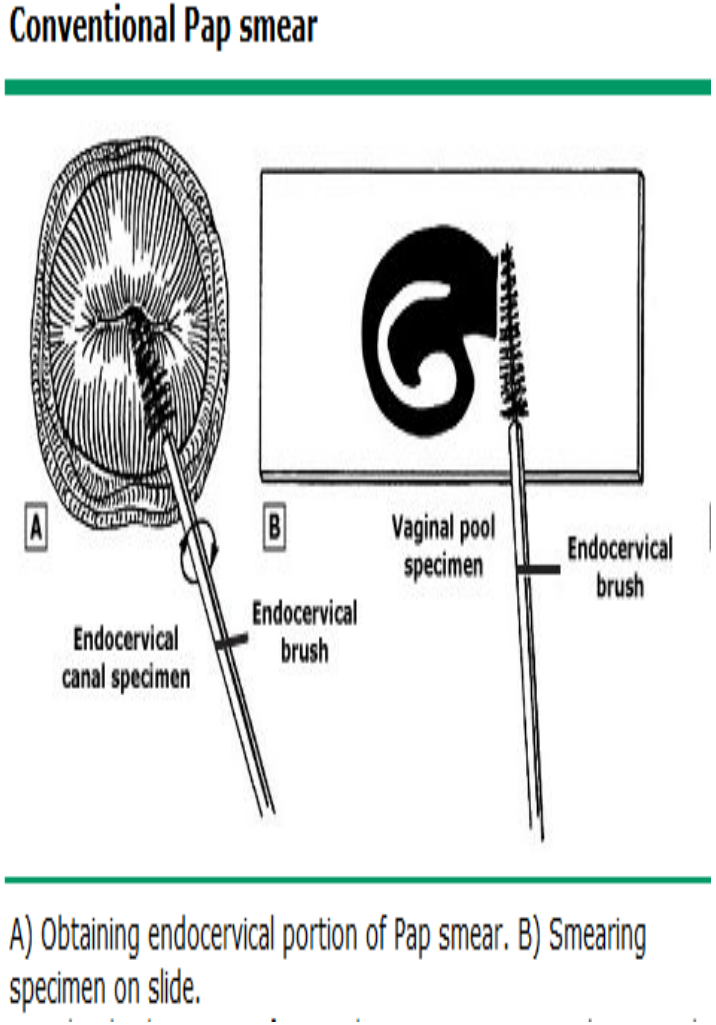
1. The conventional Pap smear.
2. The liquid-based, thin layer preparation (ThinPrep®, SurePath™).



Close up view of cross section of upper vagina and cervix with wooden or plastic spatula pressed against cervix, longer end introduced slightly into os. Arrow indicates rotation to obtain ectocervical sample.

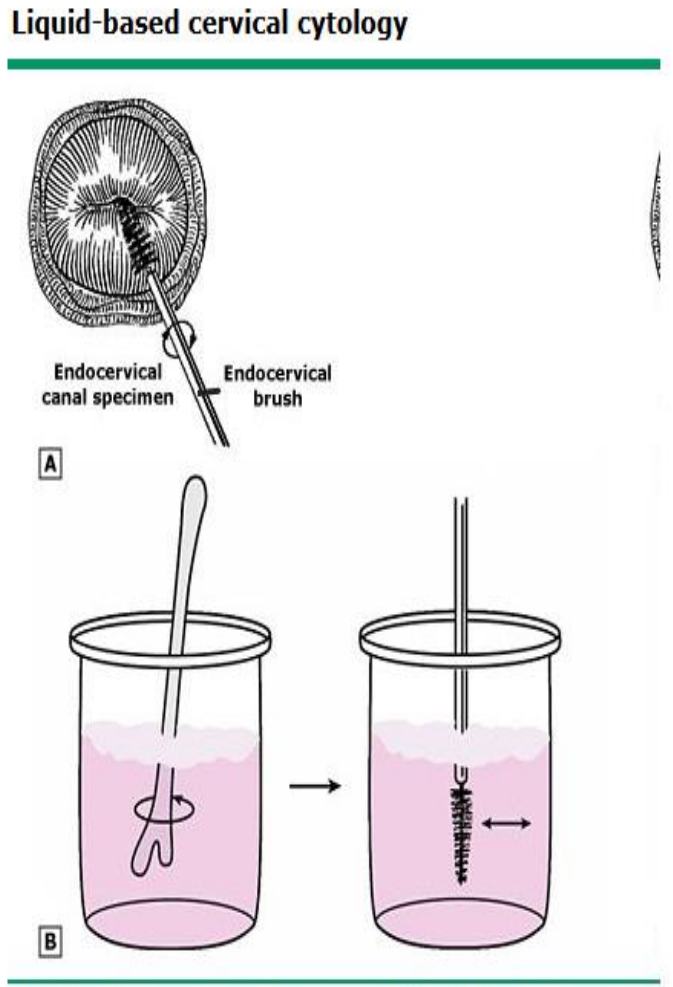
Conventional Pap Smear

- The ectocervical spatula is smeared and the endocervical brush is rolled uniformly onto a single slide promptly after obtaining the specimens. The slide is then rapidly fixed to avoid air-drying; the usual fixatives are either ethyl ether plus 95% ethyl alcohol or 95% ethyl alcohol alone. If spray fixatives are used, the spray should be held at least 10 inches away from the slide to prevent disruption of cells by the propellant.



Liquid Based Cytology

- The collecting device is placed into a liquid fixative solution and vigorously swirled or rotated ten times in the solution (Centrifugation). When the liquid is processed by the cytology laboratory, loose cells are trapped onto a filter and then plated in a monolayer onto a glass slide.



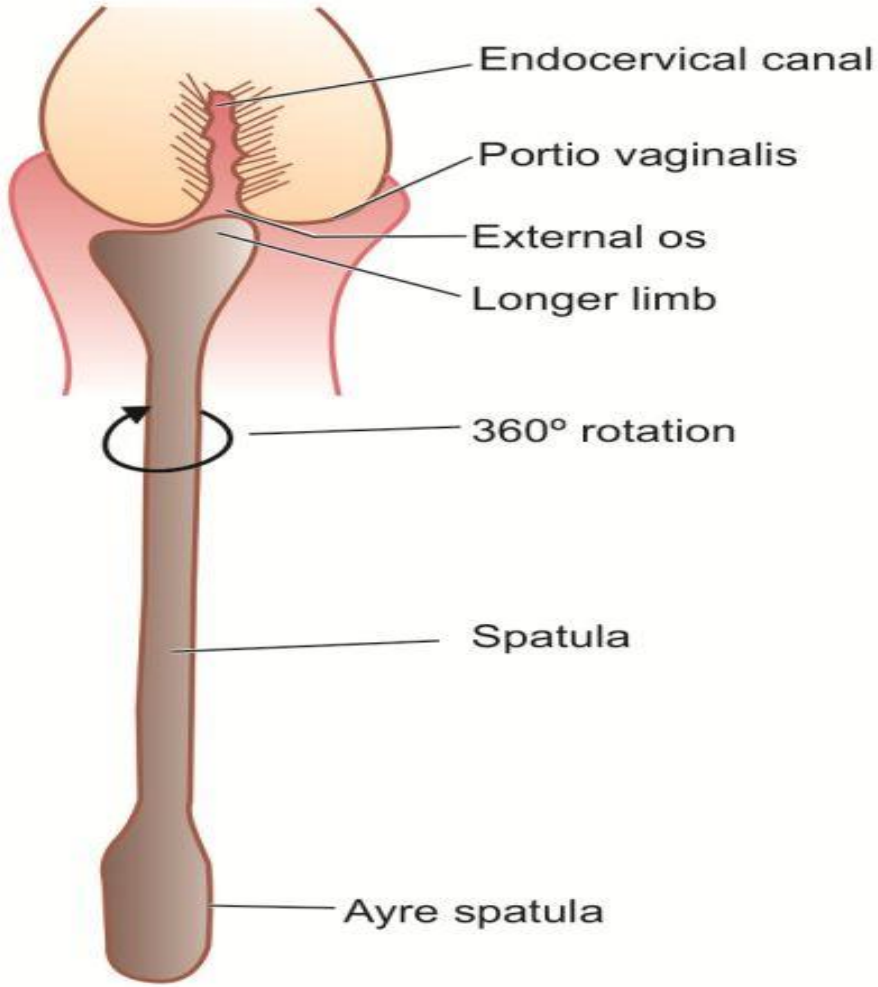
A) Obtaining endocervical portion of Pap test. B) Placement of specimens in liquid collection medium.

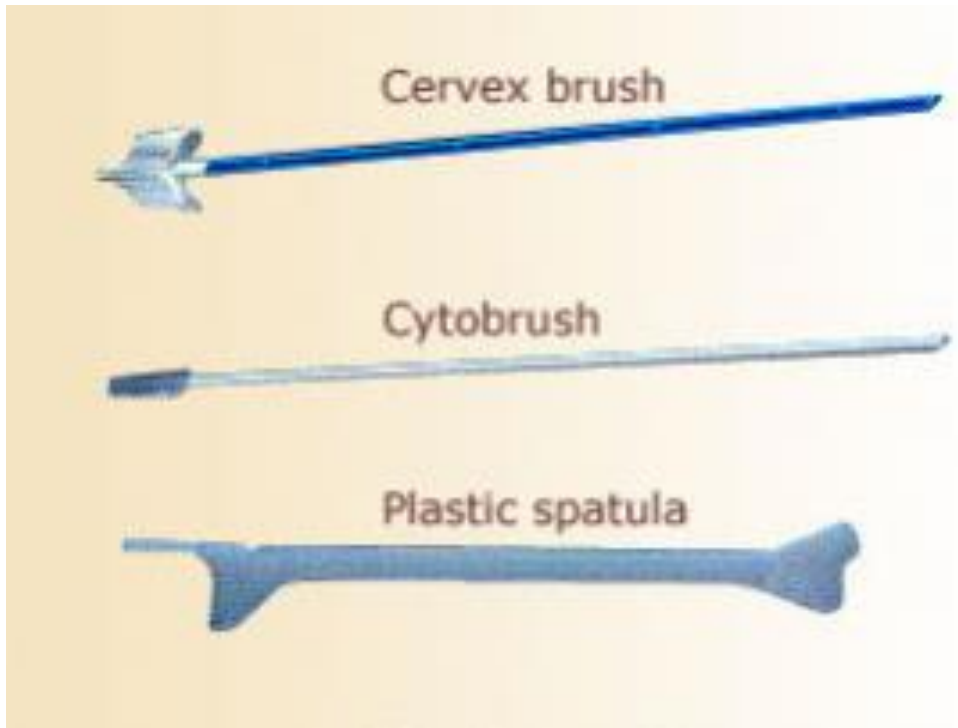
Colposcopy

- Colposcopy is a diagnostic procedure in which a colposcope (a dissecting microscope with various magnification lenses) is used to provide an illuminated, magnified view of the cervix, vagina, and vulva.
- Colposcopic evaluation of the cervix and vagina is based on the finding that malignant and premalignant epithelium have specific macroscopic characteristics relating to contour, color, and vascular pattern that are recognizable by colposcopy.
- The **primary goal of colposcopy** is to identify precancerous and cancerous lesions by taking biopsies , so that they may be treated early.

Indications of Colposcopy

- **Specific cytological abnormalities** (Any abnormal cytology) :
  1. Persistent atypical cells of undetermined significance (ASC-US) or ASC-US with positive high-risk human papillomavirus (HPV) subtypes.
  2. ASC suggestive of high-grade lesion (ASC-H).
  3. Atypical glandular cells (AGC).
  4. Low-grade squamous intraepithelial lesions (LSIL).
  5. High-grade squamous intraepithelial lesion (HSIL).
  6. Suspicious for invasive cancer.
  7. Malignant cells present.
- Evaluation of patients with **persistent** (two consecutive years) **positive testing for high-risk human papilloma virus and normal cytology.**
- Assessment of **women exposed to diethylstilbestrol (DES) in utero**.
- Evaluation of a **palpably or visually abnormal cervix, vagina, or vulva**.
- **In conjunction with laser** or other treatment modalities (Cautery , Cryotherapy)
  - **to ensure that known lesions are completely removed or treated**, to detect any other lesions in surrounding areas, and for post-treatment surveillance.
- **Evaluation of a positive screening test for cervical neoplasia** (spectroscopy, cervicography, or speculoscopy.)


Endocervical canal
Portio vaginalis
External os
Longer limb
360° rotation
Spatula
Ayre spatula

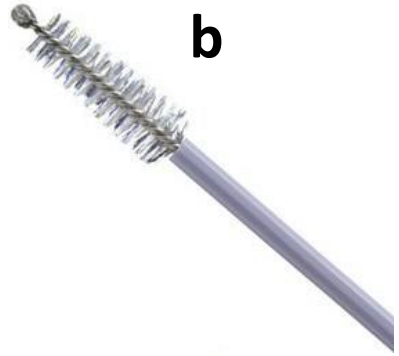

Cervex brush
Cytobrush
Plastic spatula

Station

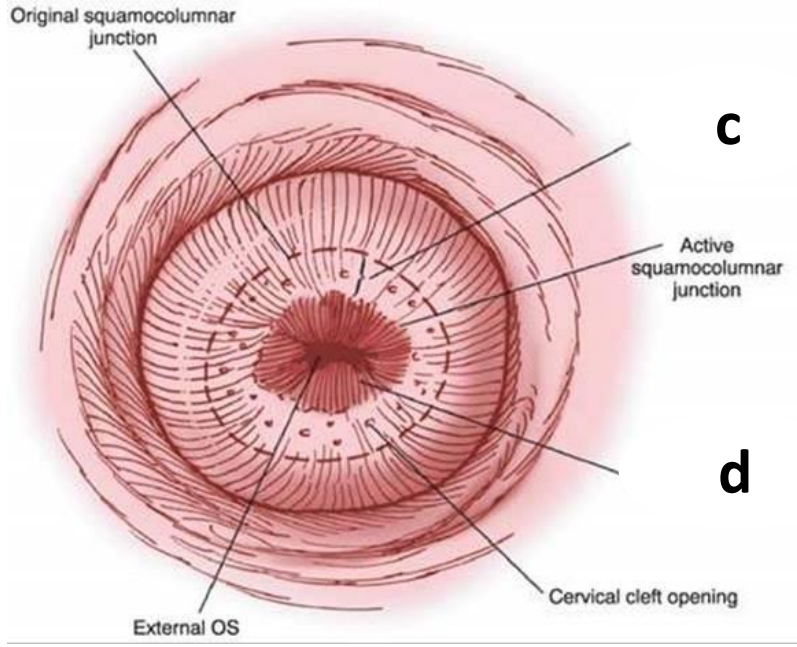
- **Identify the letters :**
  - A. Ayer spatula
  - B. Endocervical brush
  - C. Transformational zone
  - D. Endocervix

A

b



- **Define C anatomically**
  - area between old and new squamo-columnar junction.

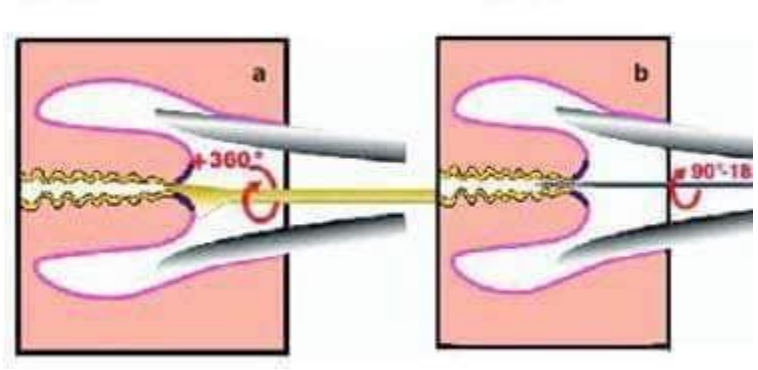


Station Cont.

- Mention Bethesda finding by a+b ?
  - HSIL, LSIL
- Cytology screening and method of preparing ?
  - Pap smear, conventional and liquid based
- CIN II patient without visible lesion next step?
  - colposcopic exam
- Confined cervical lesion management?
  - excisional therapy (conization, LEEP)

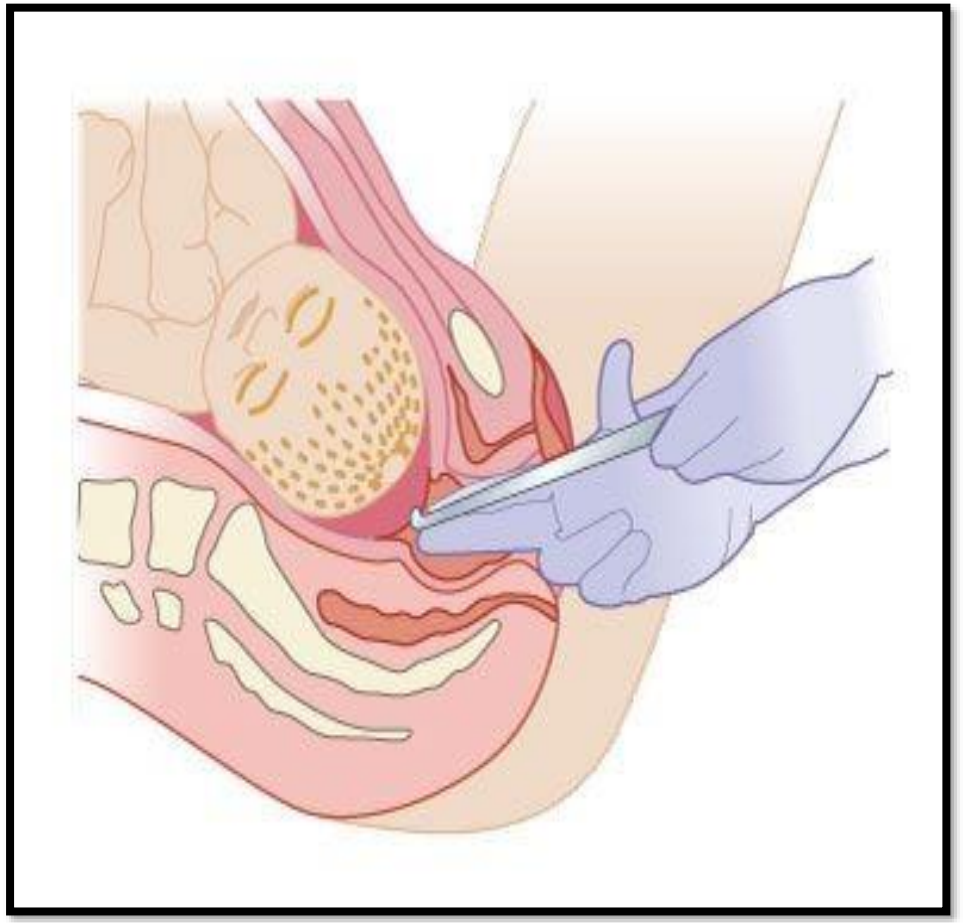
Station

1. Instrument's name:
   - A) cervical spatula. B) endocervical brush
2. Name of the labelled area:
   - Transformation zone
3. Definition of the area:
   - Area between old and new squamocolumnar junction
4. 2 methods for screening:
   - Cervical cytology under microscope, HPV testing
5. Methods of cervical cytology;
   - Conventional method, liquid based cervical cytology
6. If cytology shows CIN 2 what is the next step:
   - excisional therapy (conization, LEEP)



Amniotomy :

❖**Amniotomy** (also referred to as artificial rupture of membranes [AROM]) is the procedure by which the amniotic sac is deliberately ruptured so as to cause the release of amniotic fluid, it is usually performed for the purpose of inducing or expediting labor or in anticipation of the placement of internal monitors (uterine pressure catheters or fetal scalp electrodes).



Cont.

- Used if cervix is 3-4 cm dilated.
- The head should be engaged (Risk for cord prolapse).
- With the release of the fluid , More head descent , Dilatation of cervix and uterine contractions due to release of Prostaglandins.
- Need oxytocin augmentation.
- The membranes should be physically accessible.

❖**Other indications :**

- Color (Blood , Meconium).
- Internal monitoring

Indications and Contraindications

❖**Amniotomy is indicated in the following situations:**

- When internal fetal or uterine monitoring is needed.
- For induction of labor, usually in conjunction with an oxytocin infusion .
- For augmentation of labor, in that amniotomy leads to an increase in plasma prostaglandin.

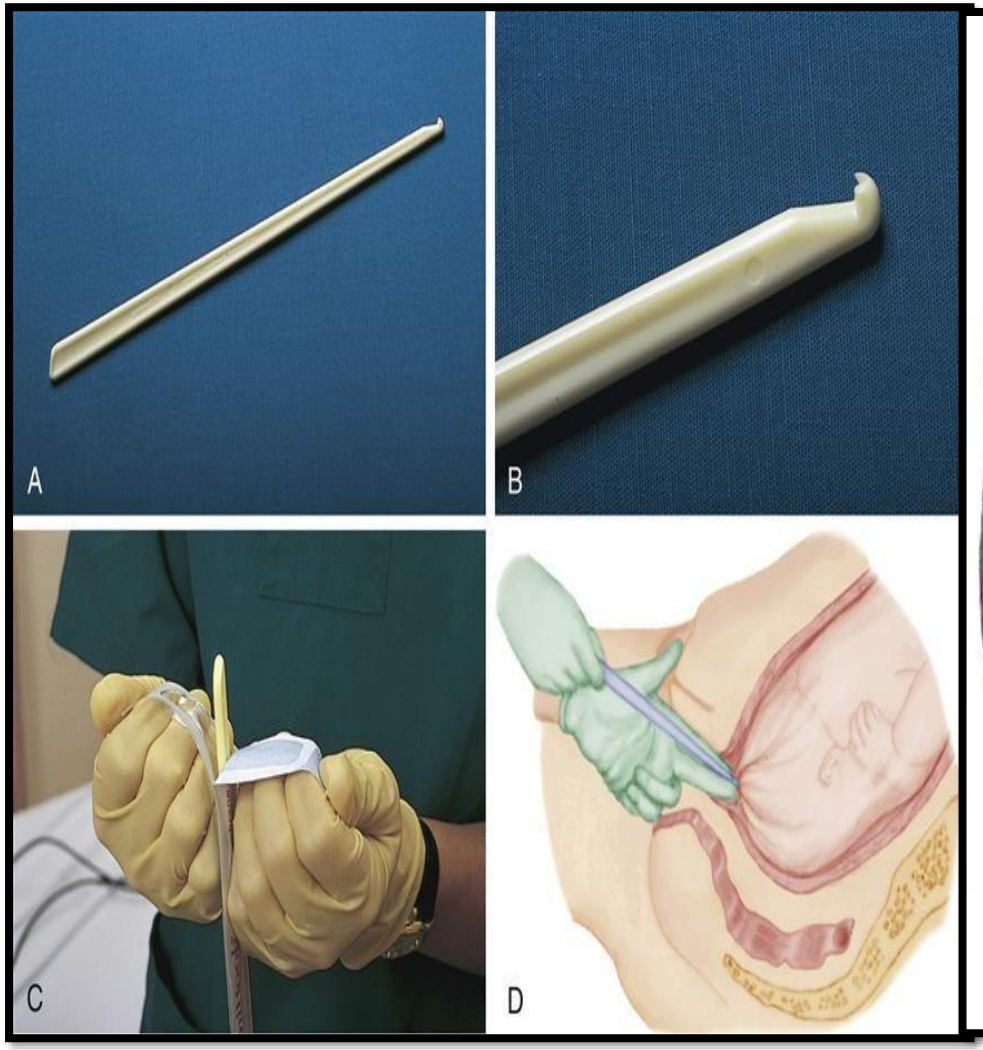
❖**Amniotomy may be contraindicated in the following situations:**

- Known or suspected vasa previa
- Any contraindications to vaginal delivery
- Unengaged presenting part (although this obstacle may be overcome with the use of a controlled amniotomy or the application of fundal or suprapubic pressure)

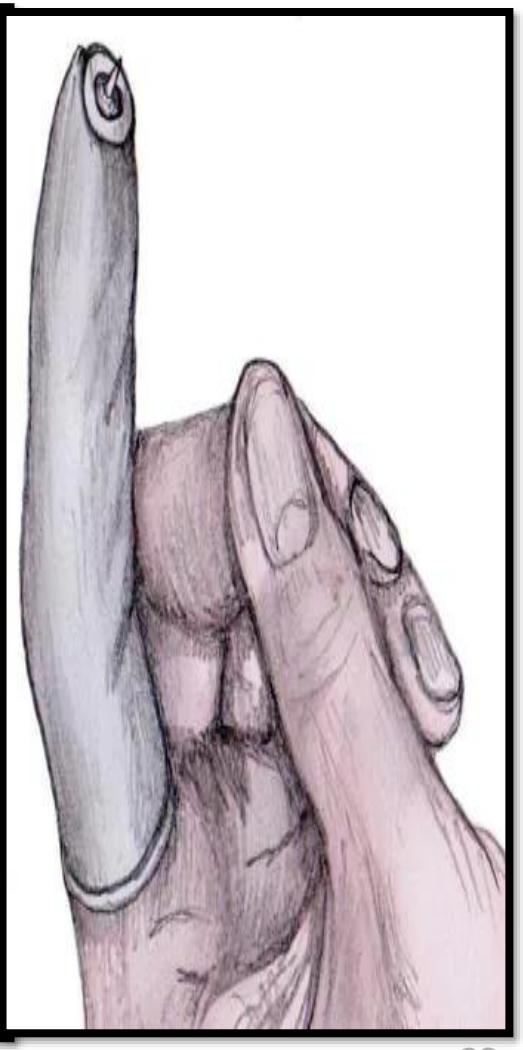
Amniotomy Equipment

❖**Equipment for amniotomy includes the following**:

- Examination gloves
- Vaginal speculum and spinal needle (if a controlled amniotomy is to be performed)
- Amniotic membrane perforator: This may be an amniotomy howk,such as the **AmniHowk,** amniotomy finger cot, such as the **Amnicot**



Amnihowk



Amnicot

Complications

❖**Complications :**

- The most common complication of amniotomy is cord prolapse, which usually occurs during the sudden and rapid egress of amniotic fluid, Rupture of a vasa previa during amniotomy can cause life-threatening fetal blood loss, Both of these complications require emergency cesarean delivery.
- An increased incidence of chorioamnionitis, especially with prolonged rupture of membranes,Cord compression associated with variable decelerations of the fetal heart rate occurs more often after amniotomy, Minor fetal scalp trauma may also occur.

Station :مكرر باختلاف الأفرع

❖what's this instrument?

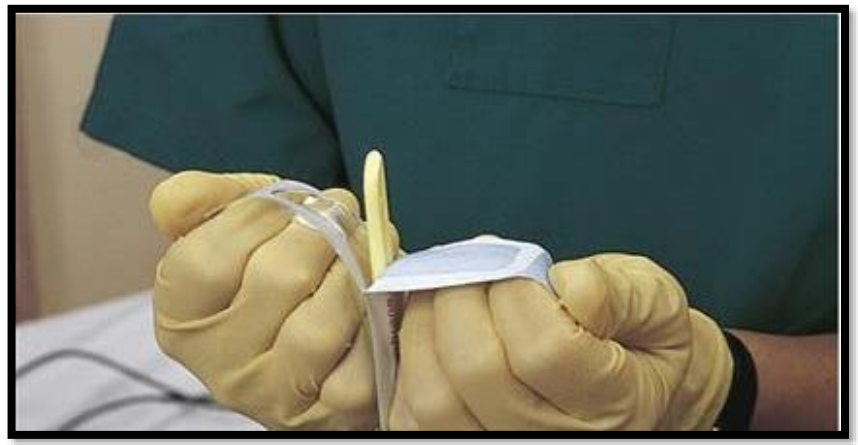
- Amniohowk

❖name of procedure?

- Amniotomy, artificial rupture of membrane

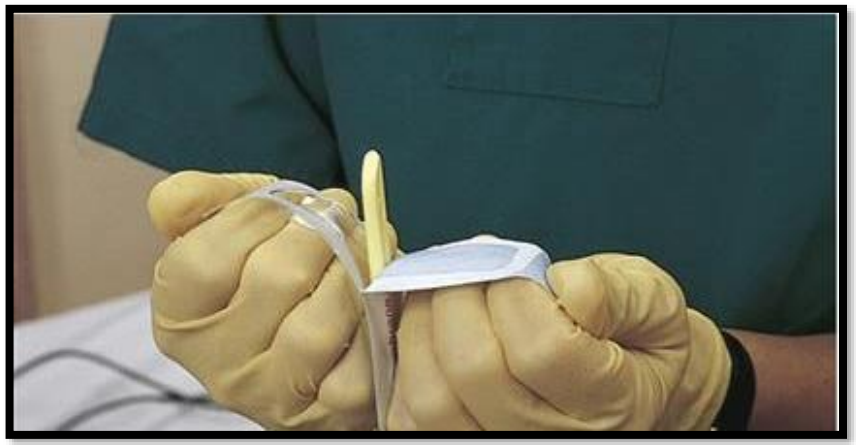
❖Give 4 advantages of this procedure?

- Enhance uterine contraction
- Shorten active phase of first stage
- Assess fetal well being from liquor state
- To check if there's cord prolapse



Station Cont.

- if pt. pregnant with 24w , length of fundal pubic height 29cm, what's the sequence if this procedure make to she?(polyhydramnios)



cord prolapse, abruptio placenta, fetal bradycardia

- d)if the amniotic index was 29 and on rule of 5 was 5/5 what will happen if you use this instrument?

not engaged baby→ cord prolapse

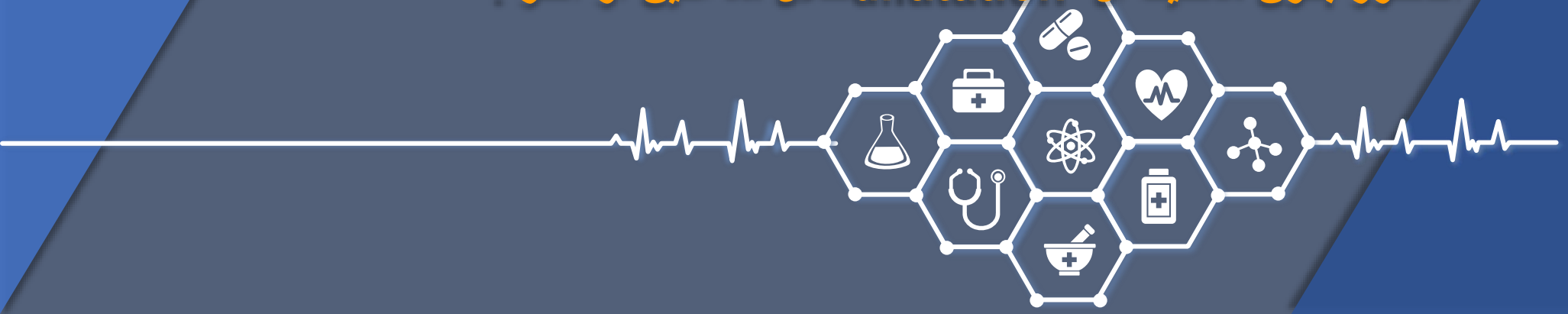
- if the patient had previous one C/S can you use this instrument and why?

YES. Amniotomy not c/i in pt. with previous one cs; as we may need a method of labor induction in our TOLACS in this pt.

Note: IOL by PG avoided in pt. with previous one cs

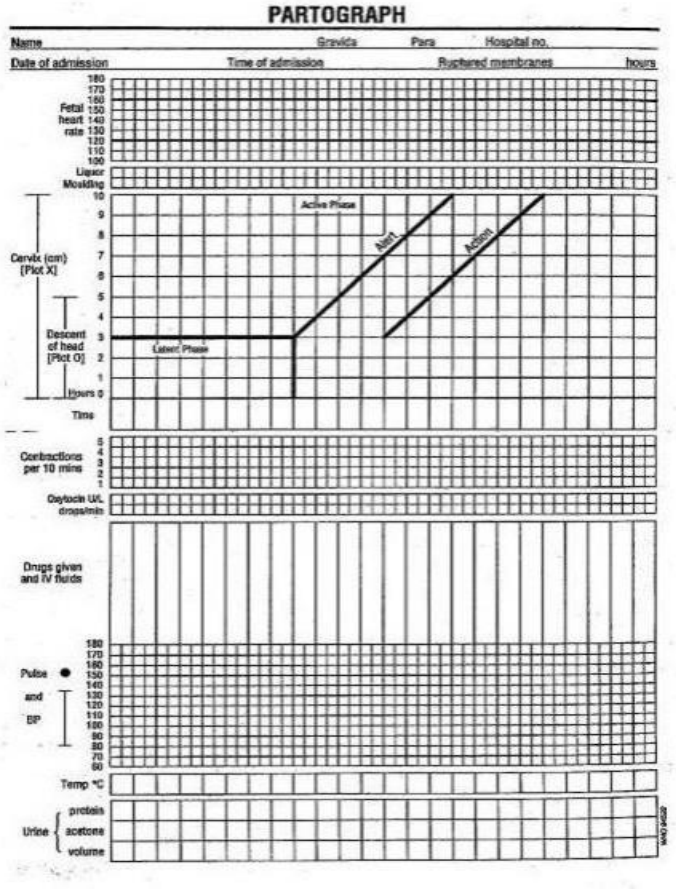
Partogram

ضروري تطلبوا من الدكاترة يعبوا معكم ورقة ال partogramلأنه في سؤال أرشيف كان معطي المعلومات وانت عبي (:
اثناء التعباية انتبهوا انه المربع بال dilatationعبارة عن ساعة وحدة لكن الدكتور بكون معطيك ال dilatationخلال ساعتين أو أكثر .



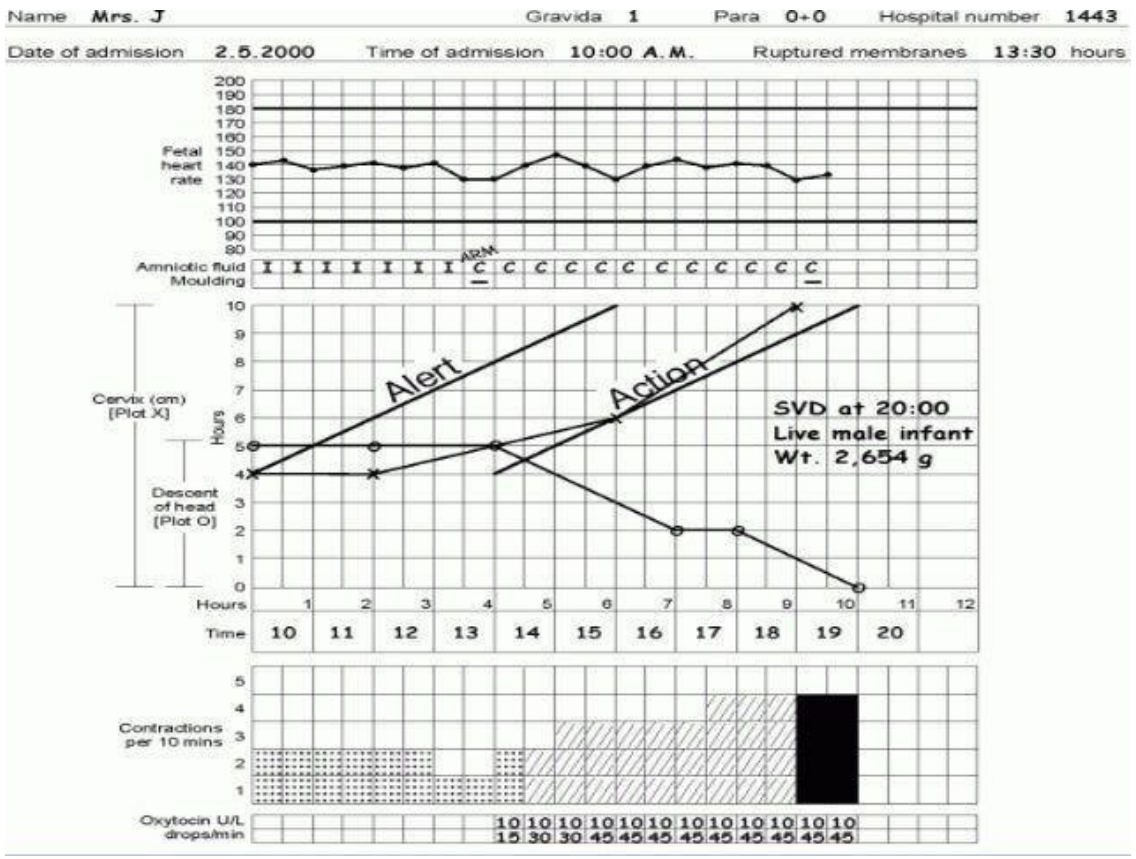
مهمممم جداااا **Partogram**

- **Definition**: A tool to assess & interpret the progress of labor
- **Contents**
  - **Record fetal condition including**
    - Fetal heart-beat rate
    - Molding of the fetal head
    - Condition of amniotic fluid
  - **Record maternal condition**
    - Pulse and blood pressure
    - Body temperature
    - Urine (quantity, presence of protein and acetone)
    - Drugs administered including Oxytocin
    - IV fluids
  - **Record progress of labor**
    - Cervical dilatation
    - Descent of the head
    - Uterine contractions



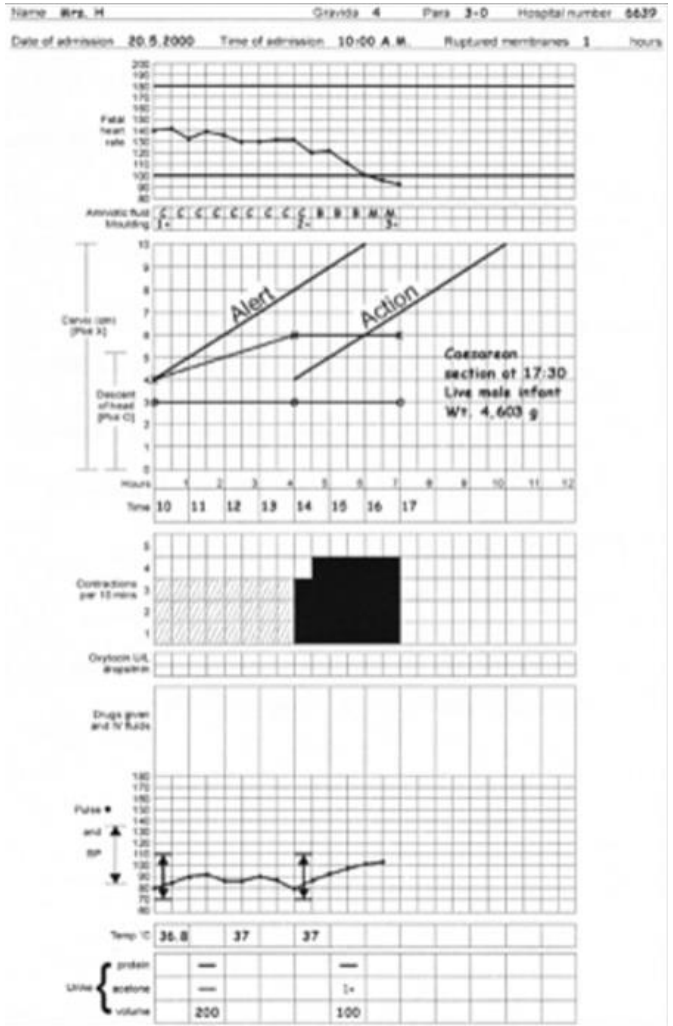
What is your interpretation regarding fetal well-being ?

- **Fetal heart rate**
  - FHR is between 130-150 through out labor (reassuring FHR)
- **Character of amniotic fluid**
  - Membranes were ruptured artificial at 4h past admission
  - Liquor is clear
- **Molding of fetal skull**
  - Not recorded



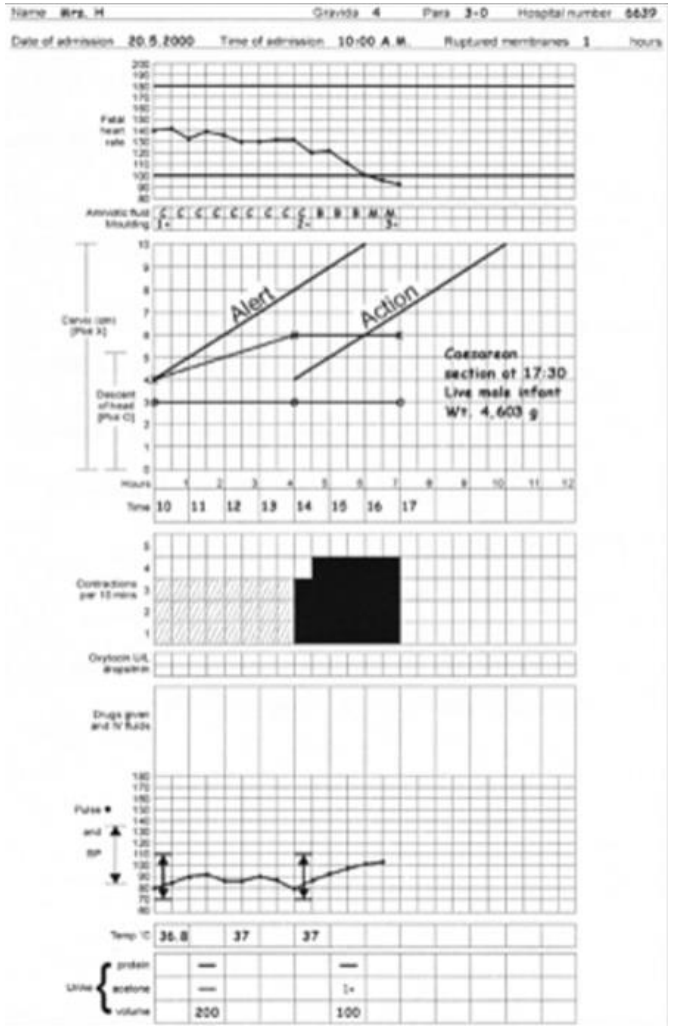
Mini-OSCE Q1

- **At admission, describe the following:**
  - **Dilation: 4cm**
  - **Head descent: 3/5**
  - **Amniotic fluid: Clear fluid**
- **Describe uterine contraction after 2 hours of admission**
  - **Moderate**
- **When did rupture of membranes happened ?**
  - **1 hour prior to admission**



Mini-OSCE Q1 cont.

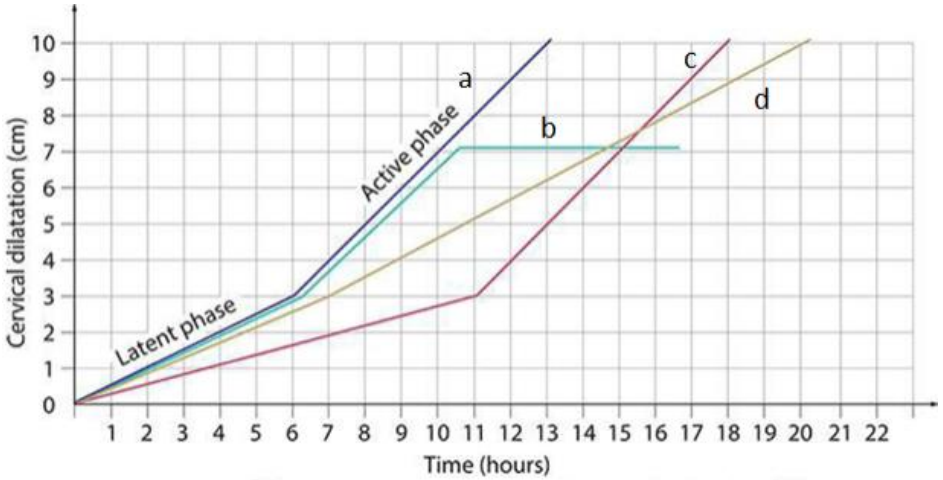
- **What is you interpretation about labor progress ?**
  - Primary dysfunction of labor
- **What points on partogram support your interpretation ?**
  - Poor Cervical dilatation progress
  - No descent
  - FHR worsening
- **What are the causes ?**
  - Cephalopelvic disproportion (CPD)
  - Malposition or malpresentation
  - Inadequate uterine contractions



Mini-OSCE Q2

❖ **Write what represented in each line ?**

a. Normal labor
b. Secondary arrest
c. Prolonged Latent phase
d. Primary dysfunction



❖ **What is the management of line c ?**

- Simple analgesics, mobilization, reassurance and discharge patient from labor

❖ **What is the causes of line b ?**

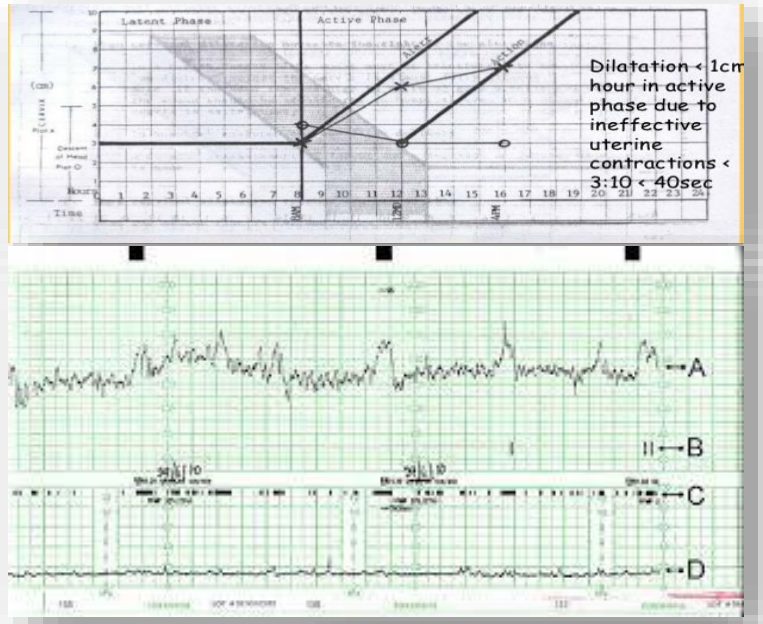
- CPD (most common), inefficient uterine contraction, malposition or presentation

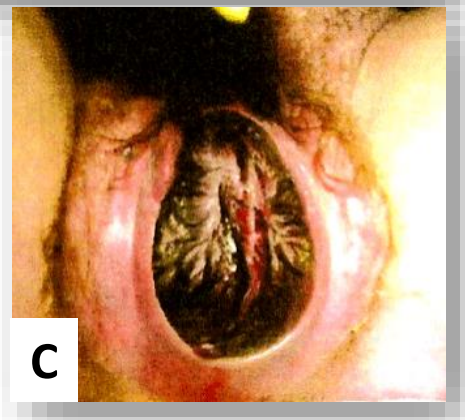
❖ **What is the most important things you should look for in the partogram of the patient represented by line b ?**

- Molding, amniotic membrane (liquor), uterine contraction, fetal presentation position

Mini-OSCE Q3

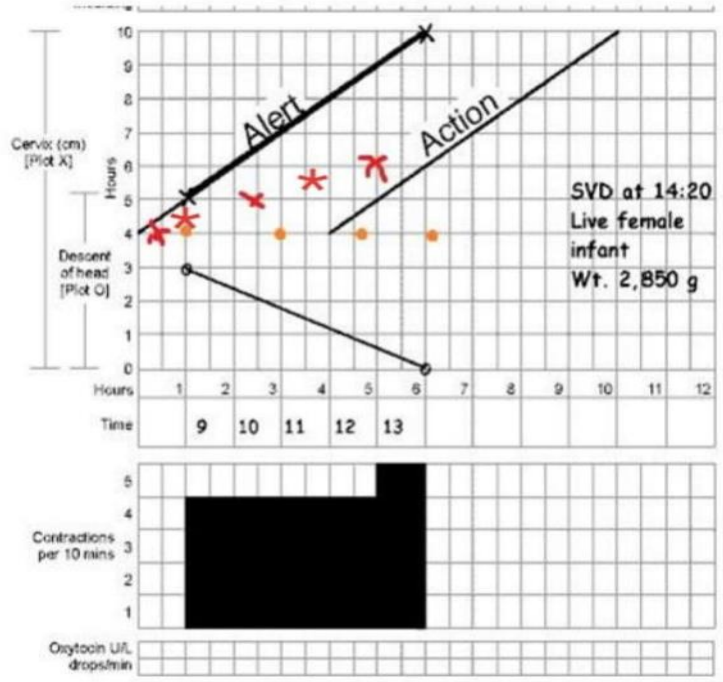
- Regarding this partogram what is your interpretation ?
  - Primary dysfunctional labor
- Describe CTG with explanation
  - Normal CTG
- What is the stage according to picture C ?
  - Extension, Second stage
- What is your management of picture C ?
  - Encourage the mother to push down
  - Continue to monitor the mother and fetus
  - Controlled delivery of the head is needed by pushing the hand against the perineum





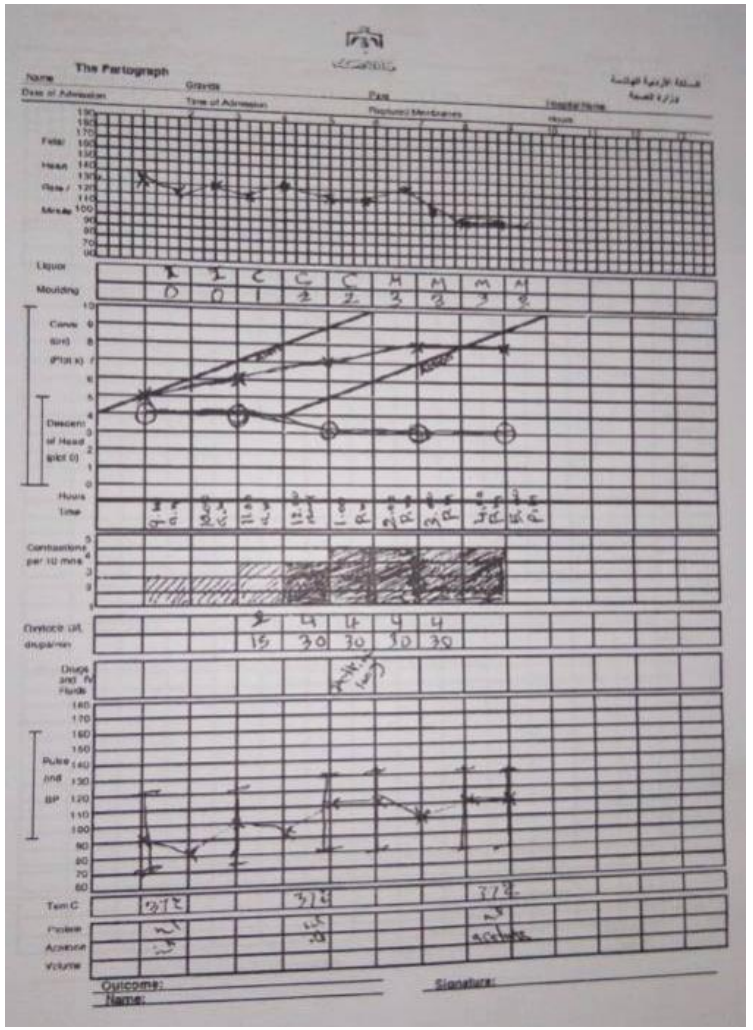
Mini-OSCE Q4

- **At admission, describe the following:**
  - **Dilation: 4cm**
  - **Head descent: 4/5**
- **What is you interpretation about labor progress ?**
  - **Primary dysfunction of labor**
- **Mention 3 findings from Partogram support your**
  - **Poor Cervical dilatation progression**
  - **No descent**
  - **FHR worsening**



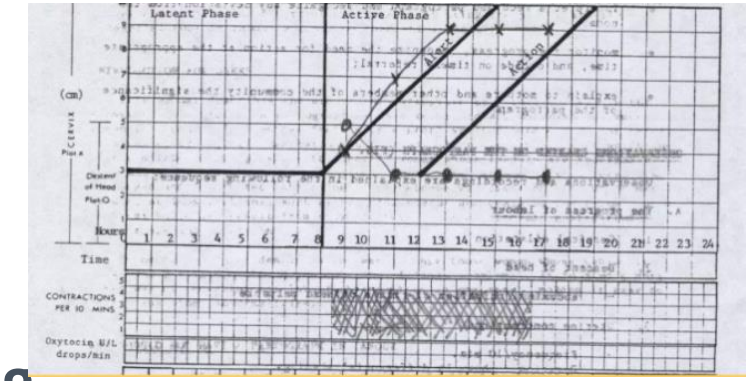
Mini-OSCE Q5

- **What is the vaginal examination finding on admission ?**
  - Intact membranes
  - No molding
  - Cervical dilation = 5cm
- **what are the physical findings in vaginal exam at 5 pm that indicate obstructed labor?**
  - Fetal bradycardia
  - Meconium-stained amniotic fluid
  - Severe head molding
  - Arrest of cervical dilation at 8 cm
- **What is the action you would do to the pt now?**
  - Cesarean section



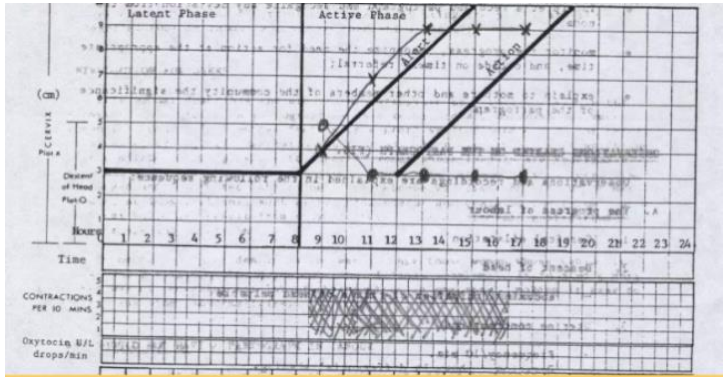
Mini-OSCE Q6

- **Describe the following:**
  - Dilation at admission : **4cm**
  - Head descent at admission : **5/5**
  - Uterine contractions after 3 hr of admission: **4 moderate contractions**
- **How to assess the progress of labor regarding what points ?**
  - **Descent, Dilatation, Molding, Uterine contractions**
- **What is the name of this problem in the partogram ? And what is the most common cause?**
  - **Secondary arrest, Cephalopelvic disproportion**
- **What is the management in this situation ?**
  - **C/S Delivery**



Mini-OSCE Q7

- **What is your diagnosis ?**
  - Secondary arrest
- **What are the causes ?**
  - Cephalopelvic disproportion, malposition, malpresentation insufficient uterine contractions
- **If you came to examine this patient at 6 hours, what do you want to assess ?**
  - Assess the adequacy of the pelvis via clinical pelvimetry, assess for any signs of obstruction like excessive molding and caput, and assess uterine contractions along with position and the presentation of the baby
- **If there was inadequate uterine contraction, what do you want to do ?**
  - Exclude CPD
  - Augmentation of labor via amniotomy and oxytocin



Mini-OSCE

Case about Partogram:

1-Primary dysfunctional labor

Causes: insufficient uterine contraction

(dr alaa say this is the perfect answer and

if you write 3 causes it's wrong)

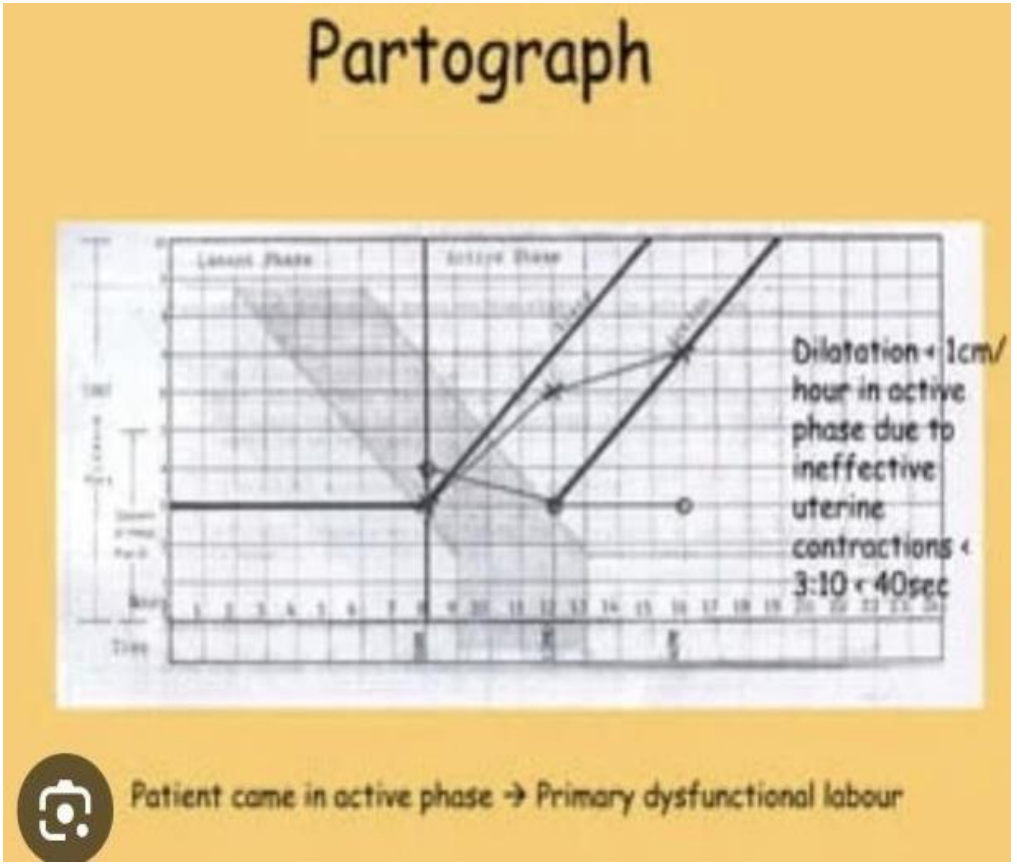
2- Management: Exclude CPD, Augmentation of labor via amniotomy and oxytocin

3- What is Dilation after – hour?

4- Duration of active phase from second stage: primi: < 2 hours (< 3 hrs. if epidural)

Multi: < 1 hour (< 2 hrs. if epidural)

Mention physical examination findings



Dr.Mohammed mini OSCE

Gestational trophoblastic disease

Overview of gestational trophoblastic disease

Characteristics	Partial mole	Complete mole	Choriocarcinoma
Etiology	Fetal karyotypes: 69XXX, 69XXY, 69XYY	Fetal karyotypes: 46XX (~ 90% of cases), 46XY (~ 10% of cases)	Most cases of choriocarcinoma are preceded by hydatidiform mole (50%)
Mechanism	Fertilization of an egg containing a haploid set of chromosomes with 2 sperms	Fertilization of an empty egg that does not carry any chromosomes	Malignant transformation of cytotrophoblasts & syncytiotrophoblasts
Clinical features	1. Vaginal bleeding 2. No change in uterine size 3. Pelvic tenderness	1. Vaginal bleeding during the first trimester 2. Uterus size greater than normal for gestational age 3. Pelvic pressure or pain 4. Passage of vesicles 5. Endocrine symptoms; due to ↑hCG (e.g., hyperemesis gravidarum, ovarian theca lutein cysts, hyperthyroidism)	1. Postpartum vaginal bleeding 2. Inadequate uterine regression after delivery 3. Multiple theca lutein cysts 4. Additional symptoms (e.g., dyspnea or hemoptysis from metastases in the lungs)

Overview of gestational trophoblastic disease

Characteristics		Partial mole	Complete mole	Choriocarcinoma
Diagnostics	β-hCG	Increased in all three; (40% >100,000 mIU/mL); (partial mole < complete mole < choriocarcinoma)		
	Ultrasound (See next 2 slides)	1. Fetal parts may be visualized 2. Fetal heart tones may be detectable 3. Amniotic fluid is present 4. Increased placental thickness 5. Focal anechoic spaces and/or increased echogenicity of chorionic villi (Swiss cheese pattern) 6. Increased transverse diameter of the gestational sac 7. Theca lutein cysts are usually absent	1. Echogenic mass interspersed with many hypoechogenic cystic spaces "snowstorm" 2. No fetal parts 3. Lack of fetal heart tones 4. No amniotic fluid 5. Theca lutein cysts	1. Invasive mole typically appears as one or more poorly defined masses in the uterus with anechoic areas 2. Color Doppler of the anechoic areas reveals high vascular flow. Invasion into the myometrium may be visualized
Treatment		1. Uterine evacuation 2. Monitor β-HCG levels (usually 8-12 weeks)		1. Methotrexate 2. Monitor β-HCG levels for at least 12 months.
Prognosis		Most patients achieve normal reproductive function after recovery		Cure rate of 95–100%

Overview of gestational trophoblastic disease

Partial mole	Complete mole
	

swiss cheese pattern

snowstorm

Mini OSCE – 1

A female that her last menstrual period was 8 weeks ago, presented with bleeding and passage of the structures in figure A

- Describe what you see in figures
  - A- Hydropic vesicles
  - B- snowstorm appearance
- What is your diagnosis?
  - Complete Molar Pregnancy

figure A

figure B

Mini OSCE – 1

- Mention 6 relevant questions in the history that you'll ask?
  - Previous molar pregnancy
  - Maternal age especially if it was >35 years
  - History of Infertility
  - history of spontenouse abortion, ectopic pregnance
  - The use of contraception
  - History of heavy smoking
- Mention 4 steps in management.
  - Admission and stabilize the patient if anemia or preeclampsia present
  - Pelvic and abdominal U/S to exclude invasive mole or coexisting pregnancy
  - Suction evacuation
  - If she is Rh(D)-negative, give anti-D IG after evacuation (GA > 7W)

Mini OSCE – 2

35 years old female comes with hemoptysis after complete molar evacuation , B-HCG done for her was 100,000.

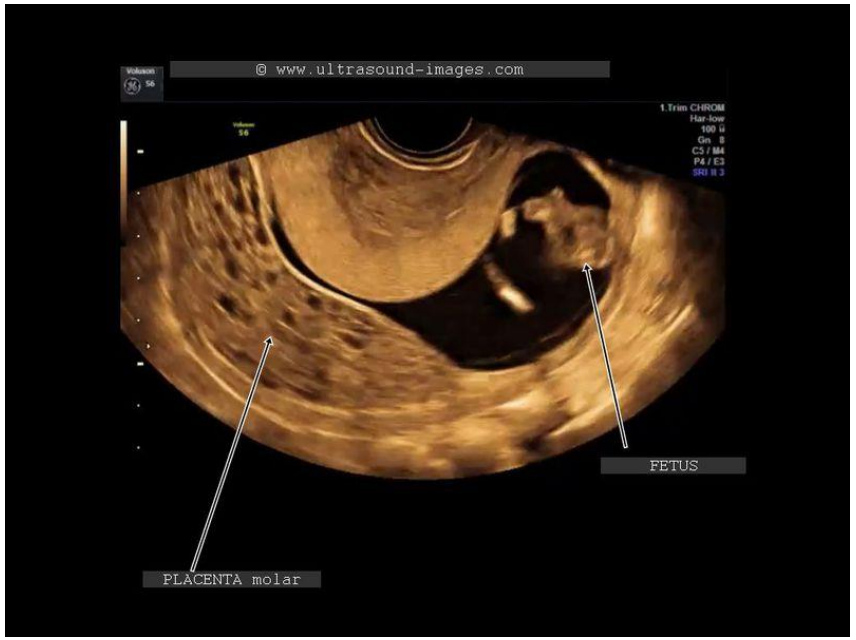
- Most likely diagnosis?
  - Choriocarcinoma
- Other investigations you would do for her?
  - Pelvis U/S
  - Chest x-ray
  - CT for abdomen and brain
- Relevant gynecological symptoms may present with it?
  - vaginal bleeding (typically late postpartum hemorrhage)
  - Uterine rupture (rare)

Mini OSCE – 2

- What is your management plan?
  - Treatment with chemotherapy methotrexate or dactinomycin &monitored with weekly serial measurements of serum beta-hCG during therapy. Remission is defined as three consecutive normal hCG values over 14 to 21 days, then monthly monitoring of beta-hCG until one year of normal levels.

Mini OSCE – 3

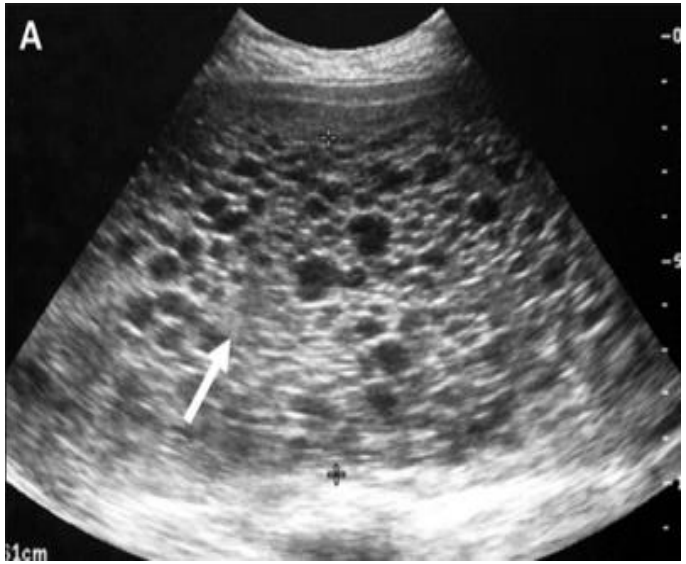
- Diagnosis:
  - Partial hydatidiform mole
- Karyotyping :
  - 69XXX, 69XYY ,69XXY
- The pt didn't accept the treatment and she came after 2 month with seizure and no fetal cardiac activity, what is the cause of seaizure ?
  - Eclampsia
- Management :
  - Suction evacuation
- How to confirm dx :
  - Histology
- Other investigation :
  - HCG , karyotyping , chest X-ray ,
  - urine analysis
- How do you follow up her :
  - beta-HCG level weekly until 3 repeated negative result then monthly for 6 m,



Partial molar 3d ultrasound

Mini OSCE – 4

Lady who is 8 weeks gestation came to you complaining of vaginal bleeding .



- What do you see ?
  - Snowstorm appearance
- What is your diagnosis ?
  - Complete hydatiform molar pregnancy
- What other finding you might see on US ?
  - Theca lutein cyst
- What is the treatment ?
  - Suction evacuation
- What would you advise her after she has completed treatment and before discharge from hospital ?
  - Follow up with B-HCG every week until 3 repeated negative result then monthly for 6 m
  - , and use double contraception method

Osce

OSCE

History : women pregnant in 10 week GA ,on examination the uterus between symphysis pubis and umbilicus?

1.What the wrong things related to history ?

Large for date uterus

2.Give me 3 differentials ?

Wrong date /multiple gestation/molar pregnancy

3. Other investigation and what you look for ?

US: wrong date look for CRL

multiple gestation look for mutlipte gestational sac

molar pregnancy look for snowstorm apperance

B-hCG for normal doubling

4. other questions asked by examiner

Miscarriage

Miscarriage

- **Definition**: Termination of pregnancy before the age of viability (<24 weeks, <500 g), can be either spontaneous or induced (abortion)
- **Incidence**:
  - The most common complication of Early Pregnancy.
  - The frequency decreases with increasing gestational age.
- **Risk factors**:
  - Advancing Maternal Age; most important risk factor
  - Previous spontaneous Miscarriage (5% → 20% → 28% → 43%)
  - Maternal weight (BMI <18.5 kg/m^2 or >25 kg/m^2)
  - Drugs: Smoking, Alcohol, cocaine, caffeine, NSAIDs, Low folate levels
  - Fever
  - Prolonged time to Pregnancy
  - Celiac disease

Etiology

Fetal Etiology	Maternal Etiology
❖ Chromosomal abnormalities: ○ Account for 50% of all Miscarriages ○ The earlier the gestational age at abortion, the higher the incidence of cytogenetic defects • Autosomal trisomies esp. Trisomy 16, 52%. • Monosomy-X, 19% • Polyploidies, 22% • Other, 7% ❖ Congenital anomalies	❖ Congenital or acquired uterine abnormalities ❖ Invasive intrauterine Procedures or Trauma ❖ Acute Maternal Infection (due to fetal or placental infection) ❖ Uncontrolled Maternal Endocrinopathies ❖ Hypercoagulable state ❖ Unexplained

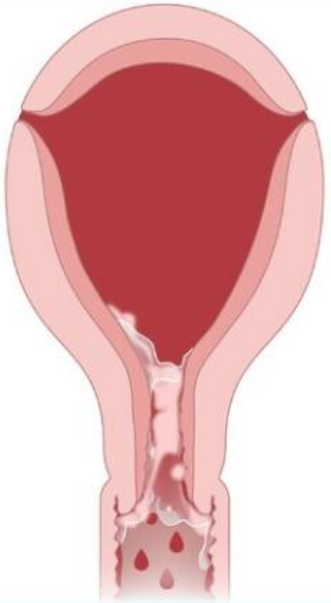
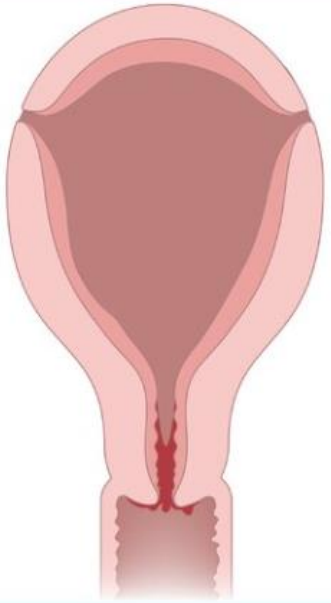
Types of miscarriage

Type	V bleed	Fetal activity	Products of conception	Cervical os	Management	Prognosis
Threatened	Yes, painless	Yes	Intrauterine	Closed	Nothing	Reversible
Inevitable	Yes, painful	May present	Visible/palpable POC	Dilated	Wait	Irreversible
Complete	Yes	No	POC completely outside of the uterus	Closed	Nothing	Irreversible
incomplete	Yes, painful, Risk of shock	No	POC within the cervical canal or uterus	Dilated	Expulsion	Irreversible
Missed	No	No	No expulsion of the POC	Closed	Expulsion	Irreversible

❖Uterus size

- **Threatened**: appropriate for gestational age
- **Complete**: Small and well contracted
- **Incomplete**: smaller than expected for gestational age, but NOT well contracted
- **Missed**: Usually, smaller than expected for gestational age

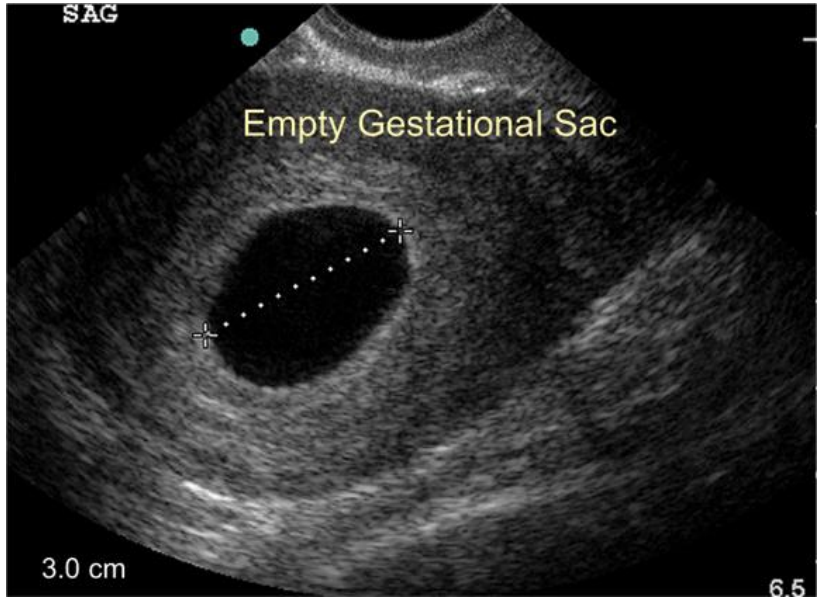
Types of miscarriage

	Threatened	Inevitable	Incomplete	Complete	Missed
Types of spontaneous abortion					
Cervical os					
Fetal cardiac activity		 or			

Mini OSCE – 1

8 weeks came to ER with vaginal bleeding

- ❖ Diagnosis:
  - Missed miscarriage
- ❖ Things support it :
  - Absence of embryonic cardiac activity in an embryo with crown- rump length greater than 5 mm
  - Absence of a yolk sac when the mean sac diameter is 13 mm
  - Absence of an embryonic pole when the mean sac diameter (average of diameters measured in each of three orthogonal planes) is greater than 25 mm measured transabdominally or greater than 18 mm by the transvaginal technique



Mini OSCE – 1

- Risk factors :
  - Age — Advancing maternal age is the most important risk factor for spontaneous miscarriage in healthy women.
  - Previous spontaneous abortion .
  - Smoking Alcohol/ Cocaine / NDAIDs
  - Fever /Caffeine
  - Prolonged time to pregnancy
  - Low-folate level /Maternal weight /Celiac disease
- If she came after two months pregnant with HbA1c =8 what you should advice her ?
  - She should do OGTT, if its abnormal then she has to control her blood sugar by lifestyle change (3 meal instead of one big meal) and metformin, because miscarriage is one of the most common DM complication, and I will give her folic acid (5 mg/day) and advice her to visit the gynecologist doctor regularly every week

Mini OSCE – 2

women with recurrent loss of pregnancy first loss at 8w second 12w third 26w

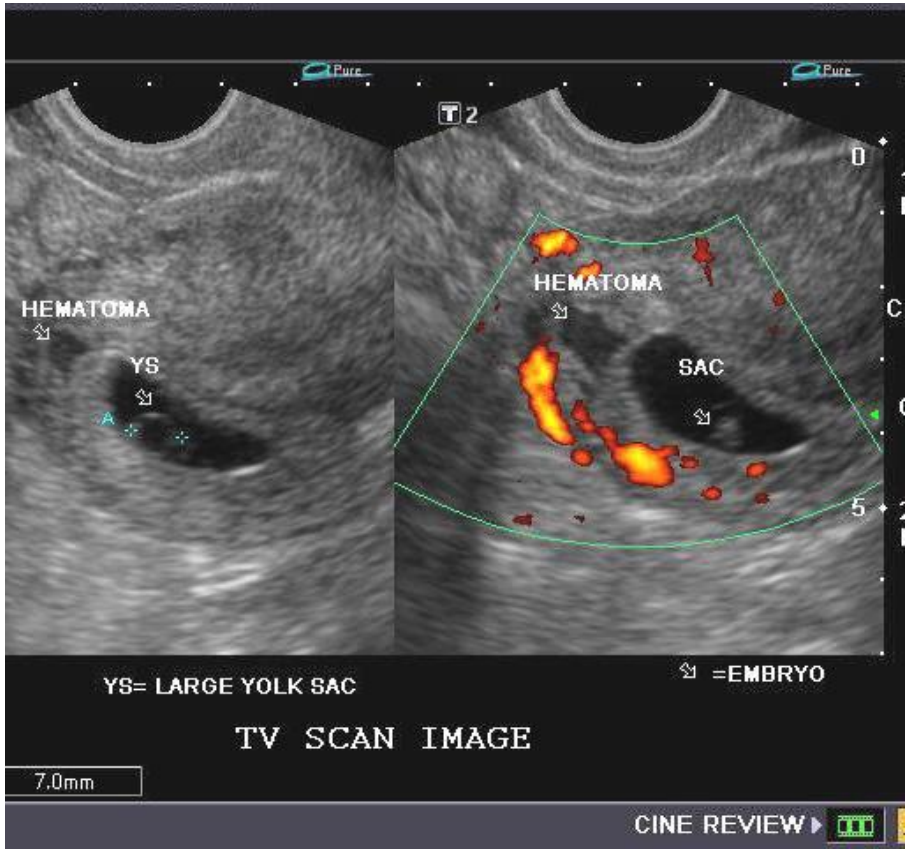
- Name of this procedure
  - hysteroscopy
- Name of abnormality
  - Septate uterus
- 3-فسر لماذا كل مرة كان عمر الحمل يزداد

  - Do septoplasty for the patient (high recurrence rate)

Mini OSCE – 3

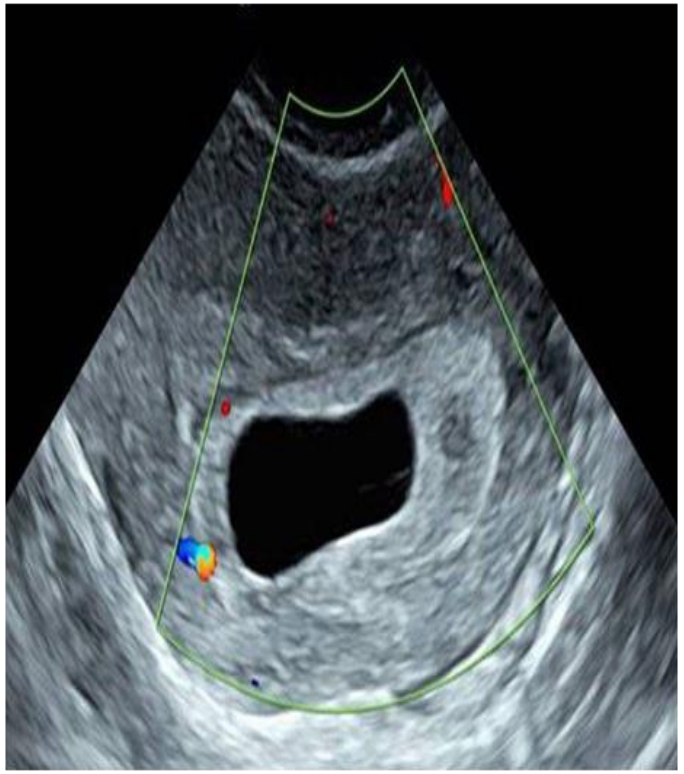
This lady came with history of 8 week amenorrhea ,vaginal bleeding and lower abdominal discomfort .

- ❖What is the diagnosis ? And why ?
  - Missed miscarriage , because no fetal heart activity on doppler US
- ❖Mention 3 bimanual examination findings ?
  - Small uterus for gestational age , closed cervix , Tenderness upon uterine palpation may indicate infection.
- ❖Serious complication you should avoid ?
  - DIC or septic miscarriage
- ❖What lab investigations you should order ?
  - PT , PTT , fibrinogen , platelet count , CBC, blood culture



Mini OSCE – 4

G3P0+2 /GA :8Weeks presented with mild vaginal bleeding



1)Relevant hx

abd. pain, medical history (DM,PCOS, Thyroid disease,hypercoagulable state), did she do HSG, Karyotyping

2) name of us finding

anembryonic gestational sac (blighted ovum)

3) if bleeding increased +abdominal pain+ open cervix :

- a. Diagnosis: inevitable miscarrige
- b. Managment: admitted , E & C

4)If she came to the clinic after 6 weeks . what investigations you would order

Karyotyping

Osce

OSCE – 1

37years old,recurrent miscarrage para zero +4

1.cause of miscarrage in general?

antiphospholipid syndrome, thrombophilia, luteal phase defect , cervical incompetence, uterine anomalies, congenital causes, DM, thyroid disease,

2.most common cause with this case?

antiphospholipid

3. investigation? anticardolipin , lupus anticoagulant antibodies of IgG AND IgM

4. Management? aspirin and LMWH

OSCE – 2

2 previous second trimester miscarrage. one preterm labor

1.what is the most likely cause?

cervical incompetence

2.what is the relievant point in history and examination

in two second miscarrige baby was alive or not, there was painless dilation or not , there is cervical laceration in previous labor , history of LEEP, collagen diseaes, her mother or sister diagnosed w cervical incompetence, history of D & C, , uterine anomalies

3.investigation

during pregnancy need to measure the cervical length at 18-20W

IN non preg. HSG may help

4.managment

cervical cercalge at 14w

OSCE – 3

27 year old married woman G4P0+4 come to clinic my to explore the cause in US the uterus is normal

What is the name of this case ? recurrent miscarriage

What is the possible causes?thrombophilia, cervical incompetence, DM, PCOS, thyroid disease

What are the relevant questions in history?history of DM, PCOS, THYROID DISEASE,

“”””””””””””””””””in examination? General exam and vital signs, abd exam ,pelvic exam (bimanual)

What is the investigation if the cause is antiphospholiped syndrom ?

lupus anticoagulant, anticardiolipin, antibodies of IgG/IgM

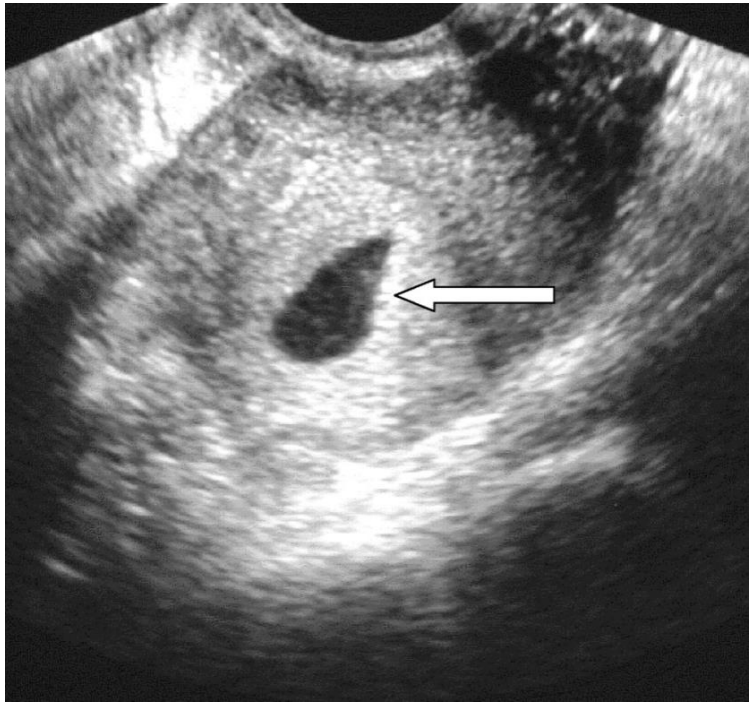
What are the treatments?

LOW dose aspirin . LMWH

Ectopic pregnancy

Mini OSCE – 1

- What is the following finding?
  - Pseudosac
- How to differentiate it from gestational sac?
  - Does not have an echogenic rim (absence double decidual sac sign)
  - Tends to be located in the middle of the uterine cavity rather than embedded in the decidua
  - Can change in shape during the scan
  - May appear to be complex since it contains blood
  - Decrease blood flow on doppler
- Diagnosis?
  - Ectopic
- 2 additional investigation?
  - B HCG, progesterone, Doppler, laparoscopy



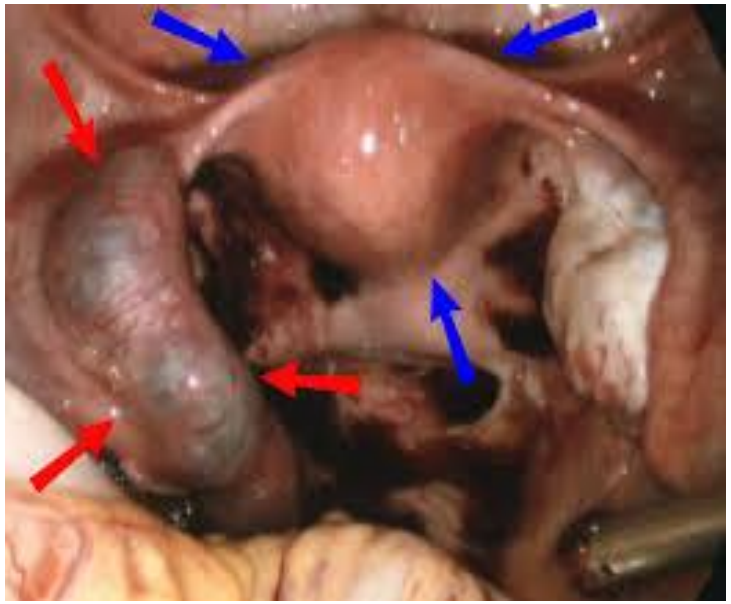
Ectopic US picture

Mini OSCE – 2

- 22 years old female p2+ come with vaginal bleeding abd lower abdominal pain and amenorrhea 8 w :
- Describe what can You see?
  - a small fluid collection that is centrally located within the endometrial cavity psudosac
- What's the diagnosis?
  - ectopic pregnancy
- Mention another differential diagnosis?
  - Missed miscarriage, blighted ovum.
- Mention another abnormality on US ?
  - Adnexal mass / Tubal ring sign
  - Peritoneal fluid / Interstitial line sign

- What's your management if this patient comes with sever abdominal pain to ER?
  - Signs of impending or ongoing ectopic mass rupture (i.e, severe or persistent abdominal pain or >300 mL of free peritoneal fluid outside the pelvic cavity)
  - A laparoscopic surgical approach (laparoscopic salpigectomy)

Mini OSCE – 3



- **Findings ?**
  - Congested enlarged left tube with free peritoneal fluid
- **diagnosis ?**
  - Ectopic pregnancy
- **Examination ?**

  -vital signs

  -abdominal tenderness

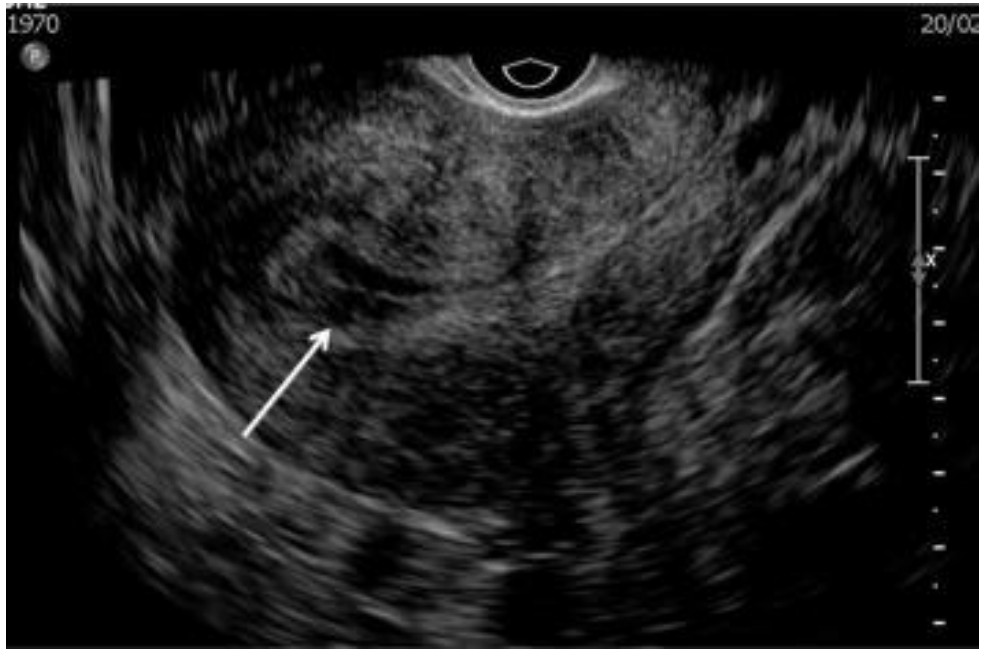
  -bimanual examination: adnexal mass, unilateral cervical motion

- **Ultrasound finding ?**
  - Pseudosac , tubal ring or a non cystic adnexal mass , peritoneal free fluid , cardiac activity in tube
- **5- surgical management ?**
  - In the presence of a healthy contralateral tube, salpingectomy , In women with a history of fertility-reducing factors (previous ectopic pregnancy, contralateral tubal damage, previous abdominal surgery, previous pelvic inflammatory disease), salpingotomy

Mini OSCE – 4

A 33 years old G4P2+1 presents at 7 weeks of amenorrhea complaining of vaginal spotting check her transvaginal US image , what is your next step of management (given that both adnexa are free)

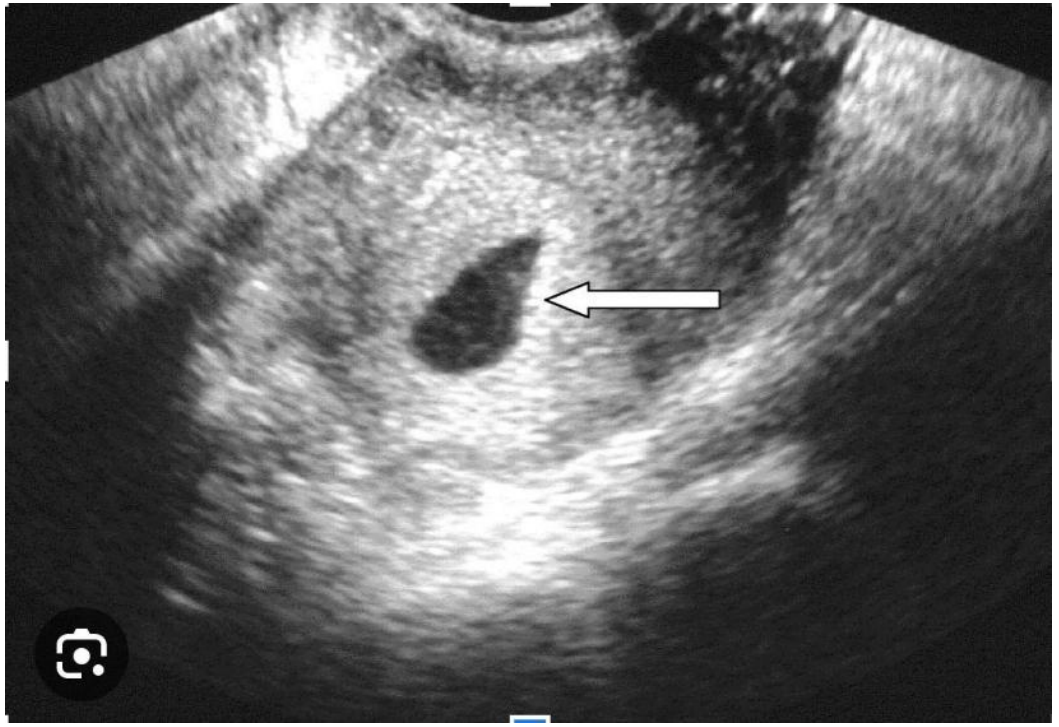
a. Do urine pregnancy test
b. Do beta HCG-titer
c. Discharge home after reassurance
d. Immediate admission
e. Give her misoprostol



Mini OSCE – 5

❖Mention 8 findings in history?

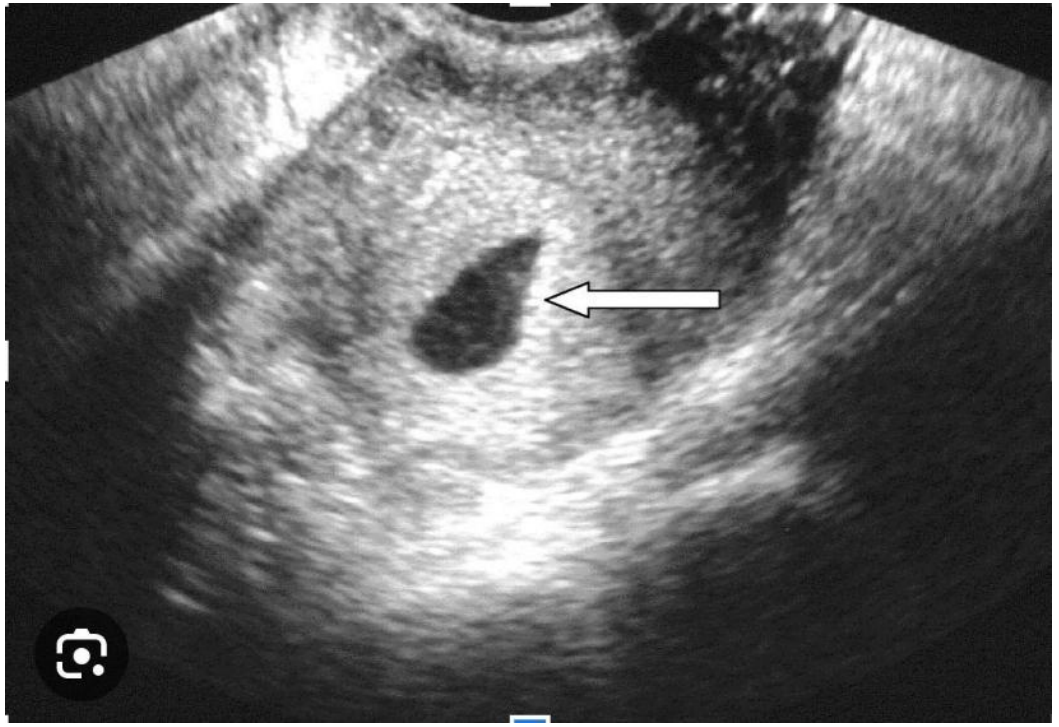
1. vaginal bleeding
2. abdominal pain
3. previous ectopic pregnancy
4. previous tubal surgery
5. previous history of PID
6. Use of IUD
7. Smoking
8. age



Mini OSCE – 5

❖Mention findings in physical Examination?

abdominal tenderness, adnexal mass, unilateral cervical motion



❖Shape in ultrasound?

pseudosac ,can change shape during the scan

❖The most relevant lab test:

- B-HCG

Mini OSCE – 6

A patient came to the clinic one month after inserting IUD.

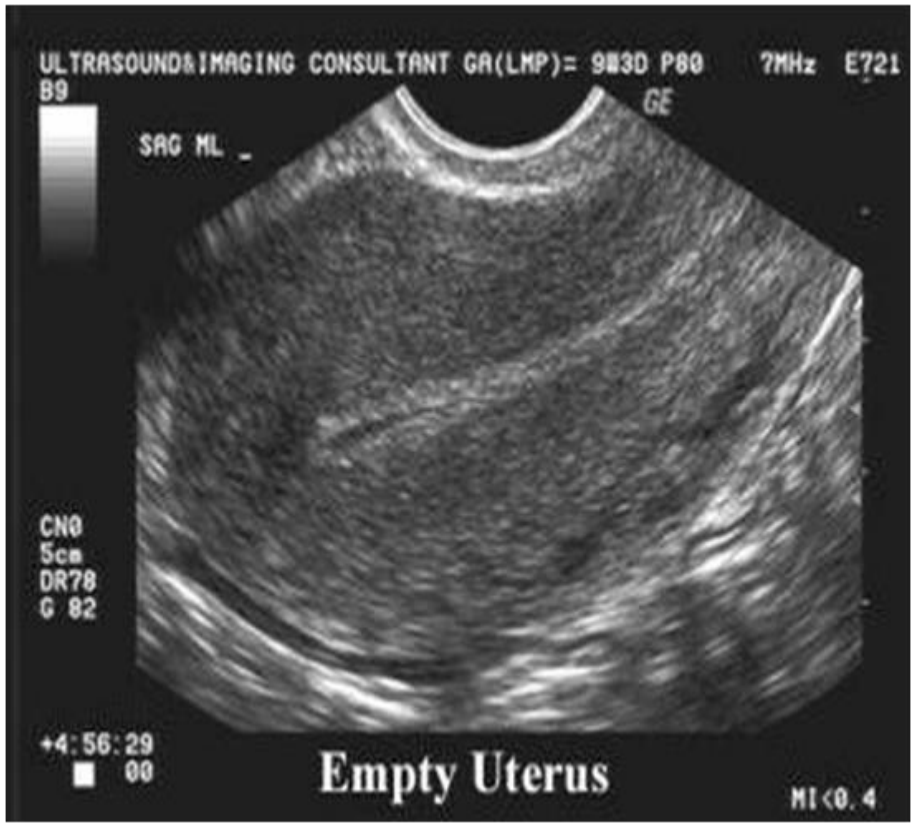
- LMP: before one month . US was perfomed

1. What is the indication to do TVUS for this patiet?

amenorrhea , TO RULE out ectopic pregnancy

2. The finding in US?

empty uterus (endometrial stripe), no gestational sac, no IUD



Mini OSCE – 6

3.What are the risk factors for your diagnosis?

.previous ectopic pregnancy

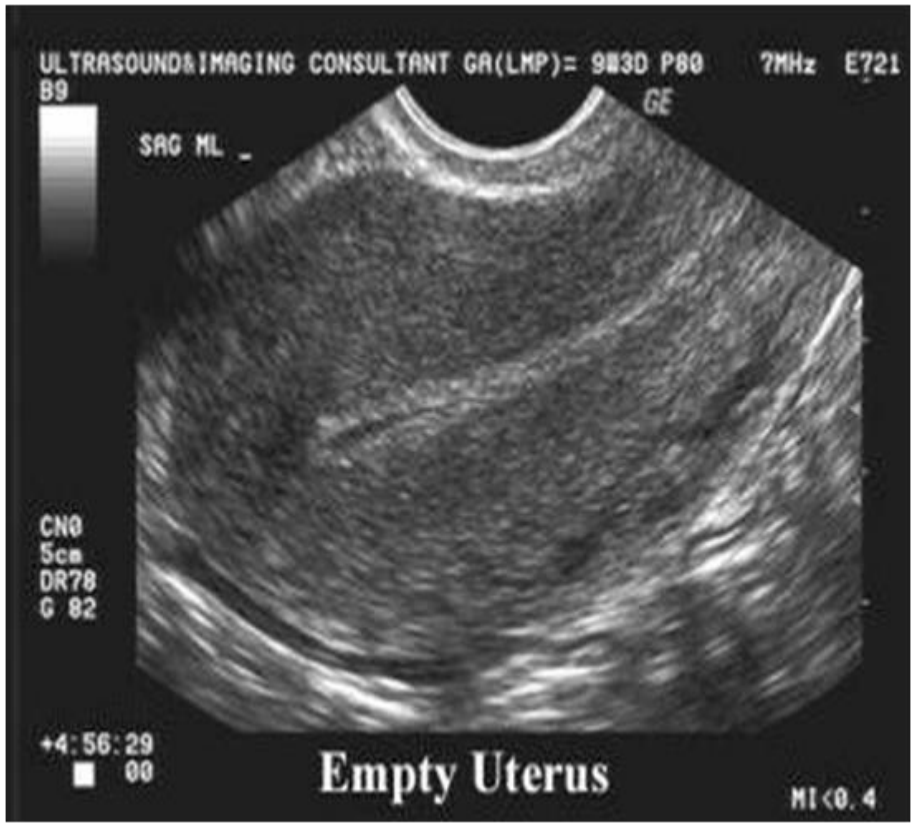
previous tubal surgery

previous history of PID

Use of IUD

Smoking

age



4. The best contraception method to be used in the future for her case?

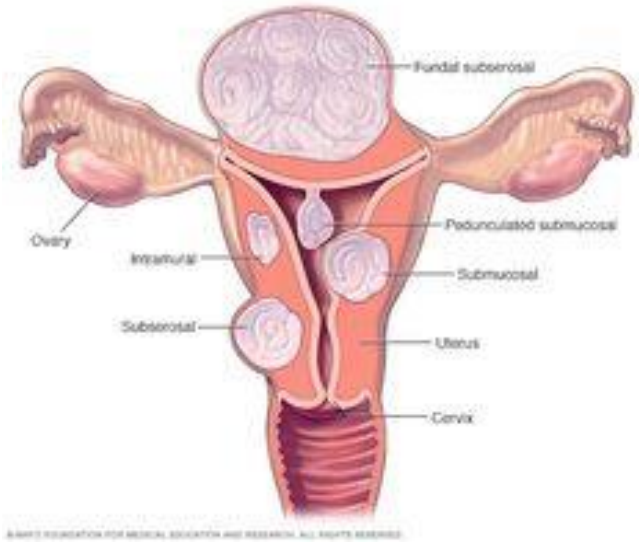
long acting reversible contraceptive as implant

Benign lesions of uterus & cervix

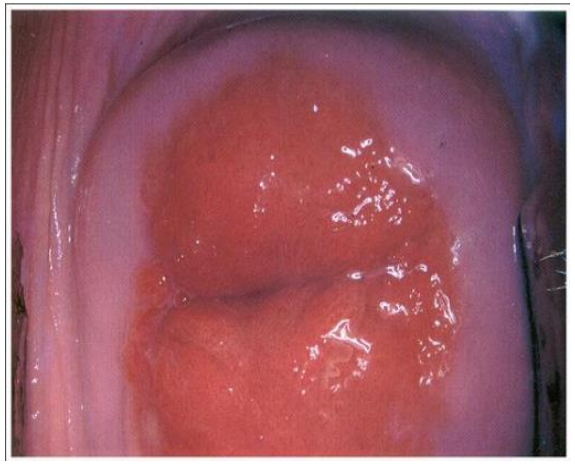
Mini OSCE – 1

50-year-old patient came with irregular bleeding and pelvic pain, On the exam there was an intramural mass.

- ❖What is your diagnosis and what type ?
  - Uterine leiomyoma , intramural
- ❖What other symptoms according to her case ?
  - Secondary dysmenorrhea ,deep dyspareunia
- ❖What will you find on bimanual examination ?
  - Firm non tender irregular enlarged mobile uterus
- ❖What the diagnostic image ? (size and location)
  - MRI
- ❖What is the definitive treatment ?
  - Hysterectomy



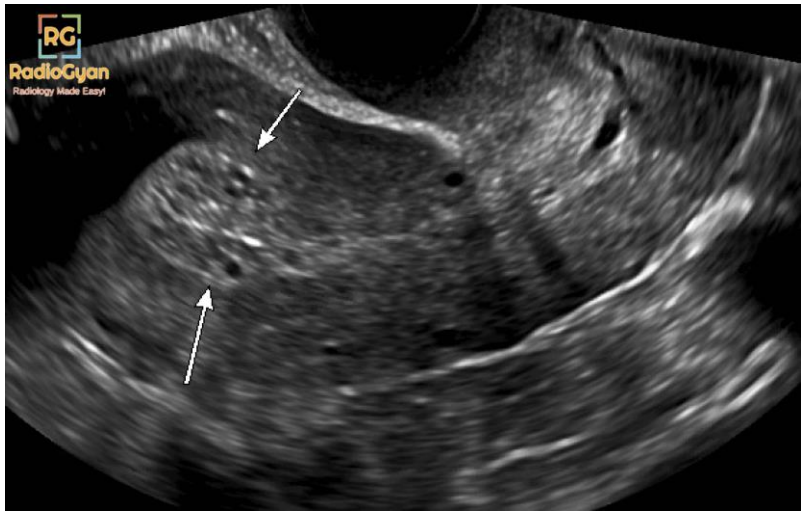
Mini OSCE – 2



- 1- Name the two epithelium:
  - A- Columnar epithelium (Reddish appearance)
  - b- Stratified squamous epithelium
- The most likely dx ?
  - Ectropion
- Mention Two risk factors for this condition ?
  - 1-Adolescents
  - 2-Pregnancy and taking estrogen-progestin contraceptives or who had a cervical laceration during labor and delivery.
- Before starting the treatment what do you want to assess ?
  - Malignancy should be excluded before treatment (Pap smear)
- Mention two treatment options :
  - Boric acid suppositories 600 mg vaginally at bedtime or deoxyribonucleic acid 5 mg vaginal suppositories (for 2 weeks).
  - An ablative procedure using cryocautery or electrocautery

Mini OSCE – 3

52 Years Female with post menopausal bleeding , and this US (Arrows: Endometrium)



- ❖1-What does the US measure?
  - Endometrial thickness
- ❖2-What is Your Deferential diagnosis ?
  - Endometrial hyperplasia, Endometrial cancer, Adenomyosis and Fibroid
- ❖How much the probability for this female to have endometrial cancer ?
- ❖4-Your next step and why ?
  - Hysteroscopic guided endometrial biopsy , to assess the stage of hyperplasia and management ?
- ❖5-If she has endometrial cancer what is your management ?
  - Total hysterectomy and chemotherapy

Cervical intraepthelial hyperplasia

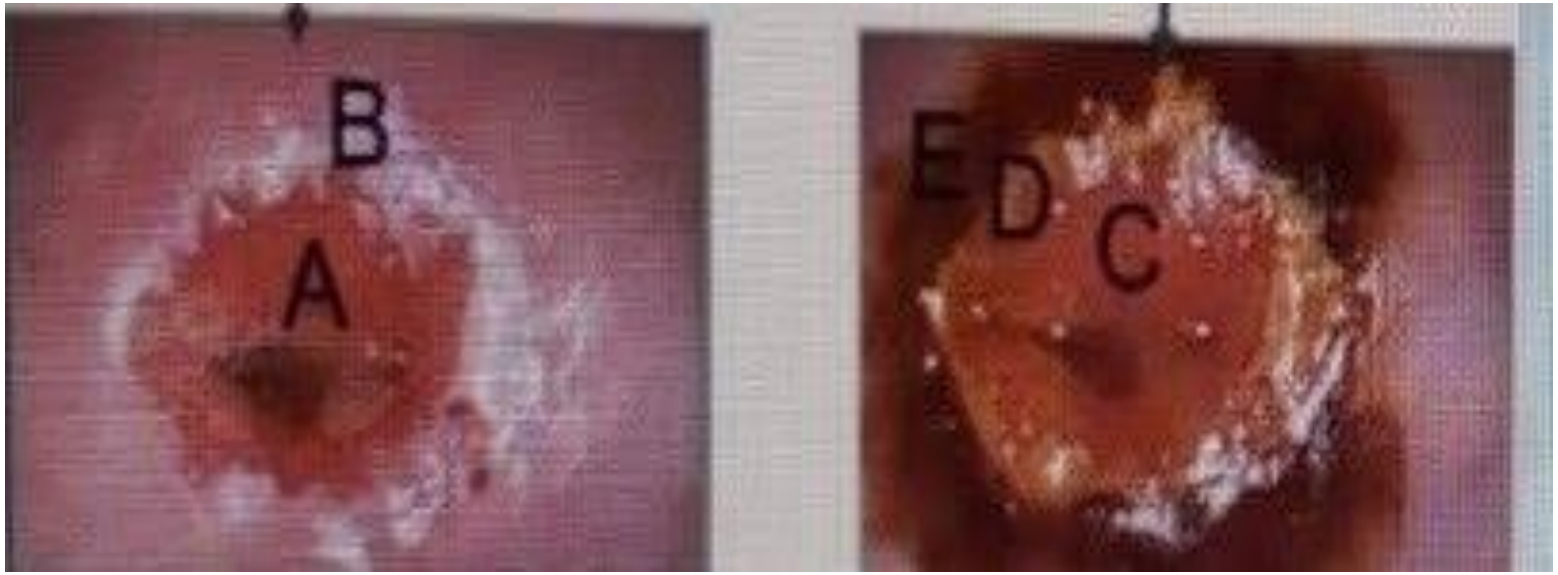
Mini OSCE – 1

- Procedure ?
  - Colposcopy
- Name of this site ?
  - Transformation zone
- Name of lesion ?
  - Acetowhite lesion
- Name of substance used ?
  - 5% acetic acid

- If this is CIN3 what the management ?
  - loop electrosurgical excision procedure (LEEP) but , with suspected micro-invasion or adenocarcinoma in situ (AIS), cold knife conization is often recommended so that margins can be evaluated without cautery artifact.

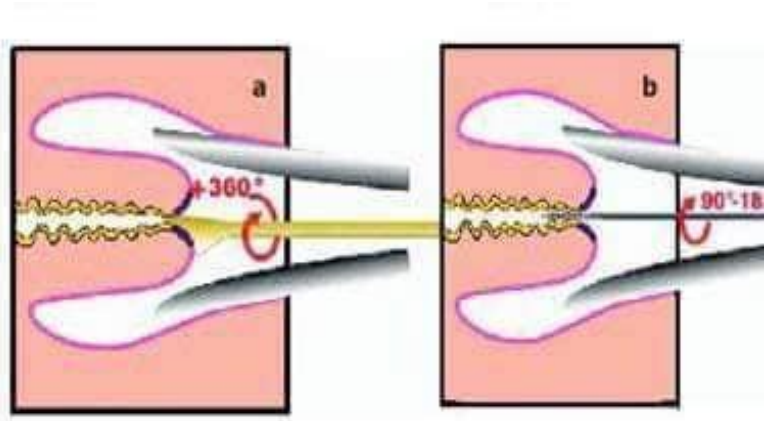
Mini OSCE – 2

- Colposcopic views. where are the normal areas:
  - A and E



Mini OSCE – 3

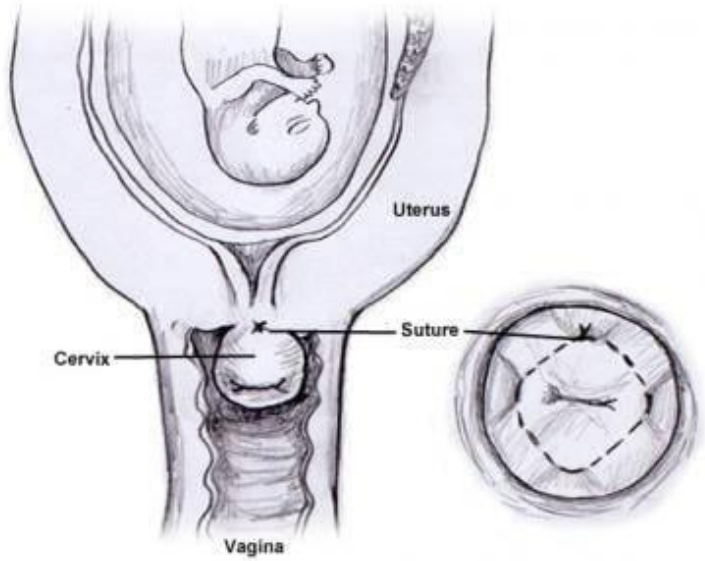
- Instruments name:
  - cervical spatula, endocervical brush
- Name of the labelled area:
  - transformational zone
- Definition of the area:
  - Area between old and new sequamocolumner junction
- 2 methods for screening:
  - cervical cytology, high risk HPV testing
- Methods of cervical cytology:
  - Conventional method, liquid based cervical cytology
- If cytology show CIN 2 what is the next step:
  - Colposcopy + cervical punch biopsy + endocervical curettage



Others

Mini OSCE – 1

- Name of this procedure?
  - Cervical cerclage
- Indication?
  - Multiple previous preterm births or pregnancy losses in the 2nd trimester
  - Previous preterm birth with short cervix (<25mm) on U/S at <24 weeks
  - Prior cerclage due to cervical insufficiency at <24 weeks
- Causes of this problem?
  - Cervical trauma in previous deliveries
  - Short cervix <2.5 cm
  - Previous termination of pregnancy
  - Connective tissue disease



Mini OSCE – 1

- At what gestational age this procedure is done and why?
  - 14 weeks , to bypass the high risk of miscarriage and to make sure that the fetus is healthy
- When to remove?
  - In case of preterm labor
  - At 37 weeks
  - Miscarriage

Mini OSCE – 2

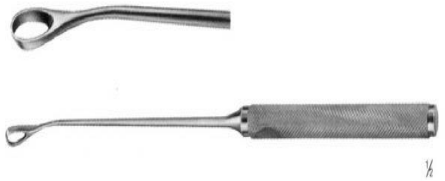
- 39 weeks primgravida , who has been in labour for 8 hours , next step?
  - Operative delivery using forceps C

C B A

Mini OSCE – 3

❖ **Naming them ?** From right to left

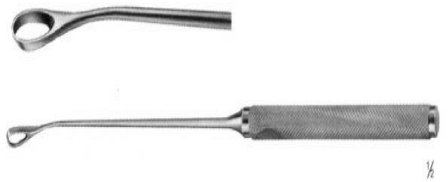
- Cervical dilators (Hegar dilators)
- UTERINE CURETTE SINGLE ENDED
- Ovum forceps
- Uterine sound
- Sim's double-bladed vaginal speculum



Mini OSCE – 3

- **Operation could be used for:**
  - Dilatation and curettage , Hysteroscope
- **Early and late complications for that procedure ?**
  - Cervical laceration , Uterine perforation, Asherman , Infection
- **Pre- requests :**
  - GA , Lithotomy position and cleaning the area by sponge forceps

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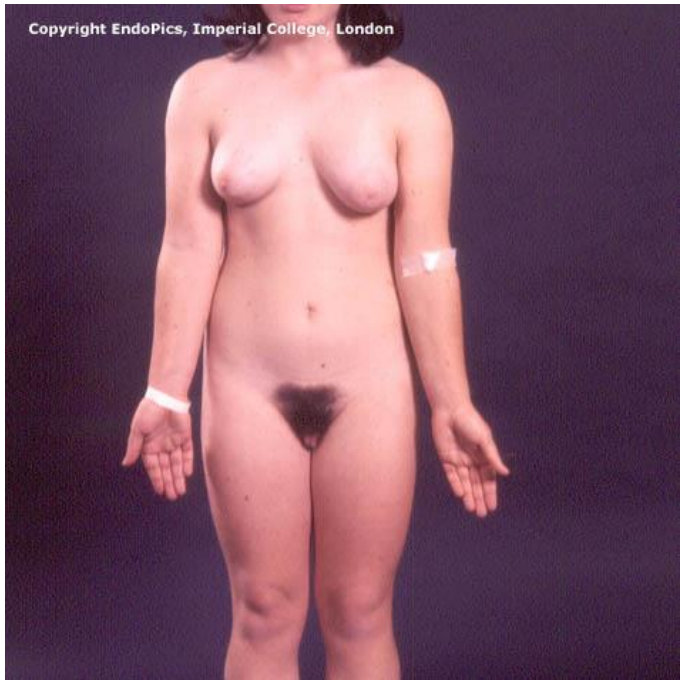
Amenorrhea

Mini OSCE – 1

A 17 years old female that never had her period comes to the clinic, blood pressure normal, thyroid normal, height is 163, all other tests are normal.



- What is your provisional diagnosis?
  - Primary amenorrhea
- What does her Tanner stage tell you?
  - an objective classification system that used to track the development of secondary sex characteristics(breast and sexual hair) , she have a Normal secondary characteristics development and external female genitalia

Mini OSCE – 1

- Mention 2 differential diagnosis
  - Genito-urinary malformation: imperforate hymen, transverse vaginal septum, vagina agenesis with or without a functioning uterus {Mayer-Rokitansky-Kuster-Hauser Syndrome (utero-vaginal agenesis)}
  - Constitutional delay
  - Androgen insensitivity Syndrome
- Mention 2 investigations to do
  - US (to check female anatomy) - Physical Examination – karyotyping - testosterone level-wrist xray
- Regarding presence of pubic and axillary hair, what is your diagnosis and why?
  - Mayer-Rokitansky-Kuster-Hauser Syndrome (utero-vaginal agenesis).
  - No cyclical pain - all other tests are normal - her height is 163cm – pubarche present-have Normal secondary characteristics development and external female genitalia so HPO axis preserved

Mini OSCE – 2

- what is the patient excepted karyotype (normal pelvis anatomy on US) ?
  - 46-XX
  - ((Normal female with imperforated hymen))

Mini OSCE – 3

- 16 years old come to the clinic with her mother complaining she didn't have any menstrual bleeding in her life , please answer the questions below and use the figure when it is required
- 1. Points to ask in history

  -cyclic abdominal pain -abdominal swelling -family history

  -hirsutism -weight and length -pubic and axillary hair
- 2. 4 DDx

  - imperforate hymen -turner syndrome

  -mullerin agenesis -androgen insensitivity
- 3. According to the figure , what is your diagnosis

  cryptomenorrhea

- 4.Other complaints the patient will come with
  cyclic abdominal pain, vaginal bulging, abdomina lump

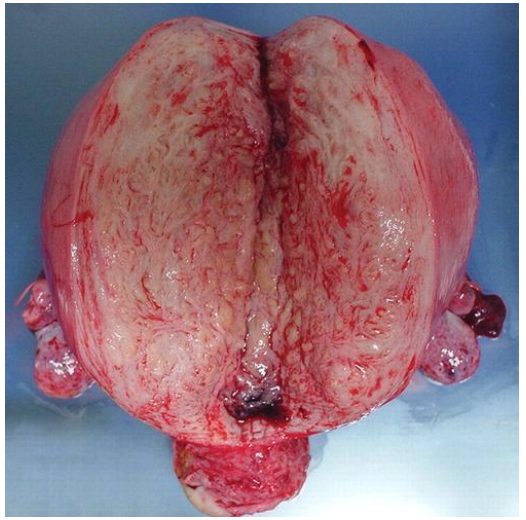
- 5. What will happen to FSH levels in her case
  normal range

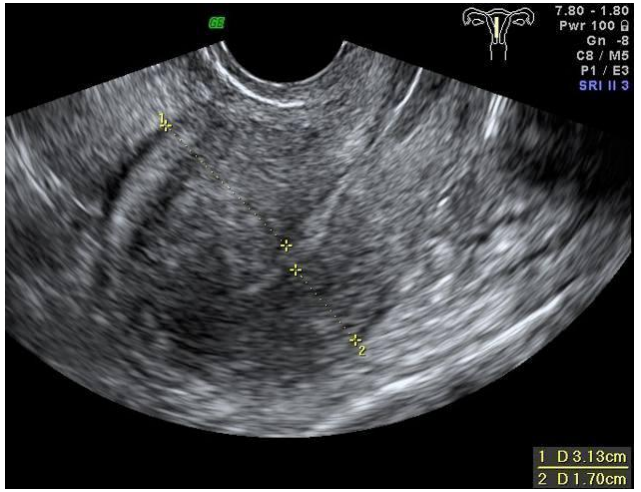
- 6.Management
  cruciate incision

Adenomyosis

Mini OSCE – 3

- 49 year old female, multiparous, heavy period, cyclic pain
  The patient underwent TAH with BSO
- 1.your dx
  - Adenomyosis
- Points from hx support your dx:
  - Heavy menstural bleeding (menorrhagia)
  - Advanced maternal age
  - Multiparous

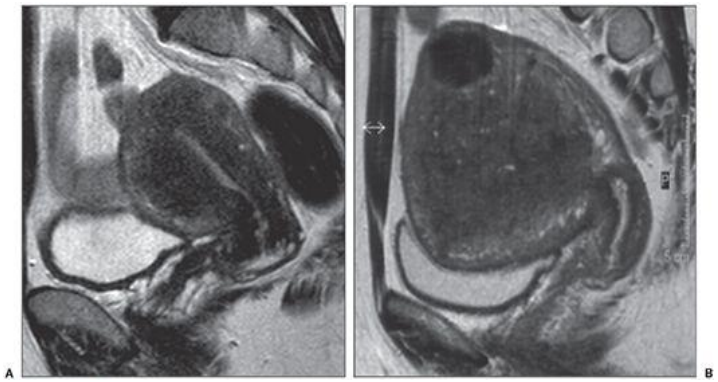




Mini OSCE – 3

- Mention 3 complications may happen during this surgery?
  - general anaesthetic complications.
    bleeding.
    ureter damage.
    bladder or bowel damage.
- Risk sites for ureter injury in this surgery?
  - During clamping of the ligament as it passes below the ovarian vessels in the lateral pelvic wall.
  - During clamping of the uterine arteries as it passes below the uterine artery 1 cm lateral to the cervix.
  - During clamping the vaginal angles, and the parametrium 1.0 cm lateral to vaginal vault.

Mini OSCE – 4



- What's the diagnosis?
  - adenomyosis
- Another name for this variant?
  - focal adenomyosis (also known as adenomyoma)
- Definitive treatment?
  - Hysterectomy is the only definitive means of diagnosing and treating adenomyosis
- Possible drug?
  - GnRH agonist
- Differential diagnosis?
  - Fibroid
- How to differentiate it from fibroid?
  - The pelvic examination of a patient with adenomyosis may reveal consistency of the uterus is typically softer and boggier than the **firmer**, **rubbery** uterus containing fibroids.

Mini OSCE - 5

- **40 year old female, para 5, complaining of heavy menstrual bleeding and dysmenorrhea, MRI is shown**
- 1. Questions you would ask her about her cycle?
  - Frequency, duration, severity, presence of clots, Pain related to period (dysmenorrhoea)
- 2. Other investigation you do it for this patient?
  - Transvaginal ultrasound / CBC
- 3. Your diagnosis?
  - Adenomyosis
- 4. From her history what is the risk factor that will aid you in your diagnosis?
  - Multipara
- 5. Conservative management?
  - NSAID / OCP / mirena / progestins
- What is your management if conservative management failed?
  - Hysterectomy

endometriosis

Mini OSCE – 5

- What's the Stage ?
  - Stage IV (Severe): (Superficial and deep lesions in cul-de-sac + extensive adhesions +large endometriomas on the ovary)
- Why is it important to stage endometriosis ?
  - Severity of endometriosis - predict the likelihood of future fertility (chance of pregnancy without in vitro fertilization (IVF)) (but No clear relationship exists between the stage of the disease and a woman's symptoms

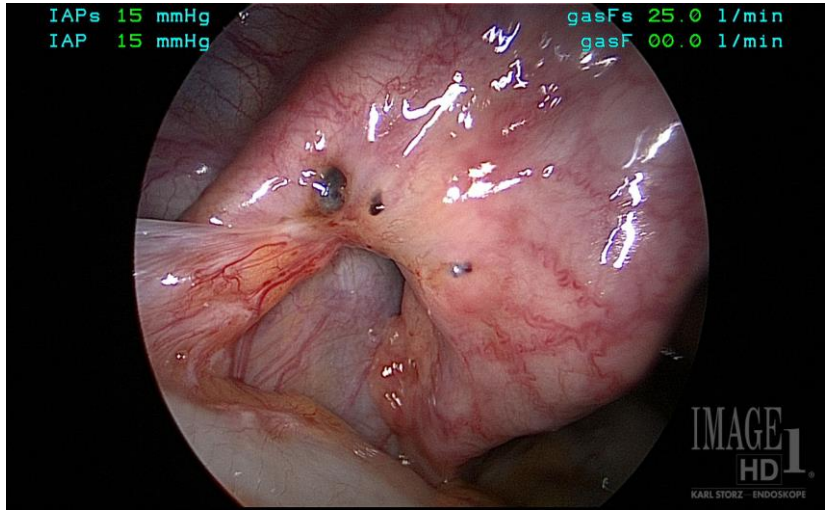
Mini OSCE – 5

- What are the laparoscopic findings in this condition ?
  - Adhesions – endometriosis lesions{red(new) – brown (powder) – white (old)} – chocolate cyst (endometrioma)
- What’re the tx options ?
  - Medical:
    - Pain relief :NSAIDs - Opioids.
    - Hormonal Treatment: Danazol, Gestrinone, Combined OCPs, Progestins, GnRH-agonists +/- Add-back therapy , GnRH-antagonists
  - Surgical: Laparoscopy -Laparotomy
  - Combination of both
- What is the feared outcome following tx of these patient ?
  - Recurrence??

سؤال سادسة

Mini OSCE – 6

- nulligravid patient complain of !!!
- what's your diagnosis?
  - Endometriosis
- Gynecological symptoms to support your diagnosis?
  - deep dyspareunia
  - menorrhagia (irregular, heavy menstrual periods)
  - lower abdominal, pelvic and low back pain
  - infertility
  - premenstrual spotting
  - 2ry dysmenorrhea



سؤال سادسة

Mini OSCE – 6

- what finding expected on physical exam?
  - pelvic tenderness.
  - fixed retroverted uterus.
  - nodularity of the Douglas pouch and uterosacral ligaments.
  - ovaries may be enlarged and tender.
  - tender adnexal mass (chocolate cyst)
  - adnexal fixation
  - fixed immobile cervix
- what do you expect to find on biopsy of the lesion?
  - endometrial stroma and gland (fibrous tissue, blood and cysts and nervous tissue)
- mention a drug that's given IM monthly, what's the duration of the treatment, give a side effect?
  - GnRH agonist, 6 month (if more add back therapy added):osteoporosis, hot flashes, vaginal dryness, headache, reduced lipido.

PCOS

Mini OSCE – 1

27-years-old woman G0P0 married 3 years ago her BMI 30.

- 1 – cause of there infertility ?
  - Anovulation
- 2- condition ?
  - PCOOS
- 3- criteria ??
  - Evidence of clinical (hirsutism ,hyperandrogenemia acne, male pattern baldness) biochemical (High serum androgen levels) hyperandrogenism
  - Ovarian dysfunction (oligoanovulation , polycystic ovaries)
  - Exclusion of related disorders .(CAH, Testosterone-producing tumors, Cushing's syndrome, Hyperprolactinemia)
- Your advice and why ?
  - Weight loss to improve ovulation , improve their response to ovulation induction agents
- Other modality of treatment if want to become pregnant ?
  - Letrozole, Metformin, Laparoscopic Ovarian drilling, Gonadotrophins and IVF

Mini OSCE – 2

- What's your diagnosis?
  - PCO
- Mention 6 result of hormonal abnormalities?
  - Serum luteinizing hormone (LH) elevated
  - Serum estrone elevated
  - Serum Estradiol: normal
  - Fasting insulin: elevated
  - Fasting Glucose: elevated
  - 2-hour OGTT: elevated
  - Free testosterone: elevated
  - high LH/FSH ratio >2

Mini OSCE – 2

- How can You manage the infertility in this pt?
  - Lifestyle management of Weight Reduction, letrozole, Metformin, Laparoscopic Ovarian drilling, Gonadotrophins and IVF.
- Mention 4 long term complication
  - Insulin Resistance, Obesity, Endometrial Cancer , Sleep Apnea ,Dyslipidaemia, Hypertension and Endothelial Dysfunction, Depression, Cardiovascular Disease
- Mention 2 complication if it become pregnant (I dont remember the Q exactly)
  - gestational diabetes
  - PIH
  - PET
  - preterm birth.
  - higher risk of admission to a NICU.
  - SGA
  - Spontaneous Abortions Increased in high BMI/PCOS patients,

Mini OSCE – 3

- **33 female, para 1 by ovarian stimulation, (CS before 5 years) , infrequent cycle, hirsutism, DM**
- 1. What is the cause of infrequent cycle in general?
  - anovulation
- 2. What is the diagnosis in this case?
  - PCOS
- 3. Investigation?
  - LH/FSH ratio, US, fasting glucose, lipid profile, Free testosterone,total testosterone
- 4. Management?
  - OCP , weight loss, metformin, lifestyle change
- 5. If she came with vaginal spotting what is the management?
  - do pregnancy test

Mini OSCE – 4

19 years old female complaining of hirsutism, acne:

<u>a- give 2 questions you will ask her in history</u>

-menstrual cycle - family history of PCOS

-medical history (DM, thyroid disease)

<u>b- give to finding you will see in P/E</u>

-acanthosis nigricans

-alopecia

Mini OSCE – 4

C-investigation to this patient

- Free testosterone: elevated
- high LH/FSH ratio >2
- Fasting Glucose: elevated
- US
- TSH, Prolactin

d- if there is ultrasound findings of 12 follicles with normal total testosterone level what is you're diagnosis?

PCOS

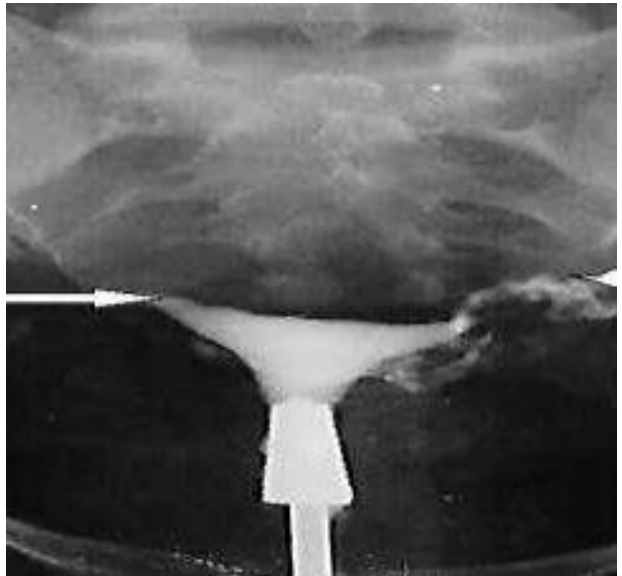
e- If it PCOS what is your management?

Lifestyle change, OCP, metformin, Surgery : ovarian drilling

Infertility

Mini OSCE – 9

- Naming of that procedure ?
  - hysterosalpingography
- Dye used for ?
  - oil based contrast (Higher risk of anaphylaxis than H2O-based-May be associated with Higher fertility rates)
- What are pathologies that could be diagnosed by that procedure
  - intrauterine and tubal disorders : Suterine malformation, Uterine adhesions (Asherman syndrome),submucous fibroid and congenital uterine malformation as septate and double uterus
- What is the pathology in the image ?
  - Not patent right fallopian tube.
- What is your next step for that patient ?
  - Laproscope

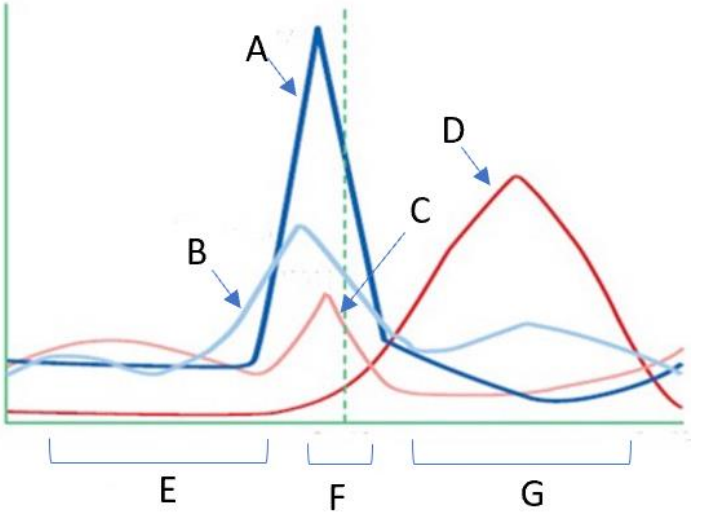


Mini OSCE – 10

- Name of the chart?
  - Basal body temperature chart
- Is she ovulating, why ? And at any day?
  - Yes, drop in temperature by 0.3C at time of ovulation then increase by 0.5C
- Give instructions to the women?
  - women will ovulate within 3 days of the nadir and timing of intercourse in these phase increase the rate of pregnancy
- Best day to do this investigation ?
  - Ideally should start charting on the first day of the period and continue to take BBT temperature every morning intravaginally throughout the entire cycle

Physiology of menstrual cycle

Mini OSCE- 1



- 1.Name the labelled lines
  - A: LH B: Estrogen C: FSH D: Progesterone
  - E: follicular phase F: ovulation G: luteal phase
- 2. What is the source of hormones?
  - A and C: anterior pituitary
  - B and D: Ovary
- 3. Between E and G, which phase is more constant?
  - G
- 4. On what cells does each hormone act on
  - A: theca cells
  - B: granulosa cells
- 5. Give 3 tests to confirm ovulation
  - Basal body temperature, serum progesterone measurement, urinary LH measurement

family planning

Mini OSCE- 1

- 1. What is this?
  - copper IUD
- 2. Prerequisites
  - Dysfunctional uterine bleeding, contraceptive for long period , emergency contraceptive
- 3. Complication?
  - menorrhagia in first several months, PID, expulsion, ectopic pregnancy , perforation
- 4. If she get pregnant with IUCD what is the management?
  - if GA less than 12w: remove IUD

Mini OSCE- 2

- **a case of a woman who wishes to use a contraceptive that is long-term and reversible, and she suffers from heavy menstrual bleeding and dysmenorrhea**
- 1. Mention 2 long term contraceptives
  - Intrauterine device (copper or mirena), Implanon, depo-provera
- 2. Which contraceptive is best for her, and justify your answer
  - Mirena, because the progesterone in it opposes the estrogen and decreases the heavy menstrual bleeding
- 3. Mention 4 side effects of the contraceptive you chose
  - Amenorrhea, irregular bleeding, PMS-like symptoms, infection
- 4. Mechanism of action of the contraceptive
  - Thickens cervical mucus, thins endometrium, local inflammatory reaction

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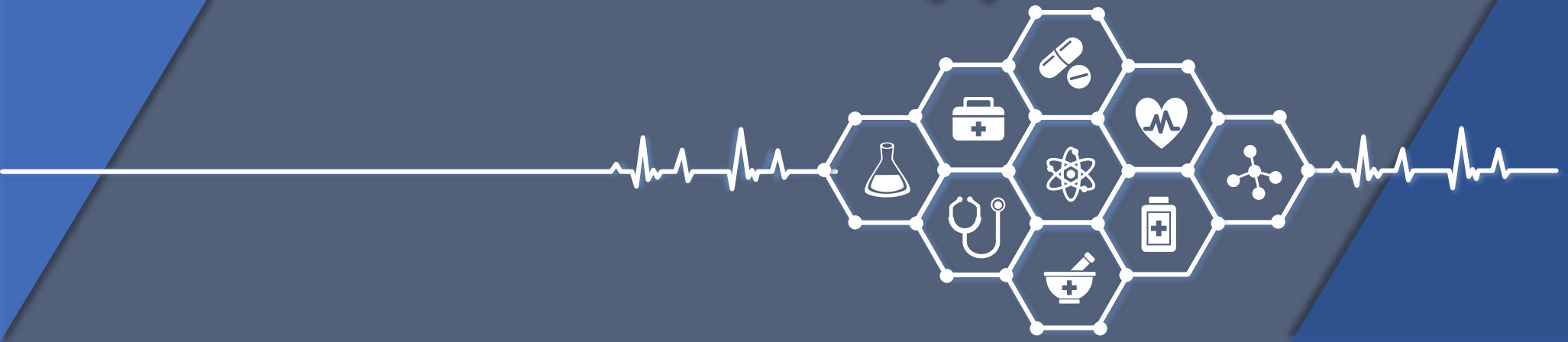
اي معلومة مكتوبه هون ومش مكتوبه ب سلايدات الدكتور هي من تبيضات الريكورد ف ادرسوها



PPH

السؤال مش كامل

Mini OSCE – 1

- **one of causes of PPH:**
  - Placenta accreta (**Abnormal placentation**)

❖**Calculate obstetric shock index and if patient need intensive resuscitation and blood transfusion**

Pulse rate divided by systolic blood pressure (PR/SBP)

PR/SBP >1 is associated with substantial postpartum hemorrhage and the need for intensive resuscitation and blood transfusion (what is the next step if >1 ?)

❖**Mention predisposing factors for PPH**

Antepartum: Previous PPH or manual removal of placenta Abruption/previa, Fetal demise, Gestational hypertension, Over distended uterus, Bleeding disorder.

Intrapartum: Operative delivery, Prolonged or rapid labour, Induction or augmentation, Chorioamnionitis, Shoulder dystocia, Internal podalic version ,Coagulopathy.

Postpartum: Lacerations or episiotomy Retained placental/ placental abnormalities Uterine rupture / inversion Coagulopathy

Preterm labor

Definitions

- **PTL**-The occurrence of regular uterine contraction associated with cervical changes before 37 completed weeks +/- PPROM
- **Threatened PLT-** regular uterine contractions without cervical changes
- **Preterm prelabor rupture of Membranes** :Spontaneous rupture of the amnion and chorion membranes before onset of labor.
- **Braxton hicks**: irregular infrequent uterine contraction and not getting closer and change with activity without cervical changes.
- **Cervical incompetence**: cervical changes without contractions

Risk factors of PTL

Strongest predictor and most significant

*****is previous PTL *****

Previous 1 PTL recurrence -> 15 %
Previous 2 PTL -> 30%
Previous 3 PTL -> 45 %

Uterine causes:

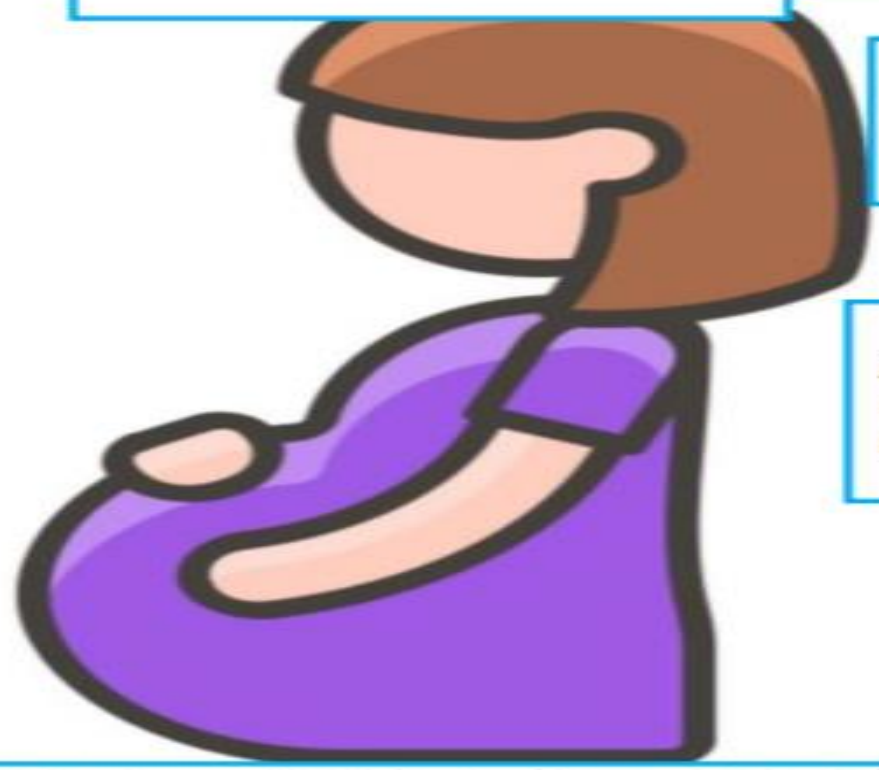
Uterine abnormality: fibroid, bicornoate…

Overdistension (multiple pregnancy, Polyhydramnios)

Trauma

Fetal:

Congenital abnormality
Chromosomal abnormality



Cervical causes:

previous terminations of pregnancy

cervical surgery LEEP or knife cone

cervical trauma in previous deliveries

Short cervix :<25 mm –high

Measured by US from external OS to internal (normally change with GA but within 30-80 mm) <30 short

Fetomaternal:

APH
PET
Uteroplacental insufficiency

cytokines from endothelial cells→ Interleukin-1 and 6 TNF→prostaglandin→contractions

Infections

Intrauterine :

Extrauterine:

1. commonest cause –ascending from genital tract
2. Transplacental from maternal blood
3. Trans-fallopian (abdominal cavity)
4. Following invasive procedures

1. Asymptomatic bacteruria
2. pyelonephritis
3. Infections like typhoid, malaria

Social:

Smoking

Maternal age <18 >40

Low pregnancy weight

Short pregnancy interval

History and Physical examination

- History:
  - Pain-site, intensity, freq., duration, association.
  - Discharge- color, amount (reaching legs), odor, recurrent.
  - Confirm the gestational age- LMP, regular cycle or not, OCP use,
  - lactation, US in early GA
  - Other complain: fever, fetal movement
  - Risk factors:
  - Do you have previous PTL?
  - Do you have a symptoms of infections?
  - (dysuria, vaginal discharge, UA, culture, hx of pyelonephritis)
  - (Hx of malaria or typhoid)
  - Do you have previous cervical surgery or termination?
  - Do you know if you have uterine anomaly or a previous trauma?
  - Known fetal anomaly or multiple pregnancy?
  - Medical Hx: PET...
  - Social Hx: smoking

History and Physical examination

- Examination:
  - Temperature >38 fever,
  - BP: hypotension with abruption
  - Pulse: increase with Chorioamnionitis
  - Abdominal
  - Uterine contractions and its characteristics –
  - Tenderness: Abruptio placenta
  - Braxton hicks??
  - Obstetric
  - Assessment of presentation and engagement
  - CTG
  - Sterile speculum before vaginal ex: Fetal fibronectin, high vaginal
  - swab for culture (GPS) and to evaluate PROM
  - If we exclude ROM: vaginal ex (cervical changes)
  - Ultrasound
  - Risk factor assessment
  - Cervical length

Screening

The two most important predictors of spontaneous preterm birth are:

1. Sonographic short cervix in the midtrimester
   - Cervical length at 18-22 weeks in pregnancies that deliver at term is normally distributed with a mean of 34 mm
2. Spontaneous preterm birth in a prior pregnancy " by hx"

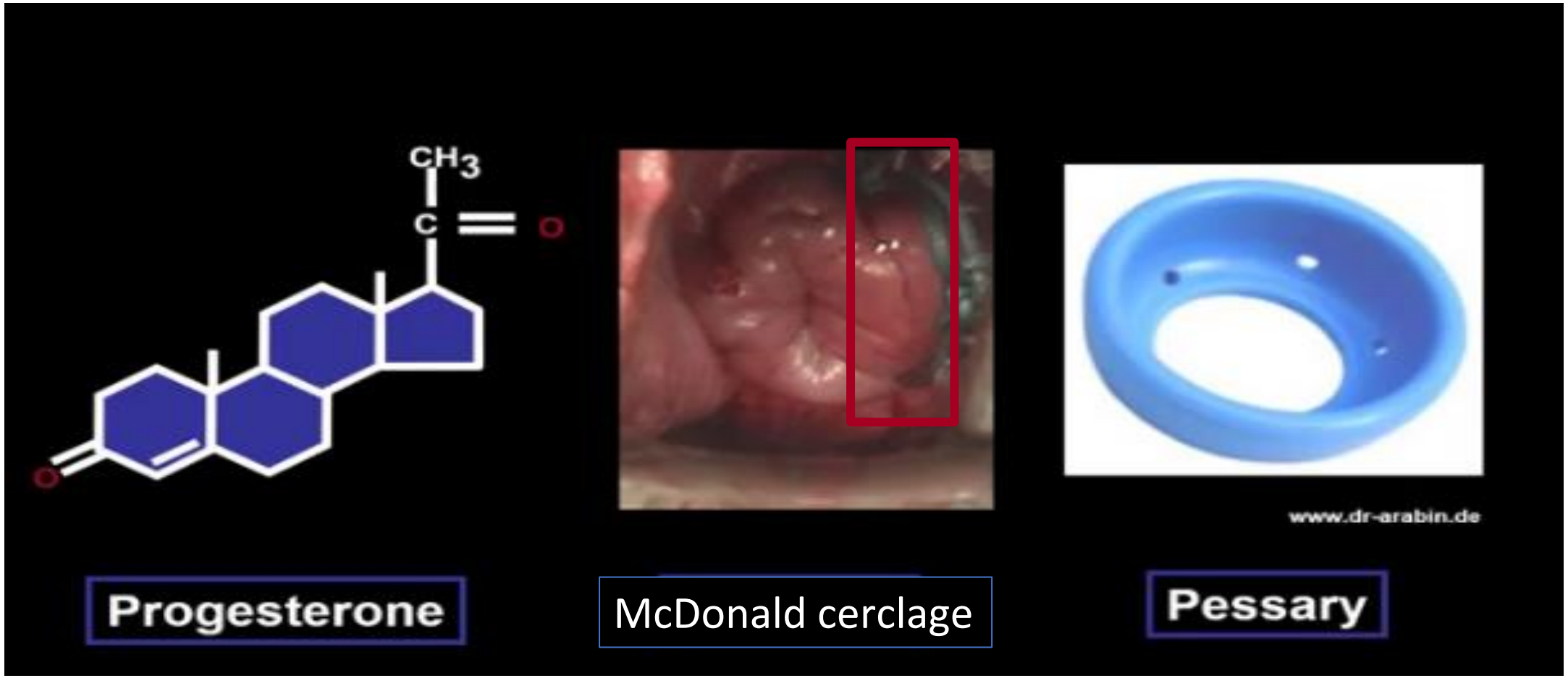
هذول اهم نقطتين لازم ينذكروا!!

3. Cervico-vaginal fetal fibronectin
   - Should do after 22w
   - Fetal fibronectin is an extracellular matrix glycoprotein produced by amniocytes and by cytotrophoblast
   - It is localized between chorion and decidua and acts as a 'glue' between the pregnancy and the uterus

Screening

4. Cell-free Fetal DNA
   - done after 10 w
   - A role for cell-free fetal (cff) DNA as a signal for the onset of labor has recently been proposed
   - In pregnant women, cff DNA is normally present in the plasma, and concentrations increase as a function of gestational age - peaking at the end of pregnancy just prior to the onset of labor
   - Patients who have an elevation of cff DNA in the midtrimester are at increased risk for spontaneous preterm delivery later in gestation

Prevention PTB in short cervix



Weak evidence

Prevention

❖women with previous preterm birth

- No benefit from bed rest, prophylactic tocolytics or lifestyle interventions
- Vaginal progesterone every night from 20 to 34 weeks reduces PTB by 25%
- Measurement of cervical length every 2 weeks between 14 and 24 weeks and cervical cerclage if the cervix becomes less than 25 mm reduces PTB by 25%

❖women with no previous preterm birth but positive screening test

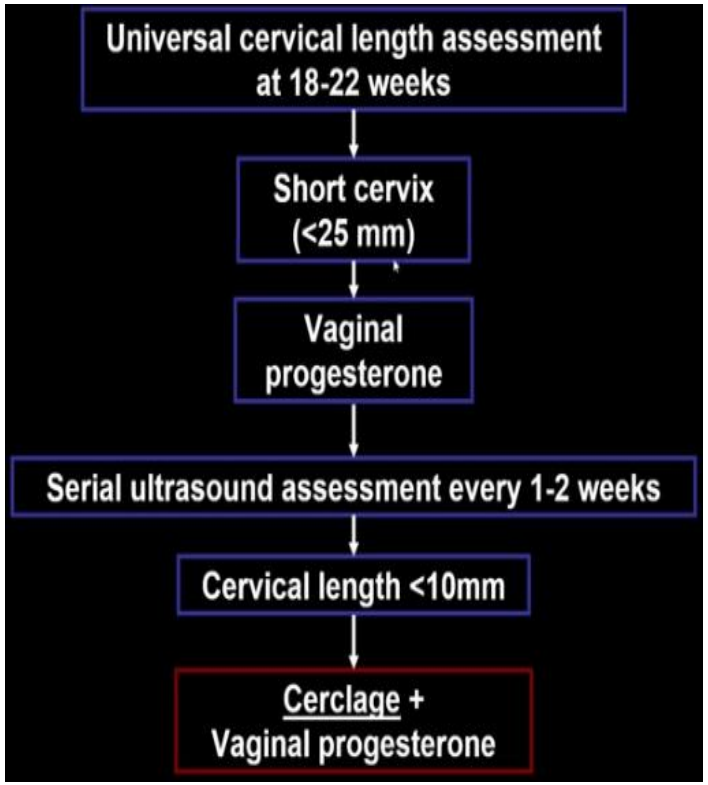
- Bed rest /betamimetics/ life style modification
- Short cervix at 20-24 weeks consider Cervical cerclage it may reduce PTB at <34 weeks by 15%
- Vaginal progesterone every night from 20 to 34 weeks reduces PTB at <34 weeks by 35-40%

❖Threatened preterm labor

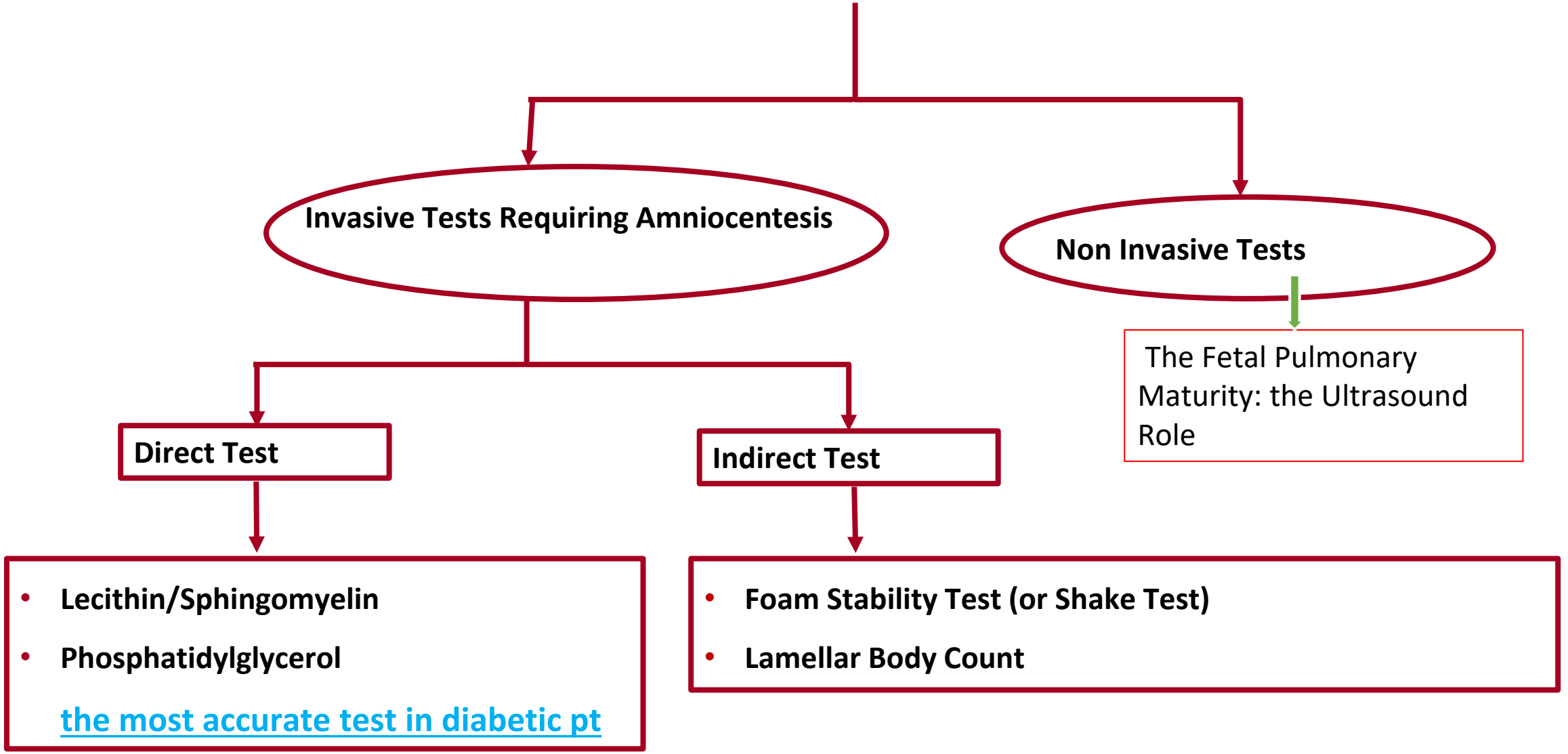
- Hospitalization in a unit with facilities for neonatal intensive care
- Administration of tocolytics to prevent preterm birth
- Administration of steroids to improve fetal lung maturity

Notes

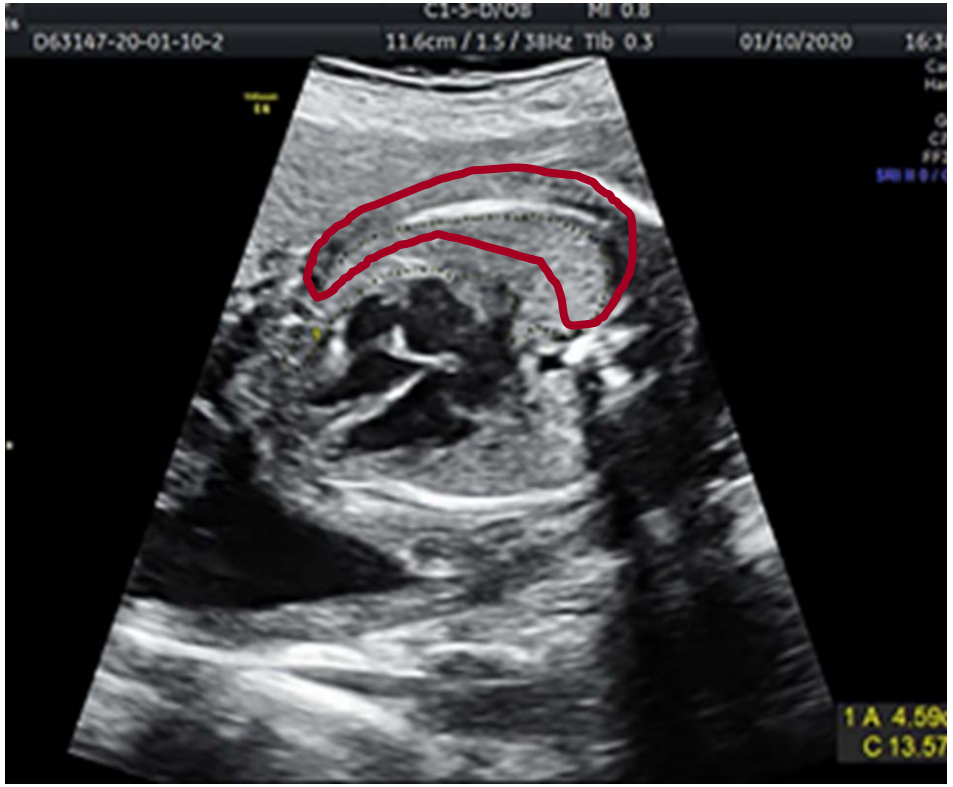
- ❖IF your pt has hx of pre term labor you should start progesterone even before screening, so start it from first visit DON'T wait for 18w
- ❖ Progesterone increase thickness of mucosa
- ❖ for women has PTL even with long cervix in this case no efficacy of progesterone so the effect of progesteron only for short cervix
- ❖ if your pt has hx of PPROM or lenghv 15 mm Go for cerclage early

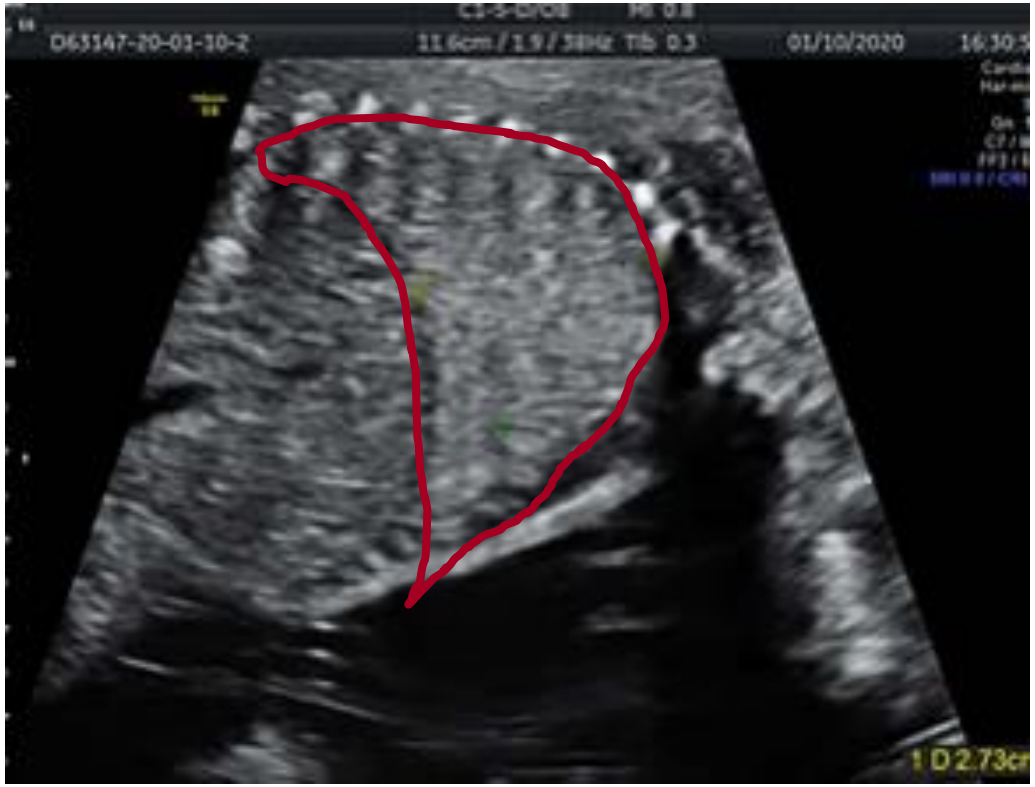


Tests for fetal lung maturity



Ultrasound Test For Lung Maturity





Cervical cerclage

- Definition:
  - placement of a supportive suture in the cervicovaginal junction to prevent early pregnancy loss or preterm birth
- Methods
  - McDonald cerclage: a removable suture in the cervix that allows vaginal delivery; Removal is indicated between 36–37 weeks' gestation, before the onset of spontaneous labor.
  - Shirodkar cerclage: a permanent suture placed that is placed in the cervical submucosal tissue; Cesarean delivery is necessary

Cervical cerclage

- Indications: only in singleton pregnancies
  - Multiple previous preterm births or pregnancy losses in the second trimester
  - A previous preterm birth and current ultrasound diagnosis of a shortened cervix (cervix length < 25 mm) at < 24 weeks gestation
  - Cervical dilation on inspection at < 24 weeks gestation
  - Prior cerclage due to cervical insufficiency at < 24 weeks gestation
- Contraindications
  - Preterm labor
  - Premature rupture of membranes
  - Chorioamnionitis or vaginal infection
  - ≥ 24 weeks' gestation
  - Unexplained vaginal bleeding

Treatment

- B -mimetics
  - Ritodrine and salbutamol
  - Stimulate B2 receptors and relax smooth muscle (uterus)
  - Highly side effects : tremor ,nausea, hyperglycemia, pulmonary edema
- Calcium channel blockers
  - Nifedipne ---inhibit myometrial contractions
  - Effective –reduce PTD within 7 days and decreased RDS
  - Fewer side effects comparing B-agonist
  - Inexpensive and easy to use
  - Side effects : hypotension ,flushing. diarrhea, constipation ,headaches.

Treatment

- Magnesium sulfate
  - For managing preeclampsia – eclampsia
  - As tocolytics agent
  - As fetal-neonatal neuroprotective agent
  - Use 4 g, the smallest effective dose, with or without a 1 g/hour maintenance dose
- NSAIDs
  - Indomethacin :Prostaglandin inhibitor (PGf2a)—50-100 mg orally
  - S/E: Oligohydramnios , constriction of the ducts arteriosus, renal effect
- Atosiban (tractocile)
  - Oxytocin-vasopressin antagonist
  - Fewer side effects; The most common side effect with Tractocile is nausea
  - Reported cases of fetal demise
  - Expensive

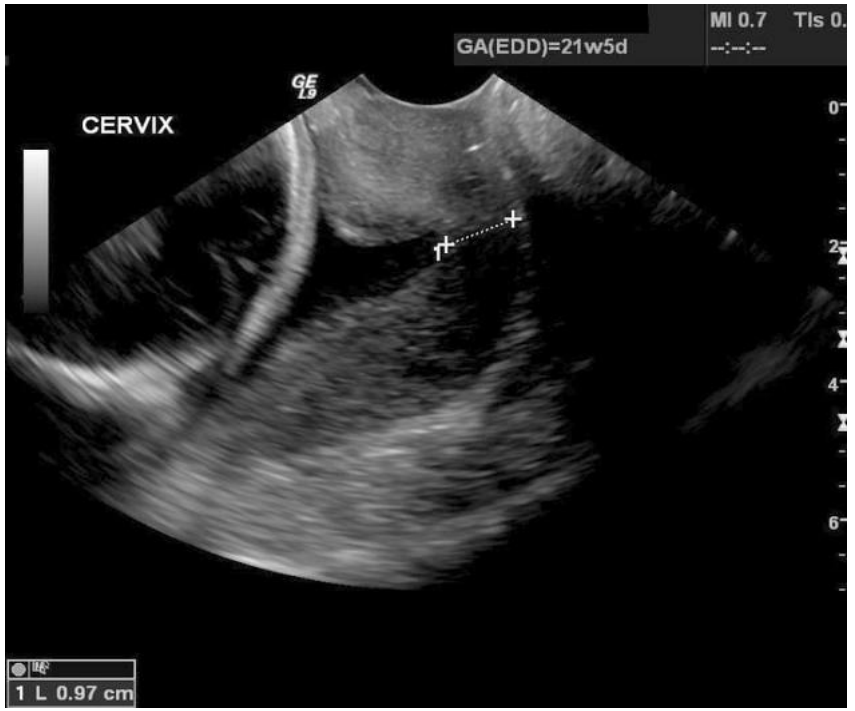
Mini OSCE – 1

- **mention The two most important predictors of spontaneous preterm birth are:**
  - Sonographic short cervix in the midtrimester
  - Spontaneous preterm birth in a prior pregnancy
- **When you can do fibronectin as a screening :**
  - After 22w
- **What the role of cell free fetal DNA ? How can predict preterm delivery ? From where you take a sample ?**
  - signal for the onset of labor has recently been proposed **(role)**
  - Patients who have an elevation of **cff DNA** in the midtrimester are at increased risk for spontaneous preterm delivery later in gestation (**prediction**)
  - Maternal blood (**sample**)

Mini OSCE – 2

Miss X 33y came with Premature labor pain, with some **nonspecific** vaginal discharge. 21+5d weeks of gestation. When the dr ask pt to cough he find this sign on US

- ❖What is the diagnosis?
  - ○ Cervical incompetence
- ❖ What is the sign shown on us ?
  - ○ Cervical funnelling
- ❖ what the type of US use her ?
  - ○ TVUS
- ❖Prior this image the doctor ask the pt to empty bladder or keep it full ?
  - ○ Empty bladder
- ❖The arrow indicate..
  - ○ Cervical length



Mini OSCE – 3

- What is the diagnosis?
  - Normal cervical length
- Describe what you see ?
  - Closed .. Long thick cervix
- A B C D refer to what ?
  - **A** : fetal head
  - **B**: amniotic fluid
  - **C:** cervical length
  - **D**: vaginal probe
- what the type of US use her ?
  - **TVUS**

- Prior this image the doctor ask the pt to empty bladder or keep it full?
  - Empty bladder

Mini OSCE – 4

A 38-year-old woman, gravida 4, para 3, at 20 weeks' gestation comes to the physician for a prenatal care visit. She used fertility enhancing treatment for her current pregnancy. Her other children were born before 37 weeks' gestation. She is 170 cm (5 ft 7 in) tall and weighs 82 kg (180 lb); BMI is 28 kg/m2. Her vital signs are within normal limits. The abdomen is nontender, and no contractions are felt. Ultrasonography shows a cervical length of 22 mm and a fetal heart rate of 140/min.

- What your diagnosis:
  - **Cervical insufficiency (normally: 34 mm)**
- Your management :
  - **Transvaginal cervical cerclage**

Mini OSCE – 5

❖A 30-year-old woman, **gravida 2, para 1, at 16 weeks**' gestation comes to the physician for a prenatal visit. She feels well and her pregnancy has been uneventful. She has received all routine prenatal diagnostic tests. Her other child was born **at 35 weeks' gestation** and is healthy. She has no personal or family history of serious illness and her only medication is a prenatal vitamin. Her vital signs are within normal limits. The abdomen is nontender to palpation and no contractions are felt. Pelvic examination shows a **closed cervical os that dilates to 1 cm when transabdominal pressure is applied to the uterine fundus.** There is no evidence of fluid exiting the cervix. Transvaginal ultrasonography shows a **cervical length of 17 mm**. Which of the following is the most appropriate next step in management?

A. Cervical cerclage
B. Tocolytic and steroid
C. Vaginal progesterone
D. Antibiotic prophylaxis
E. Bed rest

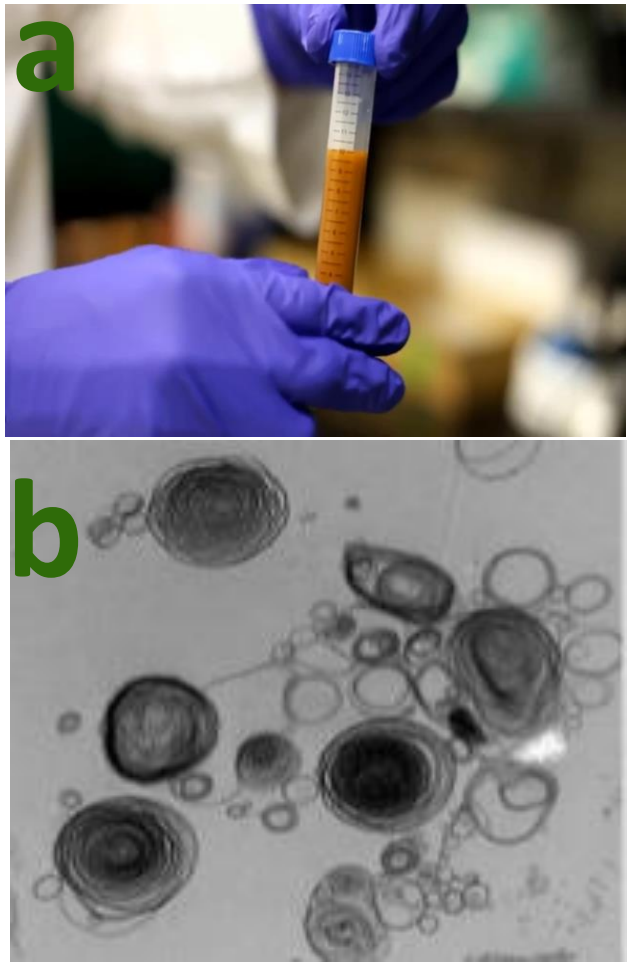
Mini OSCE – 6

❖A 31-year-old primigravid woman at 20 weeks' gestation comes to the physician for a routine prenatal visit. She feels well and her pregnancy has been uncomplicated. Four years ago, she underwent a **cervical cone biopsy for cervical intraepithelial neoplasia.** Follow-up examinations with annual HPV-based testing were normal. She does not smoke or drink alcohol. Her only medication is a prenatal vitamin. Her temperature is 36.7°C (98.1°F), pulse is 74/min, and blood pressure is 124/70 mm Hg. Fundal height is 21 cm. Pelvic examination shows a closed cervix without evidence of vaginal discharge or spotting. Transvaginal pelvic ultrasonography shows a **cervical length of 22 mm** and no evidence of fetal abnormalities. Which of the following is the most appropriate next step in management?

A. Vaginal pessary
B. Cervical cerclage
C. Progesterone (no previous hx of PTL)
D. Repeat TVUS in 2w

Mini OSCE – 7

- what is the test describing in this pic ?
  - **a=Shaking test**
  - **B =Lamellar body count**
- What is the principle:
  - Addition of amniotic fluid to different concentrations of 95% ethanol solution followed by shaking and observing the meniscus for the presence of a ring of bubbles
  - Phospholipids are packaged into multi-layered lamellar bodies They are similar in size to platelets Therefore they can be counted with an automated cell counter.
- Mention 2 direct test for fetal lung maturity ?
  - **Lecithin/Sphingomyelin**
  - **Phosphatidylglycerol**
- what is the most accurate test in diabetic pt ?
  - P**hosphatidylglycerol**



Mini OSCE – 8

38 years' female with twin pregnancy 32 weeks, came with abdominal pain, and this CTG >>

- Question relevant to history?
  - AS MENTION ABOVE
- she came with 2 cm dilation, Long cervix and intact membrane, Your Diagnosis?
  - Preterm labor
- Your management?
  - Admission, IV fluid, Prophylactic antibiotic, antenatal corticosteroid, Tocolytics.

Mini OSCE - 9

1) Name of this procudure?

Cervical cerculage

2)Indication?

Cervical incompetence

3) Causes of this problem? (mention 4)

1.Previous kone biopsy or LEEP

2.Cervical trauma in previous deliveries

3.Short cervix <2.5 cm

4.Previous termination of pregnancy

4)At what gestational age this procedure is done and why ?

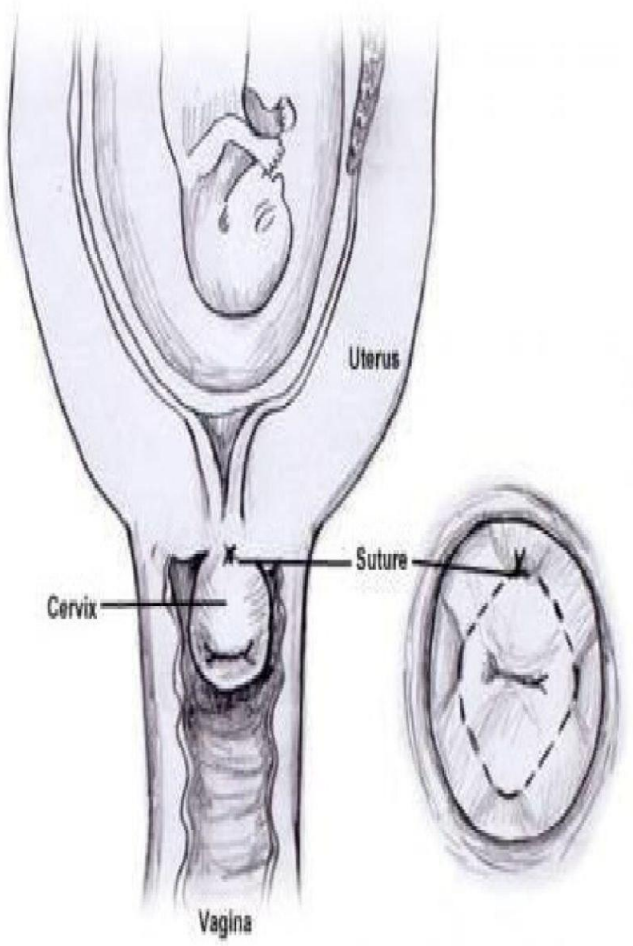
14 weeks, to bypass the high risk of miscarriage and to make sure that the fetus is healthy

5) When to remove ? (mention 3)

1.In case of preterm labor

2.At 37 weeks

3.Miscarriage



Station 10

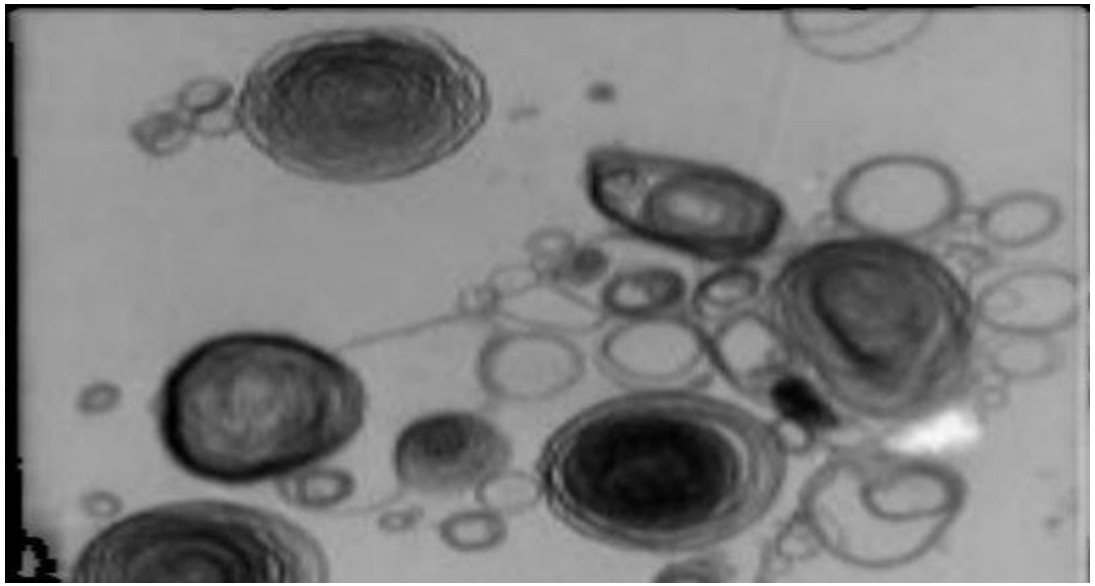
female patient came with abdominal contractions pain, GA 32:

a-what is the name of this test?

Lamellar Body Count

b-reflect for what?

surfactant concentration



C-if the reading was 22.000 what is the name of the result?

transitional perform L/S and PG

d-what is the next step?

L/S ratio and PG

e-if there is gush of fluid what is your probable diagnosis?

PROM

f-how you will diagnose PPROM clinically?

Gush of fluid, uterine contraction

g-what is you're management?

Atosiban (tractocile),CCB,Bmimetics,NSAIDS, MgSo4

Preterm prelabor rupture of membranes

Complications

- Prolonged maternal hospitalization
- Early onset neonatal sepsis
- Fetal Pulmonary hypoplasia depending on gestational age
- Higher neonatal morbidity and mortality
- Inflammation related adverse neurodevelopmental outcomes
- Infection includes chorioamnionitis
- Retained placenta
- Placental abruption

Risk factors

- Infection: the commonest risk factor such as BV, Chlamydia, gonorrhea (microorganisms cause of weakness of the membranes)
- Placenta abruption
- Uterine Overdistension
- Smoking
- Drug use
- History of PPROM

Chorioamnionitis

- Diagnosed by the presence of maternal fever (temperature ≥37.8°C) plus two or more of the five following clinical signs:
  - Maternal tachycardia (heart rate >100 beats/min)
  - Fetal tachycardia (heart rate >160 beats/min)
  - Uterine tenderness
  - Purulent or foul-smelling amniotic fluid or vaginal discharge
  - Maternal leukocytosis (white blood cell count >15,000/mm3)
- The most frequent microorganism identified in the amniotic fluid of women with clinical chorioamnionitis include *Ureaplasma*
- The standard treatment for clinical chorioamnionitis has been administration of antibiotics and antipyretics and expedited delivery

Chorioamnionitis

❖History

- (sudden gush of fluid , soaking clothes, dampness of underwear mistaken urinary incontinence)
- Odder and color
- Abdominal pain , contractions
- Mild pyrexia , feeling unwell ,abnormal vaginal discharge
- Vaginal bleeding
- Dysuria
- Cord prolapse
- Bleeding?
- Recent intercourse? Douching?
- Fetal movement

❖Examination

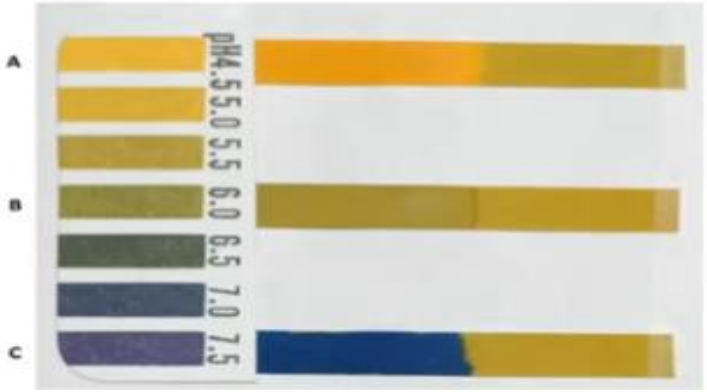
- Vital signs: temperature and PR
- Abdominal exam: tender, CTG
- Sterile speculum: cough or pooling signs, test for cord prolapse and Nitrazine test , ferning test.
- If cord prolapse crash cesarean
- DON'T do PV exam; unless immanent delivery
- If we confirm the diagnosis: admission

❖Investigations

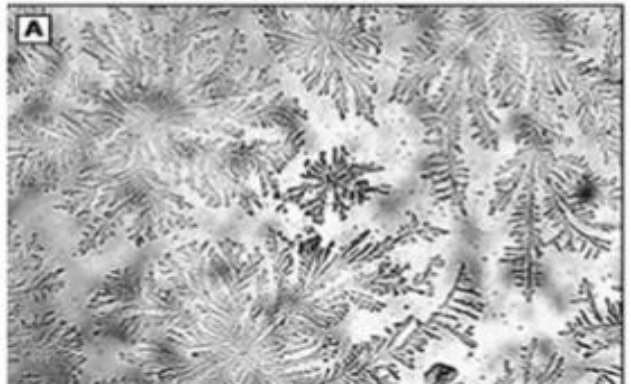
- CBC (WBCs count)
- Urinalysis (detect the infection)
- High vaginal swab
- CRP, ESR
- US, NST

Diagnosis

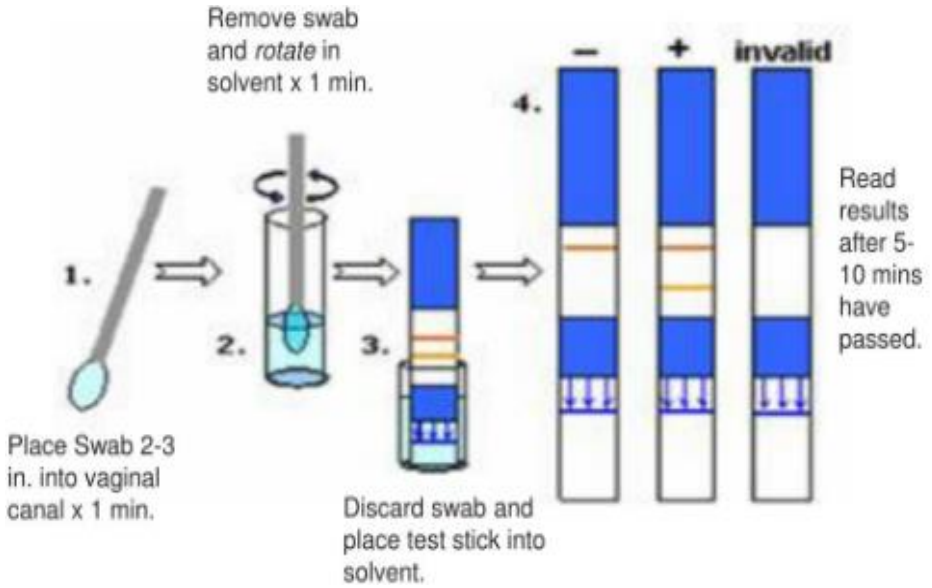
Nitrazine



Ferning



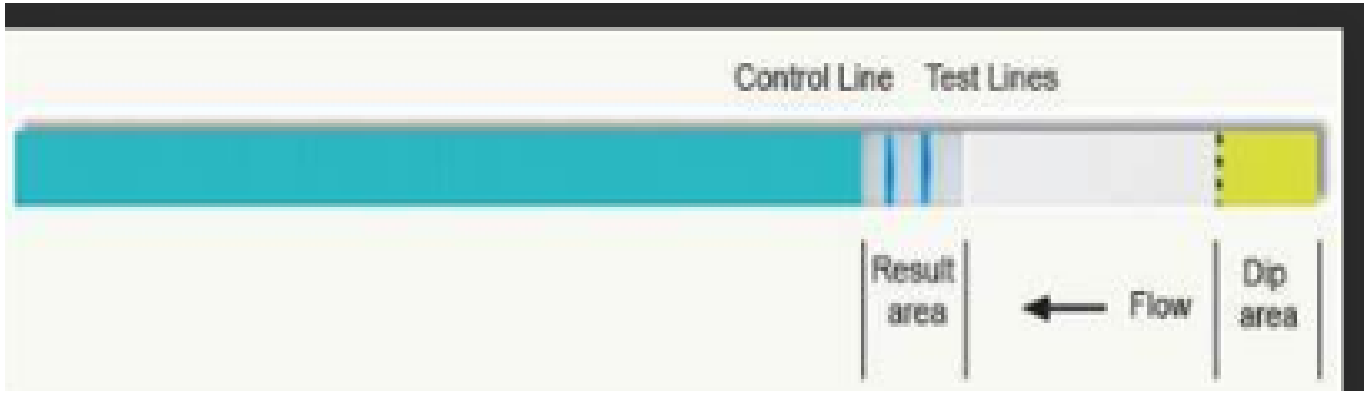
Amnisure



non-invasive strip test for the detection of the placental alphamicroglobulin-1 protein

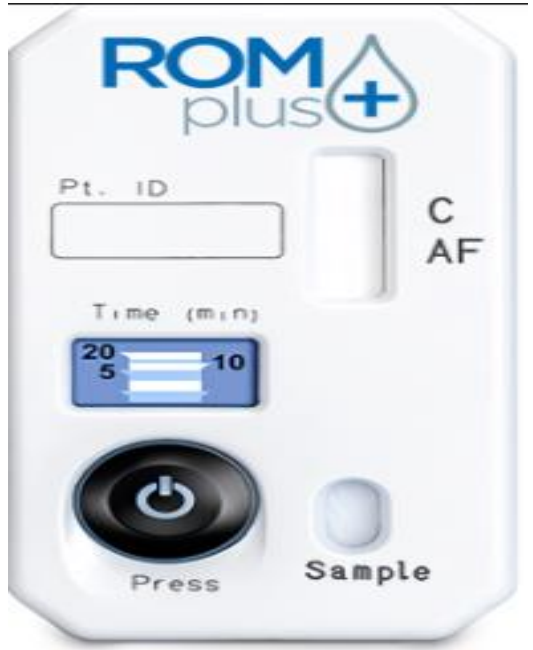
Diagnosis

Actim PPROM



❖ rapid test that reliably detects PROM, even before any visible signs can be detected

ROM Plus



❖Detect IGFBP-1 and AFP

Differential diagnosis

- Urinary incontinence: leakage of small amounts of urine is common in the last part of pregnancy
- Normal vaginal secretions of pregnancy
- Increased sweat or moisture around the perineum
- Increased cervical discharge
- Semen
- Douching

Notes

- Majority of pregnancies with PPROM deliver within one week of rupture
- Antenatal corticosteroids potent drugs with potent side effects:
  - Reduced placental weight
  - Reduced fetal weight and height
  - Reduced head circumference

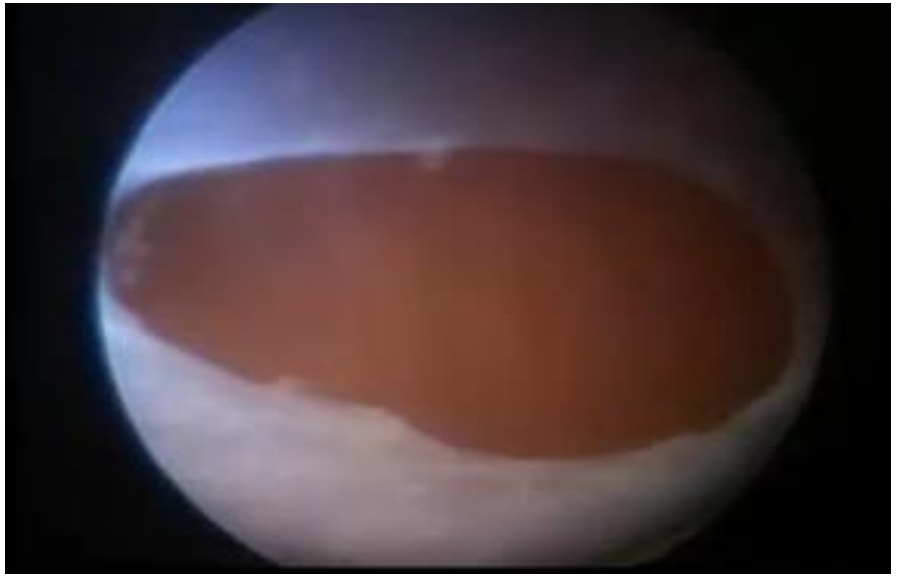
Management

- Screening for infection including GBS
- Antenatal corticosteroids
- Tocolysis only to achieve benefit of corticosteroids
- Antibiotics prolong latency based on numerous trial (penicillin plus macrolide)
- Fetal monitoring NST,AFV and fetal growth
- Maternal monitoring for infection or labor
- Timing of delivery –dependent on NICU capability

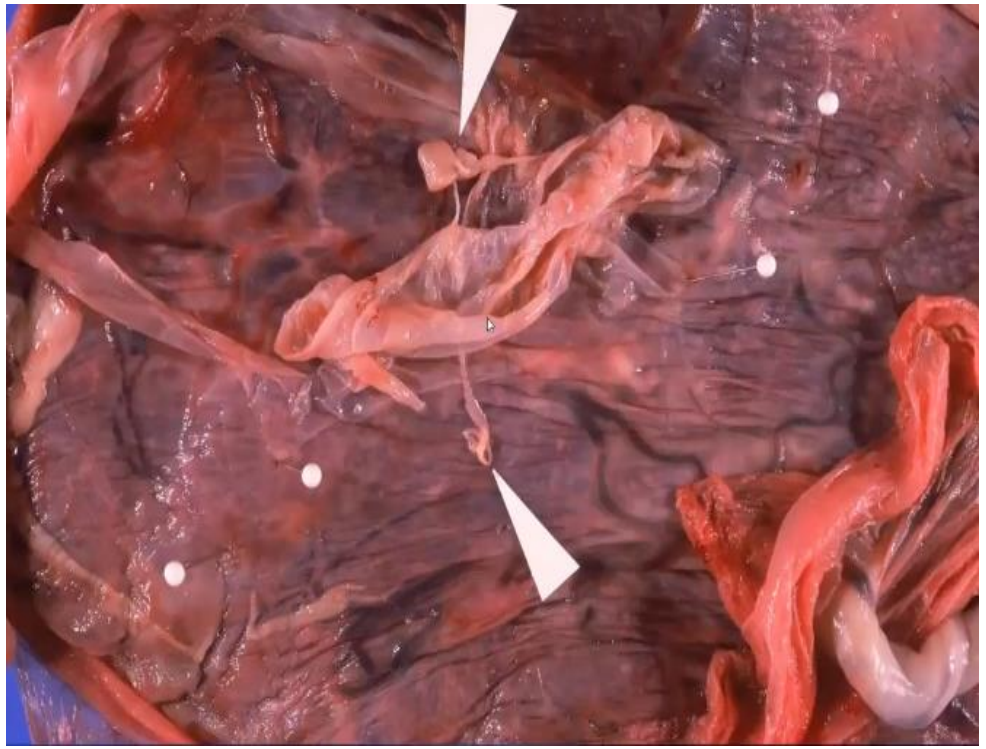
Management

- Malpresentation may require cesarean delivery
- Risk of cord prolapse should be evaluated
- Delivery at 34 weeks or sooner if indicated
- Surgical treatment
  - Amniograft
  - Amniotic patch
- The procedure can seal membrane defects up to 4 mm in diameter
- Mgso4 is an important drug in early PPROM

Amniopatch technique



- 22- gauge needle
- Injection into available pocket of fluid
- ½ unit of platelets
- 1 unit of cryoprecipitate



Amniopatch Seen after delivary

Mini OSCE – 9

A G4P3 female, previous 2 vaginal and 1 cesarean deliveries, she is in her 30th week of gestation, she came to the hospital due to leakage of fluid and fetal distress.

1- Relevant history?
2- what investigations should be done
3- your diagnosis?
4- if you find fluid in the posterior fornix with closed cervix what is the diagnosis and management?
5- the most serious complication?

all answers mentioned above

Mini OSCE – 10

pregnant women 33w came to emergency with watery vaginal discharge

- ❖Imoprtant point you should ask about in history
- ❖Findings in examination
- ❖Management
- ❖If she complain from fever ,most common cause
- ❖Other symptoms for the condition above

all answers mentioned above

Station 3

- A 30-year-old primigravida, at gestational age of 32 weeks, presented to the ER complaining of uterine contractions every 15 min. After assessment and admission, the fibronectin test was positive. Her cervix is 60% effaced and 1-2 cm dilated. The CTG was normal on admission. A Tocolytic agent was started. After 24 hours, the CTG was repeated and it can be seen in the image. Based On that, which of the following Tocolytic has mostly been used?

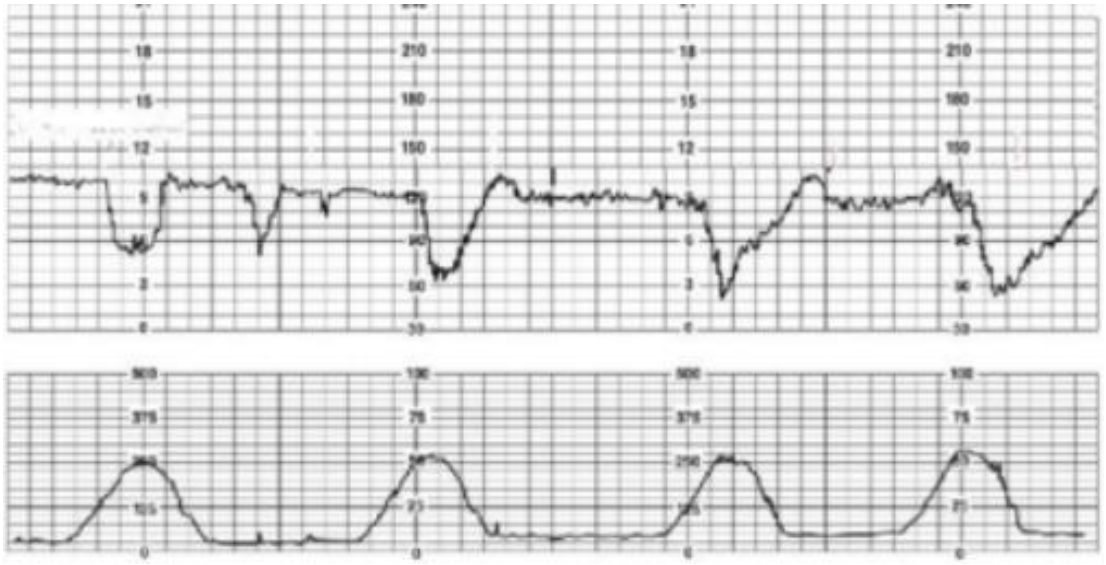
  a. Terbutaline

  b. Ritodrine

  c. Magnesium sulphate

  d. Nifedipine

  e. Indomethacin



Mini OSCE – 11

P1 lady, 31 weeks GA, her first pregnancy was a 30 weeks, admitted to ER with abdominal pain and watery vaginal discharge?

- ❖what's your diagnosis?
  - PPROM
- ❖how to confirm it?
  - History (sudden gush of fluid, soaking clothes, dampness of underwear mistaken urinary incontinence) + Examination by speculum: cough or pooling signs + Nitrazine test + other diagnosis test as mentioned above
- ❖what to do with this lady??
  - expectant with monitoring and antibiotic
- ❖when you decide to deliver her??
  - After 34 weeks
- ❖5) Chorioamnionitis prophylaxispenicillin plus macrolide esp. azithromycin
- ❖6) Duration of PROM?
  - 10day

Hypertension in Pregnancy

❖**Hypertension is systolic blood pressure of ≥140 mm Hg and/or diastolic blood pressure of ≥90 mmHg on ≥2 occasions 4 hours apart**

- **Proteinuria is the presence of ≥300 mg of protein in a 24-hour collection of urine**
- **OR urinary protein to creatinine ratio of ≥30 mg/mmol 0.3 mg /dl**
- **OR two readings of at least ++ on dipstick analysis of a midstream or catheter urine specimen**

❖ any pre eclampsia befor 20w Ddx:
*trophoblast * twin

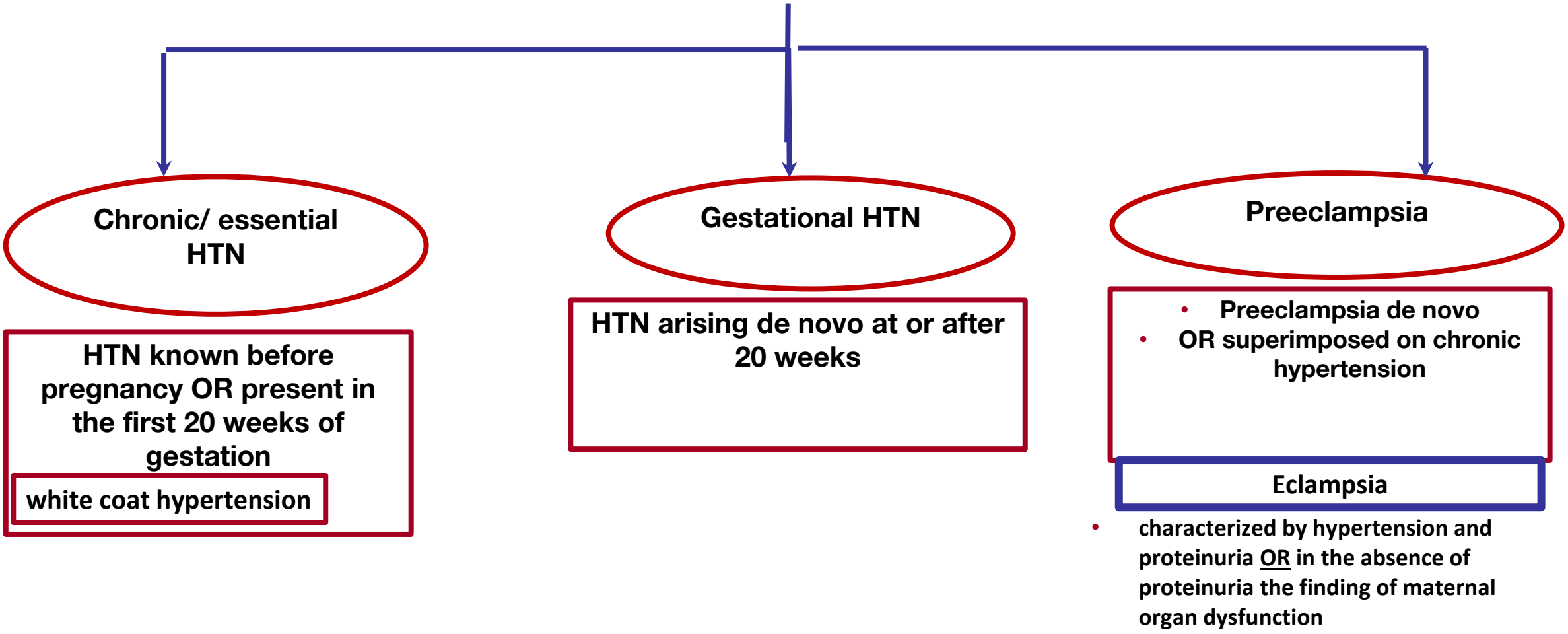
Introduction

- Hypertension is systolic blood pressure of ≥140 mm Hg and/or diastolic blood pressure of ≥90 mmHg on ≥2 occasions 4 hours apart
- Proteinuria is the presence of ≥300 mg of protein in a 24-hour collection of urine
- OR urinary protein to creatinine ratio of ≥30 mg/mmol 0.3 mg /dl
- OR two readings of at least ++ on dipstick analysis of a midstream or catheter urine specimen
- any preeclampsia before 20w, Ddx:
  - trophoblast
  - twin

Clinical features

- History
  - Patients with pre-eclampsia often have no symptoms.
  - However, symptoms of pre-eclampsia may include:
  - Headache
  - Visual disturbance: such as blurring or flashing lights
  - Swelling of the arms, legs and face
  - Nausea and vomiting
  - Abdominal pain
  - Reduced urine output
- Examination
  - Hypertension
  - Oedema: typically in the peripheries and face
  - Epigastric/right upper quadrant tenderness
  - Hyper-reflexia and clonus (indicates an increased risk of eclamptic seizure)
  - Papilloedema

Classification of HTN in Pregnancy (HDP)



Maternal risk factors

- Advancing maternal age
- Increasing weight
- Afro-Caribbean and South Asian racial origin
- Medical history of chronic hypertension
- Diabetes mellitus
- Systemic lupus erythematosus or antiphospholipid syndrome
- Conception by in vitro fertilization
- family history or personal history of PE
- The risk of PE in women in their first pregnancy is three times higher than in women with previous pregnancies that were not complicated by PE
- Women who had PE in a first pregnancy are up to 10 times more likely to develop PE in a second pregnancy

Maternal risk factors

- The risk for PE is lower in tall than in short women
- Decreased in parous women with no previous PE
- The protective effect against PE of a previous pregnancy without PE, decreases with the time interval between the previous and the current pregnancy so that after 15 years the risk of PE is about the same as that in nulliparous women

What are the effects of HTN on Pregnancy

- Maternal :
  - Preeclampsia up to 50 % of those with severe chronic HTN
  - Placental abruption up to 10%
  - Cesarean delivery
  - Cerebrovascular accidents
  - Acute renal failure
  - Congestive heart disease
  - Liver failure
  - DIC
  - Death
- Fetal
  - Fetal growth restriction
  - Preterm birth
  - Perinatal mortality

Maternal complications of Preeclampsia

- Eclampsia (convulsions or coma in a woman with PET
- Brain hemorrhage or stroke
- Disseminated intravascular coagulation (DIC)
- HELLP syndrome (Hemolysis, Elevated Liver enzymes and Low Platelets)
- Other severe complications include:
  - Brain edema, Blindness, Renal failure, Hepatic failure, Pulmonary edema and Death
- Long term complications:
  - Doubling in lifetime risk of cardiovascular disease (CVD)
  - Including: Hypertension, Ischemic heart disease, Stroke and Death from CVD

Fetal complications

- Reduced blood supply to the placenta
- Impairment in fetal growth oxygenation and increased risk of stillbirth
- Premature delivery for maternal and / or fetal indications
- Babies are subjected to the additional risks arising from prematurity:
  - neonatal death, brain hemorrhage, seizures, respiratory and feeding difficulties, jaundice, retinopathy, and prolonged hospitalization

Childhood complications

- a doubling in risk of cerebral palsy
  - this risk is mediated through premature birth ,growth restriction or both)
- Higher blood pressure
- Body mass index
- Increased risk for CVD
- Diabetes in adult life

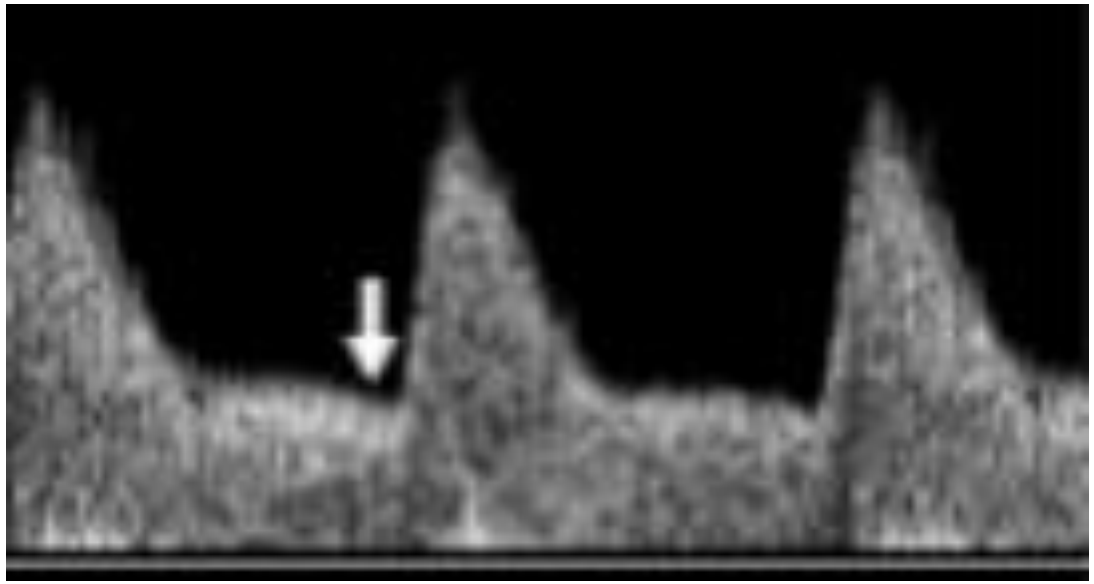
Prevention

- Dietary calcium supplementation in women with low calcium diets
- pravastatins
- Low dose aspirin at bed time

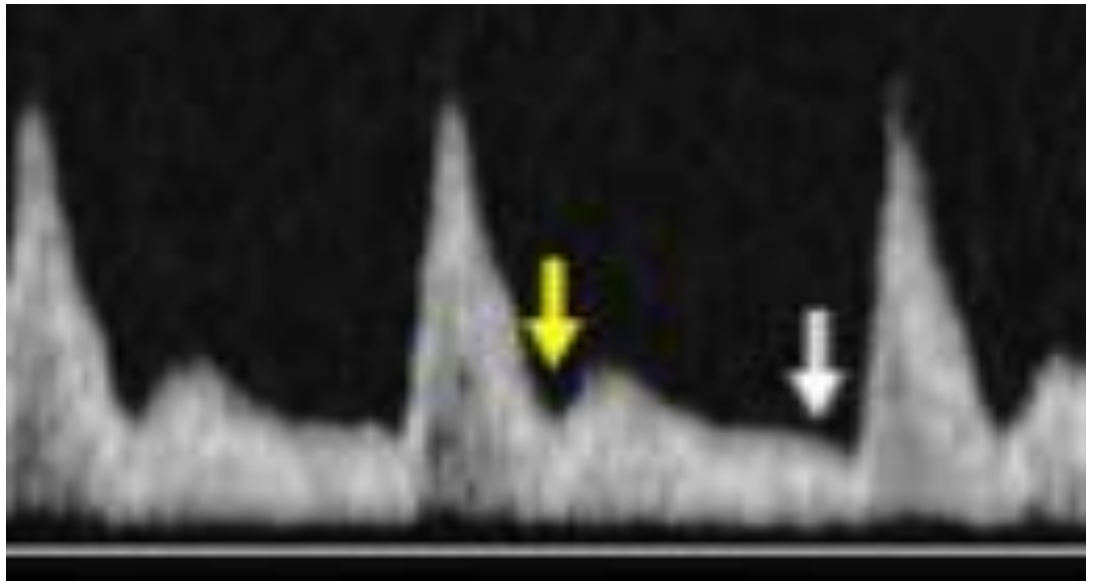
screening

- Mean arterial pressure (MAP)= 2/3 diastolic blood pressure + 1/3 systolic blood pressure
- uterine artery PI (UTPI)
  - by either transabdominal or transvaginal sonographey
- Placental growth factor PIGF
- Soluble FMS-like tyrosine kinase-1 (sFlt-1)
- Pregnancy associated plasma protein-A (PAPP-A)

Measurement of uterine artery PI (UTPI)



Waveform has good end-diastolic flow

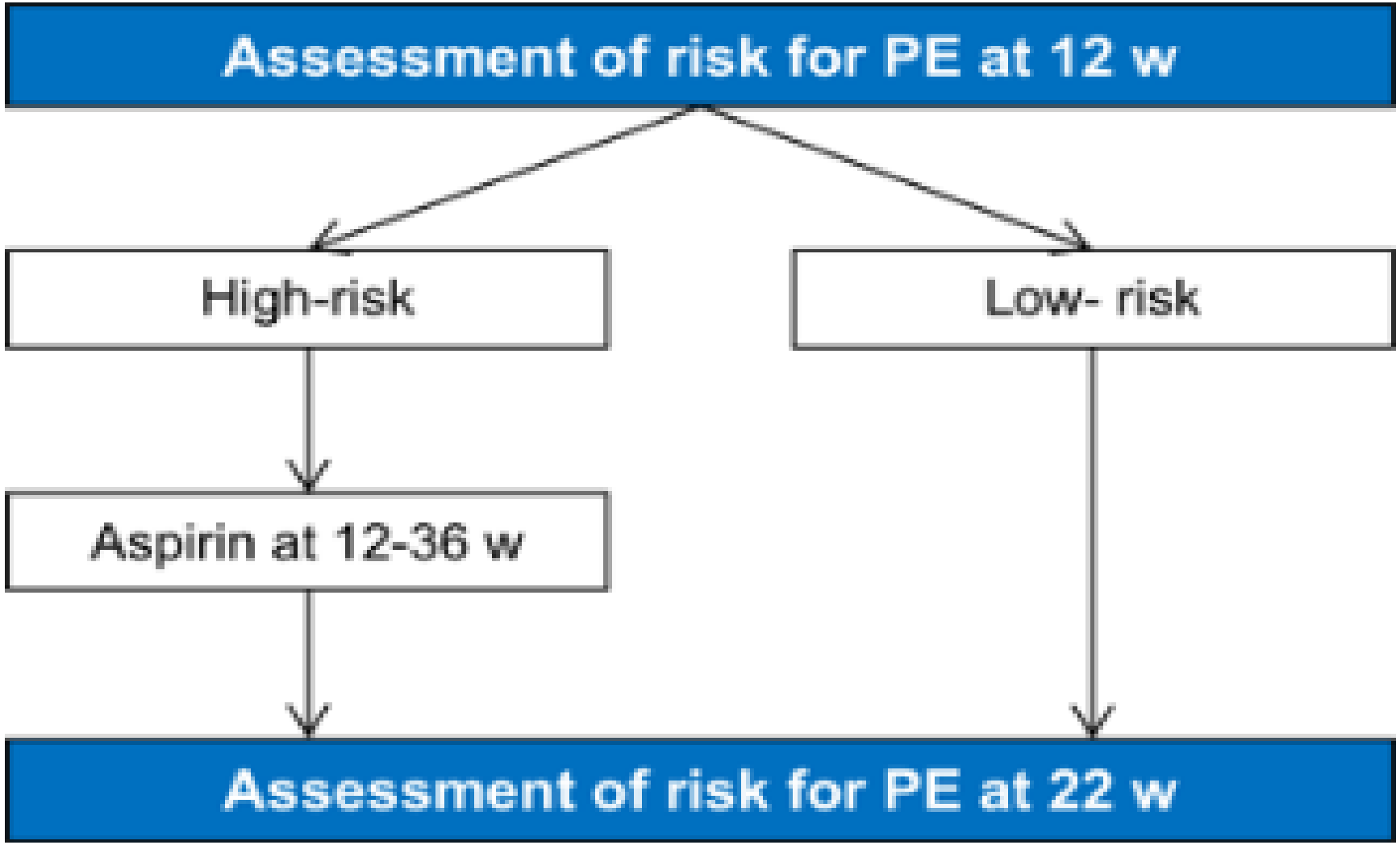


shows high resistance of flow with early diastolic notch and low end-diastolic flow

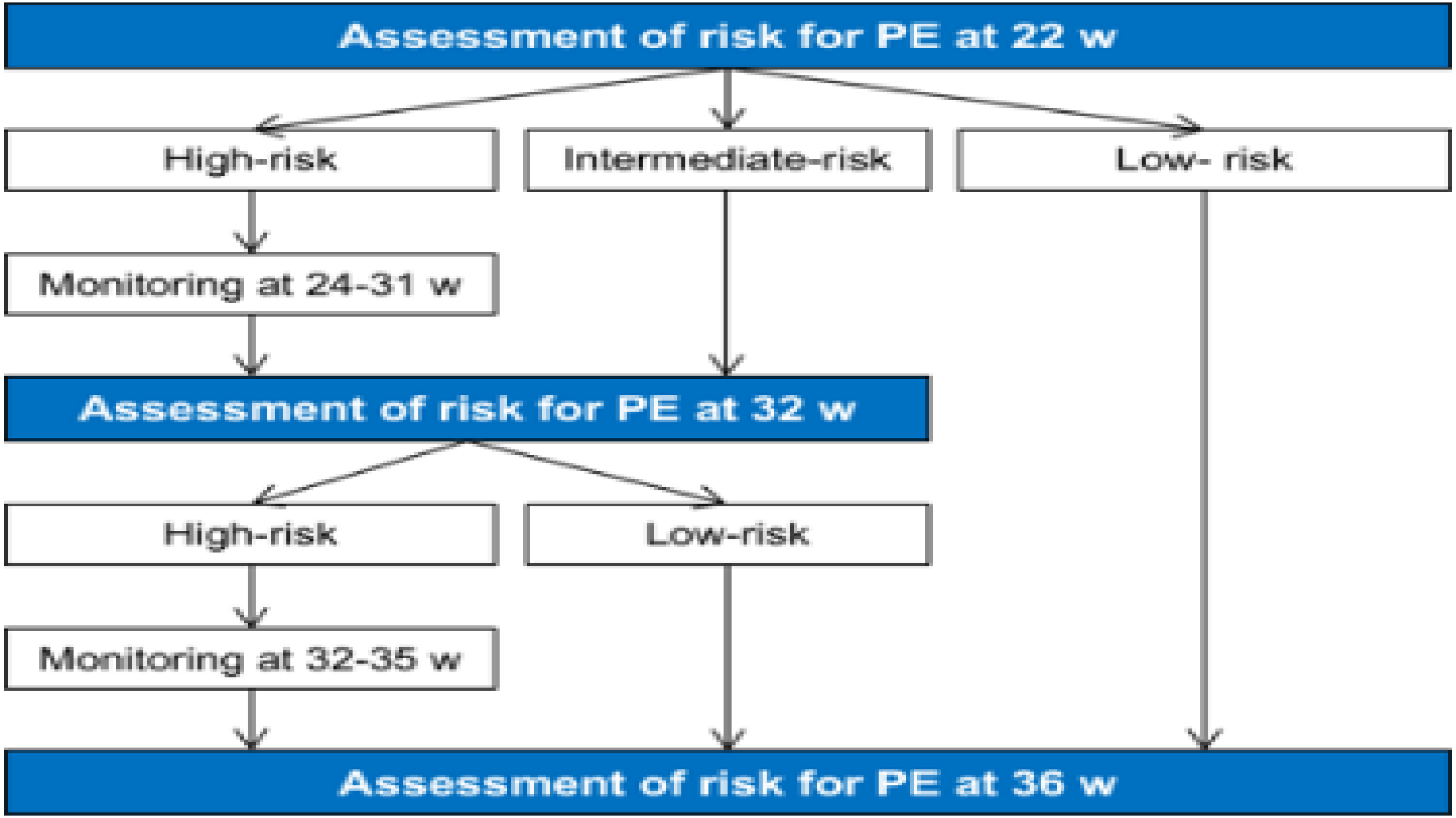
Notes

- Placental growth factor PIGF
  - Measure the amount of PIGF in blood plasma or serum
  - PIGF is a protein involved in placental angiogenesis (the development of new blood vessels)
  - In normal pregnancy PGIF levels rise and peak at 26-30 weeks
  - PIGF levels do not rise during pregnancy may be placental dysfunction
  - In Preeclampsia level of PIGF can be abnormally low
- Soluble FMS-like tyrosine kinase-1 (sFlt-1)
  - an anti-angiogenic factor that is thought to play a central role in the pathogenesis of PE
  - Exogenous sFLT-1 administered to pregnant rats induces hypertension, proteinuria, and glomerular endotheliosis
- Pregnancy associated plasma protein-A (PAPP-A)
  - Produced by the placenta and play role in placental growth and development
  - Maternal serum levels of PAPP-A in the first-trimester of pregnancy are decreased in pregnancies with fetal trisomies 21, 18 and 13
  - In PET it **decreased** during the 1st -trimester, **not significantly different in the** 2nd -trimester and **increased** in the early 3rd -trimester

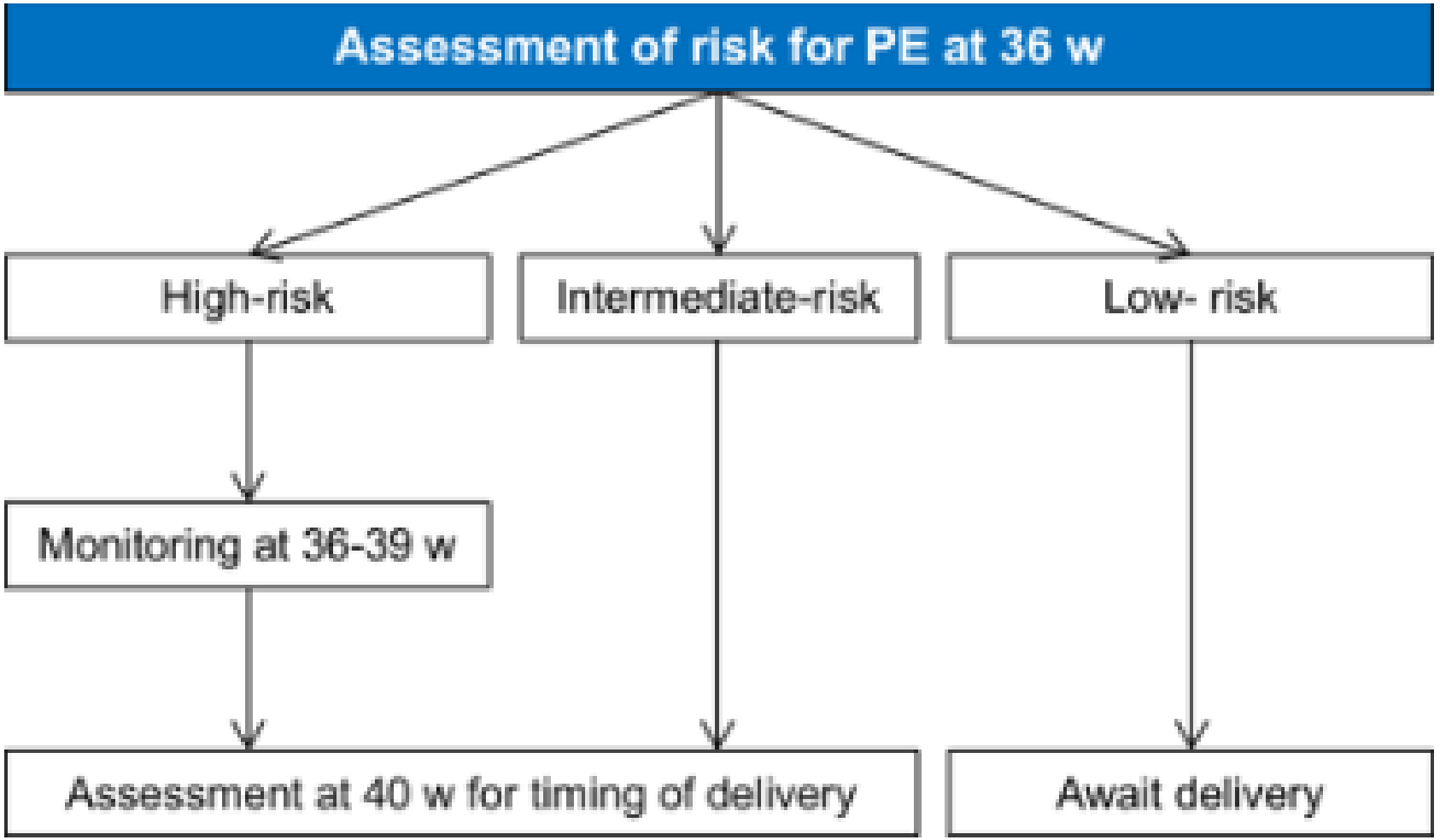
Screening at 11-13 weeks



Screening at 20-24 weeks



Screening at 30-34 weeks



Treatment of PET

- Treatment of chronic hypertension in pregnancy
  - Start antihypertensive SBP>= 140 mmHg , DBP>=90 mmHg
  - Consider labetalol
  - Consider Nifedipne for women in whom labetalol is not suitable
  - Consider methyldopa if both labetalol and Nifedipne are not suitable
  - Offer pregnant women with chronic hypertension aspirin 75 mg-150 mg once at *night from 12 week*

- Acute treatment of severe hypertension:
  - Hydralazine: 5mg IV repeated every 20-30 min.
  - Nifedipine: 10mg orally repeated at 30 min. IV infusion can be used in severe cases.
  - Labetalol:10-20mg IV .
    The dose can be doubled every 10 minutes if proper response is not achieved.
  - **Magnesium Sulphate should be given in the management of all cases of severe preeclampsia to prevent eclampsia**

Magnesium Sulfate (MgSO4)

- It can be given IV or IM or SC
- The therapeutic level is 4-7mEq/L
- The total dose of MgSO4 should not exceed 24 gms in 24 hours
- Is stopped 24 hours after delivery
- Antidote is ca gluconate
- The dose of MgSO4 is monitored by:
  - Preserved patellar reflex. (7-10 mEq/L)
  - Respiratory rate >16/min. (10-13 mEq/L)
  - Urine output >100ml/4hours. (15-25 mEq/L)
  - Serum Mg++ level.

Treatment of chronic hypertension in pregnancy

- STOP :
  - ACE inhibitors or ARBs (within 2 days of notification of pregnancy
  - Diuretics
- Time of delivery
  - In chronic hypertension no induce delivery before 37 weeks if BP lower 160/110
  - After 37 weeks depends on senior obstetrician decision
- Antenatal appointments
  - Weekly if HTN poorly controlled or admission
  - Every 2 to 4 weeks if well controlled
- ACE case fetal renal damage
- ARB cases fetal renal failure lung dysplasia cranial hypoplasia ,Limb contractures and fetal death

Laboratory findings

- Urine analysis ---proteinuria
- Microangiopathic hemolytic anemia---elevated serum lactate dehydrogenase LDH or decreased serum Hepatoglobin
- Elevated hematocrit ---due to third spacing fluid
- Elevated serum creatinine
- Elevated serum uric acid
- Elevated serum transaminases
- Thrombocytopenia
- Prolonged prothrombin and partial thromboplastin
- Decreased fibrinogen
- Increased fibrin degradation products

Management of eclampsia

- During seizure: Maintain airway, Administer oxygen and avoid supine hypotension
- Anticonvulsant therapy:
  - Magnesium sulfate 4-6 g IV followed by a maintenance infusion of 1-2 g / h
  - Diazepam 20mg IV followed by a maintenance infusion as required
  - Phynenton
- Anticonvulsant should be continued for at least 24 h after the last convulsion
- CS is indicated unless the mother is in active labour

Mini OSCE – 12

A woman sitting in hospital after cs with monitor showing her BP 140/90 and lab finding of elevated liver enzyme

- Diagnosis?
  - Severe preeclampsia complicated with HELLP syndrome
- Summarize the clinical picture using the findings above
- What is the drug given to her and why?
  - $MgSO_4$ to manage eclampsia
- When to stop the drug?
  - 24 hours after labour or from last seizure
- How to monitor the drug?
  - Preserved patellar reflex. (7-10 mEq/L)
  - Respiratory rate >16/min. (10-13 mEq/L)
  - Urine output >100ml/4hours. (15-25 mEq/L)
  - Serum Mg++ level.

Mini OSCE – 13

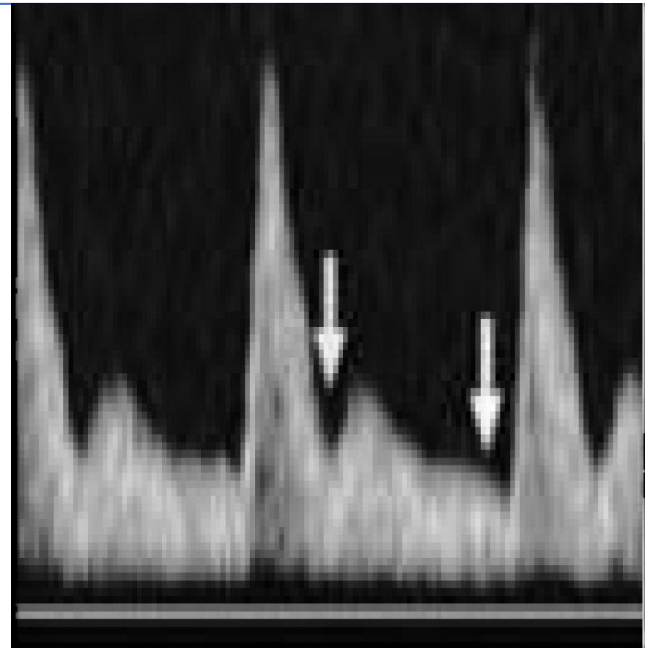
- A 33 years old primgravida at 33 w gestation complaining of a headache since 2 days, her investigations , choose the correct statement
  - a. this patient has mild pre-eclampsia
  - b. Methyldopa should be started to control her BP
  - c. Blood film has no role in diagnosis
  - d. MgSO4 is not indicated as her risk of eclampsia is low
  - e. Acute control of BP and procced into urgent CS is the management of choice

HB	12
PCV	37%
PLATELETS	85*10^9/L
ALT	98
AST	120
Urine analysis	+2 protein
Na+	140
LDH	800
Creatinine	.9

Mini OSCE – 14

- Case 2 : pregnant in GA =13 weeks , her blood pr =160/100 :
- 1-mention four points in management :
  - AS mentioned above
- 2-mention 2 obstetric complication :
  - IUGR / prematurity / preeclampsia

Mini OSCE-15



1- What is the signs shown in

picture? (Mention 2)

Early diastolic notch with low end-diastolic flow

2-What is the maternal complications from PET? (Mention 5)

Eclampsia /Brain hemorrhage or stroke /

Disseminated intravascular coagulation (DIC) /HELLP syndrome /Blindness /

Renal failure

3- What is the fetal Complications? (Mention 5)

a) Reduced blood supply to the placenta

b) Impairment in fetal growth oxygenation and increased risk of stillbirth

c) Premature delivery for maternal and/ or fetal indications

d) Babies are subjected to the additional risks arising from prematurity: - brain hemorrhage / seizures / respiratory and feeding difficulties

e)neonatal death

4- Mention another methods for screening?

(Mention 4)

MAP / PIlGF / SFlt-1/ PAPP-A

5- If she came at 12th week of gestation, what will you give her as prophylaxis? (Mention 2)

a. low-dose Aspirin (75-150 mg)

b. calcium supplement / statin

Anemia in pregnancy

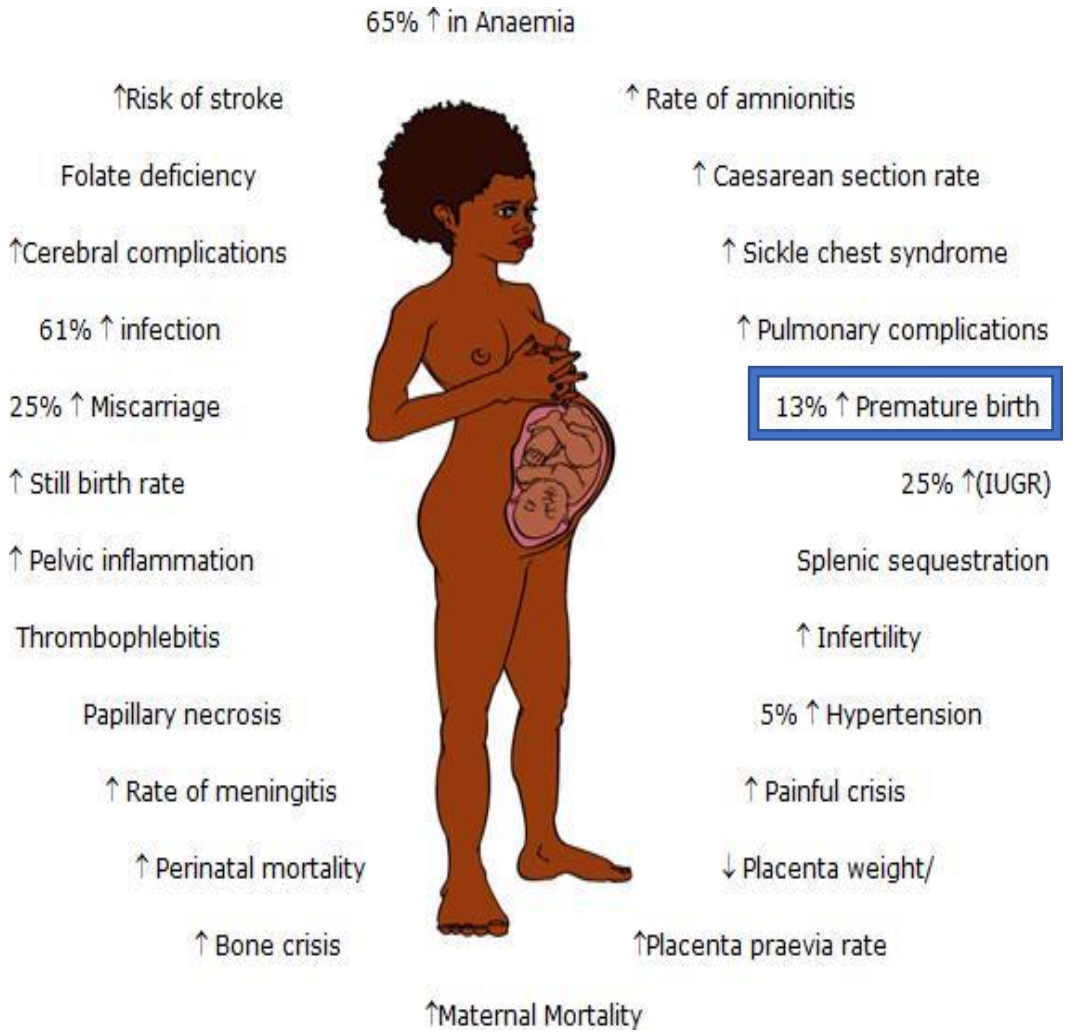
We do screening for anemia at
fisrt visit *6-7w*
28 w

How ? By Anemia workup
CBC
FOLATE
B12
electrophoresis

Blood film

Anemia in pregnancy

- Anemia in pregnancy defined as :
  - By Hb <110 g/l in the first trimester
  - <105 g/l in the second and third trimesters
  - <100 g/l in the postpartum period
- Anemia workup
  - CBC, FOLATE, B12, electrophoresis and Blood film



Microcytic Anemia: **Alpha Thalassemia**

Alpha major

- Effect of pregnancy on alpha thalassemia:
  - worsened in pregnancy , Mild to moderate hemolytic anemia
- Maternal risk
  - 1. gestational hypertension 50, 2.pre eclampsia 30%, 3.placenta abruption, 4.obstracted labor (large baby) and 5.APH , PPH and DIC
- Effect of alpha thalassemia on pregnancy:
  - Incompatible with life baby.. Severe anemia…hydrops fetalis…
  - Abnormal organogenesis .. Polyhydroaminosis .. placentomegaly
  - Stillbirth

Alpha trait

- Effect of pregnancy on alpha thalassemia:
  - Alpha trait normal outcome
- Effect of alpha thalassemia on pregnancy:
  - Alpha trait normal outcome

Microcytic Anemia: **Beta Thalassemia**

Major

- ❖Effect of pregnancy on B thalassemia:
  - risk of blood transfusion increasing
- ❖Effect of B thalassemia on pregnancy:
  - fetal hypoxia due to maternal anemia, IUGR, preterm birth, Maternal complications of iron overload, If short stature with pelvic bone deformity (CPD) risk of CS increasing.
- ❖**CAN MANAGE BY intrauterine blood transfusion like in RH-iso**
  ولكن نادرا ما يجي هاذ النوع لانهwe screening

Trait

- ❖Effect of pregnancy on B thalassemia:
  - mild anemia
- ❖Effect of B thalassemia on pregnancy:
  - normal outcome

the only way to treat thalassemia ?
blood transfusion JUST
DON’T GIVE IRON !!!!!

Microcytic Anemia: Iron deficiency anemia

- The most common type of anemia during pregnancy 75% of cases
- Is caused by blood loss, insufficient dietary intake, or poor absorption of iron from food
- Diagnosis :
  - if microcytic do iron study
  - Ferritin level has the greatest sensitivity and specificity
- Signs and symptoms
  - Irritability
  - Angina (chest pain)
  - Palpitations (feeling that the heart is skipping beats or fluttering)
  - Breathlessness
  - Tingling, numbness, or burning sensations
  - Glossitis (inflammation or infection of the tongue)
  - Angular cheilitis (inflammatory lesions at the mouth's corners)
  - Koilonychias or nails that are brittle
  - Poor appetite
  - Dysphagia due to formation of esophageal webs (Plummer-Vinson syndrome)
  - Restless legs syndrome

Microcytic Anemia: Iron deficiency anemia

Lab finding

- ↓: ferritin, hemoglobin, mean corpuscular volume, mean corpuscular hemoglobin
- ↑: total iron-binding capacity, transferrin, red blood cell distribution width

Treatment

- Iron supplement for all women after 12 weeks if there is no contraindications
  - Ferrous sulfate 325 mg - 65 mg elemental iron
  - Ferrous gluconate 300 mg – 34 mg elemental iron
  - Ferrous fumarate is a large compound compared to ferrous sulfate 300 mg -100 mg iron
  - Foods rich in ascorbic acid (vitamin C) enhances iron absorption

IV iron therapy

- **Indications**
  1. Can’t take iron by mouth
  2. Can’t absorb iron adequately through the gut have inflammatory bowel disease or other intestinal illnesses that are aggravated by oral iron supplements
  3. Can’t absorb enough iron due to blood loss
  4. Need to increase iron levels fast to avoid medical complications or a blood transfusion
- All types of treatment can increase Hb by 0.8g/dl/week
- IV iron has minimal side effects, but should be monitored for:
  - Gastrointestinal pain such as nausea and cramping, Difficulty breathing, Skin irritations/rash, Chest pain, Low blood pressure & Anaphylaxis which can include difficulty breathing, itching, and rash
- We can give it IM but very painful

Megaloblastic anemia

- Impaired DNA synthesis: ineffective erythropoiesis
- Folic acid deficiency 2nd most common during pregnancy
- Less common B12 deficiency? difficult to detect (folic acid supplements masking B12 deficiency)
- Slowly progressive
- Tend to occur mostly in 3rd trimester
- symptoms:
  - weight loss, anorexia, Glossitis and may bleeding due to thrombocytopenia
- Lead to poor outcomes :
  - 1.placenta abruption, 2.preeclampsia, 3.IUGR, 4.PTL and 5. folic acid deficiency may lead to open neural tube defects

Megaloblastic anemia

Laboratory

- Macrocytic normochromic anemia
- Peripheral blood smear hypersegmented neutrophils, oval macrocytes and Howell-Jolly bodies
- Erythrocyte folate level the best indicator than the serum level

Treatment

- Folate deficiency: treated with folic acid 1mg/day with in 10 days WBC and Platelet normalize
  - Hb increases after several weeks
- B12 deficiency: IM cobalamin 1mg monthly or sublingual

Hemoglobinopathies: Sickle cell anemia

- Autosomal recessive
- Sickle shaped RBCs
- Common in
  - African Americans 8%, Middle East and Indian
- Risk of sickling increased during pregnancy (metabolic requirements)
- Risk of vascular stasis + hypercoagulable status
- antenatal screening for sickle cell anemia by :
  - chorionic villus sampling
- When :
  - before 15w
- Why :
  - to go for termination if baby affected

Hemoglobinopathies: Sickle cell anemia

- Points:
  - 1.Pregnant with sickle cell trait have twice the frequency UTIs
  - SCA patients should be screened UTIs each trimester
  - Blood pressure checked every visit
  - One in four child will be effected if parents have SC trait 25%
  - Clear care for those women
- Pregnancy and Sickle cell disease:
  - 1. spontaneous miscarriage, 2.IUGR, 3.IUFD, 4.SGA, 5.preeclampsia, 6.preterm labor and 7.UTI more 2 time

Hemoglobinopathies: Sickle cell anemia

- **Diagnosis**
  - Normocytic normochromic anemia
  - The reticulocyte count **increased** 3-15 %
  - Lactate dehydrogenase **elevated**
  - Hepatoglobin is **decreased**
  - **Peripheral blood :** sickle cell, target cell ,Howell-Jolly bodies
- **Screening and diagnosis by Hb electrophoresis** (Hb S 85-100%, absent Hb A , normal Hb A2 , Hb F elevated more than 15 %)

Management

- Hydroxyurea not recommended in pregnancy (should stopped 3 month before pregnancy)
- Infections treated with antibiotics.
- Severe anemia needs blood transfusion in more severe plasma exchange.
- Pain crises managed with O2 , hydration (N/V common), analgesia
- Before pregnancy should receive pneumococcal vaccine
- Folate supplements 4 mg/day
- Low dose Aspirin prophylactic PET
- Iron supplements **only** by indication
- Fetal well being twice weekly since 32 weeks
- Low-molecular weight heparin any antenatal hospital period if no contraindications
- Fetal growth weekly in 3rd trimester
- Avoid dehydration , stress intrapartum
- Avoid pethidine ---increased risk of seizures
- After delivery early ambulation and wear stocking to prevent thromboembolism
- **Contraception :** excellent options Mirena and POP
- COC– avoid
- Medroxyprogesterone acetate **decrease** pain crises

Management

- **Blood transfusion in sickling patients**
  - May precipitate a crisis if sudden increases Hct
  - Hb 6-8 g/DL is typical for HbSS
- Consider transfusion :
  - Severe anemia
  - Multiple pregnancy
  - Per eclampsia
  - Acute chest syndrome
  - Acute renal failure
  - ** target level <30 % of sickle cells in circulation
  - Partial exchange transfusion

- **Time and mode of delivery**
  - SCD normal growing fetus Induction of labor or CS(by indication) at 38 weeks
  - SCD not an indication for CS
  - Prepare cross matched blood before delivery
  - Hematologist should be consulted
  - **Continuous** intrapartum fetal monitoring

Key points

- Offer screening for anemia at booking and 28 weeks this allows time for treatment
- Hb < 11 or 10.5 in 2nd trimester need investigation
- Anemia risk for Preterm labor
- The parenteral iron should only be considered for intolerant women
- At term iron deficiency anemia treated with blood transfusion

Mini OSCE – 1

CBC with HB = 6 , MCV = 70 , MCHC = 30

- Your interpretation ?
  - **Microcytic hypochromic anemia**
- DDx ?
  - **Iron deficiency , Thalassemia.**
- If women are financially able what test you ask to differentiate
  - **HB electrophoresis** , others answer **ferritin test** !!
- If the woman not take medication , write three complication ?
  - **Miscarriage , low birth weight , prematurity , Intrauterine fetal death**
- Management If woman enter labour room with this HB level ?
  - **Blood transfusion , fetal monitoring , o2 , IV fluid + tocolytic**

Mini OSCE – 2

CASE 1 : Pregnant with Hemoglobin = 8

- Most common cause in pregnancy
  - **Iron deficiency anemia**
- Treatment :
  - **Oral iron supplement**

Mini OSCE -3

23 years old (GA:10) (G2 P1) HX of DVT in previous pregnancy /

labs : (Hb=9/ WBC:15000 / reticulocytes count :6% Hb S was detected in electrophoresis

1. Diagnosis

Sickle Cell Disease

2. Complications on the mother and fetus?

As mentioned in Dr. Male slide

3. Other labs you would ask for?

Coagulation profile (fibrinogen /d dimer I PTT/PT) /MCV/

4. Managment?

WBC are elevated (suspicious of infection that should be treated with antibiotics , Other mangment as mentioned in Dr. Malik slide

5. The best contraception method to be used ?

Depot_ medroxypogesterone acetate (mirena)

Vomiting in pregnancy

Hyperemesis gravidarum

- Clinical features:
  - Onset in the first trimester, usually weeks 6-8
  - Severe protracted nausea and vomiting
  - Weight loss of more than 5% of pre-pregnancy weight
  - Dehydration and electrolyte imbalance, including ketosis
  - There are usually signs of dehydration with postural hypotension and tachycardia and there may be muscle wasting.
  - There may be associated ptyalism (excessive salivation) and associated spitting
- Risk Factors –
  - Primigravid, multiple gestation, molar pregnancy, heartburn, female fetus (1.27), nondrinkers, non smokers, family history or previous HG

Hyperemesis gravidarum

- Investigations
  - Blood tests typically reveal the following:
  - Hyponatremia
  - Hypokalemia
  - Hypochloremic metabolic alkalosis
  - Low serum urea
  - Ketonuria
  - Raised hematocrit level and increased specific gravity of the urine
  - Liver function tests → abnormal in 50% of cases
  - Thyroid function tests → abnormal in ~66% of cases.
  - An ultrasound (US) scan of the uterus could be done to rule out multiple gestation or hydatidiform mole.

Effect of HG on pregnancy

- Maternal complications
  - dehydration and electrolyte imbalances
  - preterm labor and preeclampsia
  - Vitamins deficiency :
    A. Vitamin B1 (thiamine) : Wernicke's encephalopathy due to vitamin B1 (thiamine) deficiency is a fatal but reversible medical emergencu
  - Hyponatremia
  - Mallory–Weiss tears
  - Esophageal tears
  - Stress ulcer in stomach Psychology Venous thromboembolism
  - Jaundice, Renal problem, V k deficiency.
- Fetal complications
  - fetal death
  - significantly lower birth weights

Osmotic demyelination syndrome may associate with Locked in syndrome

- Both severe hyponatraemia and, particularly, its rapid reversal may precipitate central pontine myelinolysis (osmotic demyelination syndrome). This is associated with symmetrical destruction of myelin at the centre of the basal pons and causes pyramidal tract signs, spastic quadraparesis, pseudobulbar palsy and impaired consciousness.
- Central pontine myelinolysis and Wernicke's encephalopathy may co-exist with HG, and thiamine deficiency may render the myelin sheaths of the central pons more sensitive to changes in serum sodium

Management

- Emotional support with frequent reassurance and encouragement
- Drugs that may cause nausea and vomiting should be temporarily discontinued. The commonest example is iron supplements.
- Any woman who is ketotic and unable to maintain adequate hydration requires i.v. fluids and parenteral anti-emetics.
- For less severe cases, outpatient management with administration of i.v. fluid therapy and anti-emetics as required should be first line.

Management

- -Normal saline (sodium chloride 0.9%; 150 mmol/L Na+) and Hartmann's solution (sodium chloride 0.6%; 131 mmol/L Na+) are appropriate solutions.
- Correction of the hypokalaemia is essential and it is usually necessary to use infusion bags containing 40 mmol/L of potassium chloride
- of low-molecular-weight heparin (LMWH)
- Thiamine therapy
- Pharmacological therapy
  - Anti-emetics
  - Histamine2 (H2)-receptor blockers and proton pump inhibitors (PPIs)
  - Corticosteroids
- Enteral feeding /Total parenteral nutrition

Management

❖Anti-emetics

First line therapy

Cyclizine	50 mg p.o., i.m. or i.v. 8 hourly
Prochlorperazine	5–10 mg p.o., i.m., i.v. or p.r. 6–8 hourly 12.5 mg i.m./ i.v. 8 hourly 25 mg p.r. daily
Promethazine	12.5–25 mg i.m., i.m., i.v. or p.r. 4–8 hourly
Chlorpromazine	10–25 mg i.m., i.v. or i.m. 4–6 hourly 50–100 mg p.r. 6–8 hourly
Doxylamine plus pyridoxine	10 mg of each up to 8 tablets per day

Second line therapy

Metoclopramide	5–10 mg i.m., i.v. or i.m. 8 hourly (maximum 5 days duration)
Domperidone	10 mg i.m. 8 hourly 30–60 mg p.r. 8 hourly
Ondansetron	4–8 mg i.m. 6–8 hourly 8 mg over 15 minutes i.v. 12 hourly

Suggested management algorithm for nausea and vomiting in pregnancy and HG

Mild nausea and vomiting Urinary ketones negative	Moderate dehydration Urine ketones 1–2+	Severe dehydration Urine ketones 3–4+
Community-based care	Outpatient-based care	Inpatient admission
Encourage oral fluids and small frequent meals	i.v. fluids (1 L normal saline + 20 mmol K over 2 hours × 2) Thiamine supplements	i.v. fluids (1 L normal saline + 40 mmol K, 3 L/day) i.v. thiamine
Oral anti-emetics	i.v. anti-emetics e.g., Cyclizine 50 mg	Regular i.v. anti-emetics Prophylactic LMWH

Mini OSCE – 1

30 years old woman with amenorrhea 8 W duration, come with sever vomiting (I don't remember the details in Q) and the investigations was done & the result shown below : Hb :11. , K:3.1 , Keton in urine : ++ (normal :Nill)

- ❖What's your diagnosis?
  - Hyperemesis Gravidarum
- ❖Write another 6 Investigations you want to order them?
  - BUN & electrolytes, LFT, Urinalysis, Thyroid function test, Hematocrit and U/S
- ❖Write 2 obstetric condition you should exclude them :
  - Molar, multiple pregnancy
- ❖4-Whats your management?
  - Depends on the severity of symptoms as above
- ❖if this condition increase the risk of crisis in pregnancy that indicate which type of anemia ?
  - sickle cell anemia
- ❖What is the only definitive cure?
  - Termination of pregnancy

Birth injuries

ارجعوا ل صور السيمنار

Mini OSCE – 1

- Dx:
  - shoulder dystocia
- 3 risk factors:
  - Macrosomia, gestational DM, previous dystocia,mass
- 2 initial manoeuvres:
  - McRoberts and suprapubic pressure
- 2 complications;
  - Perineal and vaginal laceration, PPH
  - brachial plexus injury

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Aberrant Liquor Station 1

U/S pic with 12 cm deepest vertical pocket

- **what is the Dx?**
  - Polyhydramnios
- **Give 4 complications**
  - Pre-labor rupture of membranes PROM, so preterm labor and premature birth.
  - Placental abruption.
  - Umbilical cord prolapse.
  - Macrosomia.
  - Maternal respiratory compromise.
  - Fetal mal-position and mal-presentation.
  - CS delivery and NICU admission.
  - Still-birth and perinatal mortality.

Station 1 Cont.

- **Give 2 maternal causes and 2 fetal causes ?**

Maternal Etiology	Materno-Fetal Etiology
❖ **Maternal DM** ○ Fetal hyperglycemia ○ Fetal polyuria	❖ **Multiple gestation** ○ Twin gestation with twin-to twin transfusion syndrome ○ (increased amniotic fluid in the recipient twin and decreased amniotic fluid in the donor) ○ or ○ multiple gestations affect 10% of MCDA due to vascular anastomosis and blood flow imbalance ❖ **Chorioangioma.** ❖ **Blood incompatibilities (Rh iso-immunization / Erythroblastosis Fetalis)**

Station 1 Cont.

Fetal Etiology		
❖ **swallowing defect** ○ CNS abnormalities and neuromuscular diseases that cause swallowing dysfunction ○ Ex : anencephaly	❖ **Extrinsic intestinal compression** (diaphragmatic hernia or masses within the thorax and mediastinum)	❖ **Fetal akinesia syndrome** ○ with absence of swallowing
❖ **Congenital anomalies** ○ 1.Esophageal atresia ○ (associated with 2.tracheoesophageal fistula ○ Tracheal agenesis ○ 3.Duodenal atresia ○ 4.intestinal atresias	❖ **Infectious** ○ Congenital syphilis Viral hepatitis Parvovirus b19 ○ CMV	❖ **Chromosomal Disorders** ○ Trisomy 18 ○ Trisomy 21 also 13

Station 1 Cont.

- **Give 2 treatment options**
  - Amnioreduction by doing amniocentesis.
    - Remove the fluid no faster than 1000 ml over 20 min (risk of sudden decompression of the uterus and separation of the placenta) and don't remove more than 5 L at one time.
  - Indomethacin.
    - Not used beyond 32 (constriction of the ductus arteriosus)

Station 2

- **What do you see and what's your diagnosis ?**
  - Single deepest pocket less than 2
  - Oligohydramnios
- **Give one single important finding during abdominal examination ?**
  - Low fundal height (high association with IUGR)
- **4 causes for this condition ?** (next slide)
- **Clinical importance for amniotic fluid ?**
  - Screening for fetal malformation.
  - genetic testing.
  - Assessment of fetal well-being (amniotic fluid index).
  - Assessment of fetal lung maturity (L/S ratio).
  - Diagnosis of PROM (fern test).
  - Diagnosis and follow up of labor

Etiology of Oligohydramnios

Too Little production	
Renal agenesis	U/S (no renal tissue, no bladder)
Multicyclic kidney	U/S (enlarged kidney with multiple cysts no visible bladder)
Urinary tract abnormality / obstruction	U/S (kidney may be present but urinary tract dilatation)
FGR and placental insufficiency	clinical reduced SFH reduced fetal movement Possibly abnormal CTG ultrasound FGR abnormal fetal doppler waveform
Maternal drug (NSAIDs)	withholding NSAIDs may allow amniotic fluid to reaccumulate
Postdate pregnancy	
Leakage (PROM)	speculum examination pool of amniotic fluid on posterior blade

Etiology Cont.

- **PPROM**
  - The earlier Chorioamnionitis ,the greater the fetal risk of bronchopulmonary dysplasia, neurologic complications, pulmonary hypoplasia, and, in severe cases, respiratory failure in the neonate.
- **Multiple pregnancies : twin-to-twin transfusion syndrome**
  - Blood is continuously shunted from one twin to the other through vascular anastomoses on the shared placenta, posing a risk to both fetuses
  - **Recipient twin**
    - Polycythemia
    - Hypervolemia
    - Polyhydramnios in diamniotic pregnancies
  - **Donor twin**
    - Anemia
    - Growth retardation
    - Hypovolemia, dehydration (stuck twin or cocooned appearance)
    - Oligohydramnios in diamniotic pregnancies

CS Station 1

❖**What is the operation?**

- Caesarean delivery (CS)

❖**What is the most common indication for primi-gravida women ?**

- Fetal distress

❖**What is the Early complication of CS ?**

- Hemorrhage
- Infection
- Incidental Surgical Injuries
- Emergency Hysterectomy
- Pain (Women who undergo caesarean delivery more commonly experience pain after delivery compared with those having vaginal deliveries.)
- Paralytic ileus (Expected in the first few days)
- Thromboembolism
- Anesthesia complication

CS Station 1 cont.

❖**mention layers that you cut in anterior abdominal wall ?**

- Skin: A transverse incision is made through the skin and subcutaneous fat.
- Subcutaneous fat: The subcutaneous fat layer is dissected to expose the underlying fascia.
- The Fascia known as the rectus sheath : covers the rectus abdominis muscle.
- Rectus abdominis muscle: In a classical C-section, two parallel incisions are made through the rectus abdominis muscle, avoiding the linea alba (the midline connecting tendon) to minimize postoperative morbidity.
- Peritoneum: The innermost layer, the peritoneum, is then incised to enter the abdominal cavity and access the uterus.
- Muscle of uterus

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PID

Definition: Community-acquired bacterial infection that spreads beyond the cervix to infect the upper female reproductive tract.

Most common (~66%): Chlamydia trachomatis, Neisseria gonorrhoeae

PID

Risk factors:

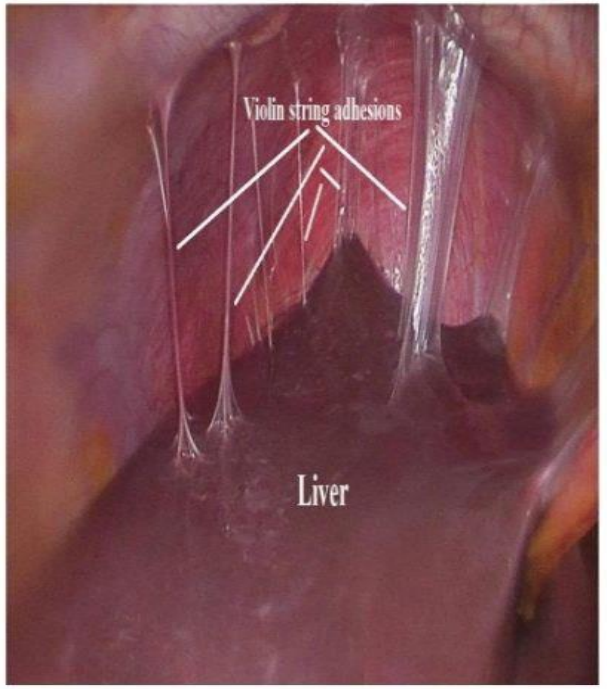
1. **Multiple sex partners**: The most important risk factor.
2. **Status of the partner**
3. **Age**
4. **Previous PID**
5. **Bacterial vaginosis**
6. **Sex during menses**
7. **Vaginal douching**

c/p

1. **Lower abdominal pain**
2. **Nausea, vomiting**
3. **Fever**
4. **Dysuria, urinary urgency**
5. **AUB**
6. **Dyspareunia**
7. **Abnormal vaginal discharge**

May come with the c/p Fitz-Hugh Curtis syndrome :

- Perihepatitis or Fitz-Hugh Curtis syndrome :
  - It consists of infection of the liver capsule and peritoneal surfaces of the anterior right upper quadrant, with minimal stromal hepatic involvement.



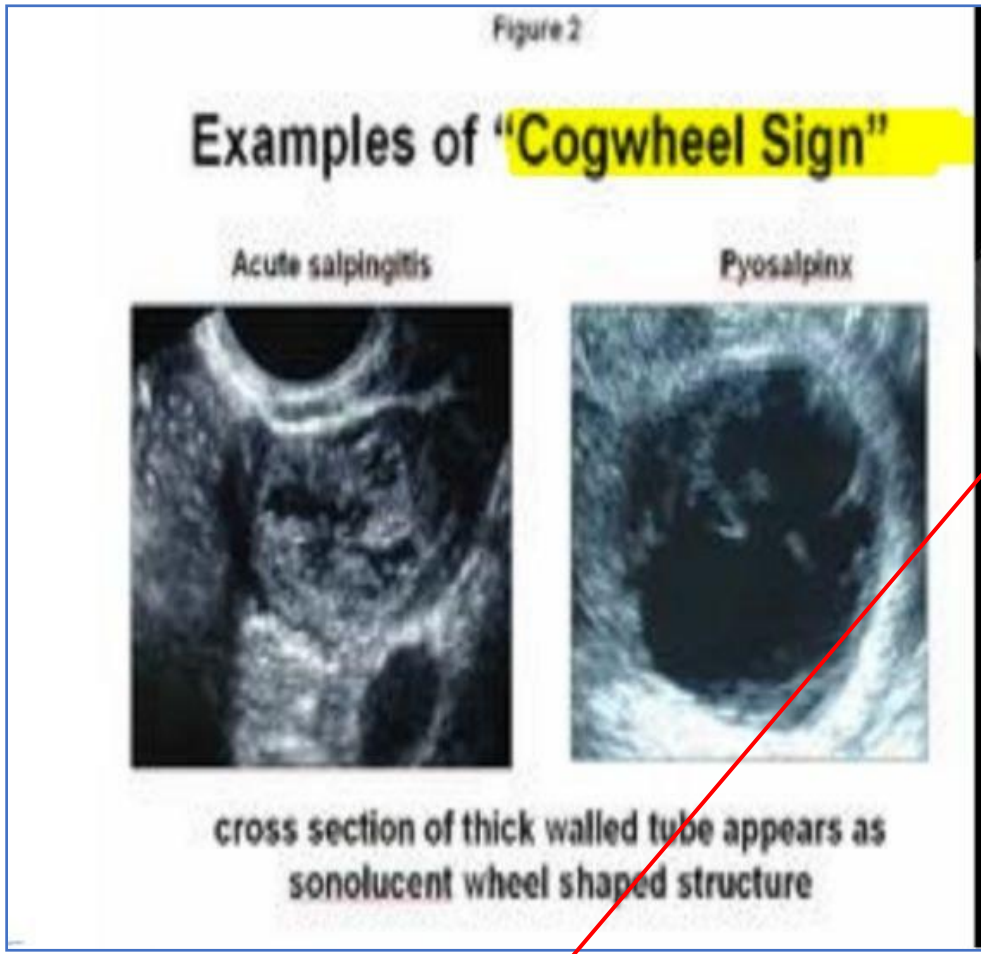
- Symptoms are typically the sudden onset of severe right upper quadrant abdominal pain with a distinct pleuritic component, sometimes referred to the right shoulder.

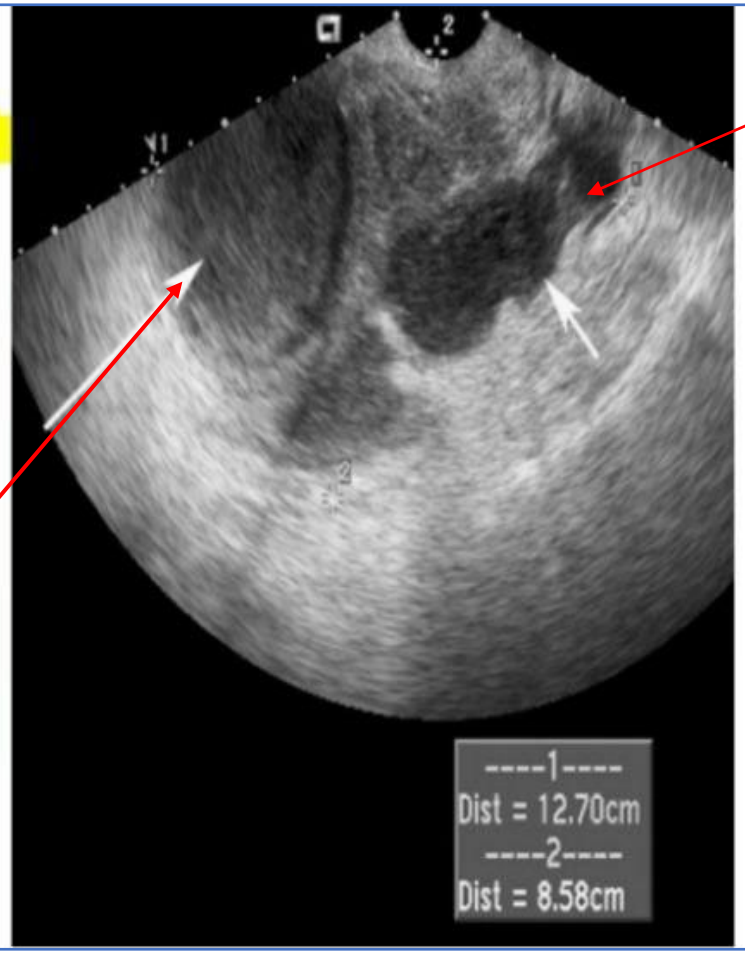
- By laparoscopy: manifests as a patchy purulent and fibrinous exudate in the acute phase
- Rare complication
- Exclusively with chlamydia infection

Dx:

- **Blood tests**: elevated ESR, leukocytosis
- **Pregnancy test**: to rule out an (ectopic) pregnancy
- **Cervical and urethral swab**
  - Gonococcal and chlamydial DNA (PCR) and cultures
  - Giemsa stain of discharge can show cytoplasmic inclusions in C. trachomatis infections, but not in N. gonorrhoeae infection.
- **Transvaginal ultrasound**: Sonographic findings consistent with PID
  - Thickened fluid-filled tubes/oviducts with or without free pelvic fluid or tuboovarian complex

TV.US in PID





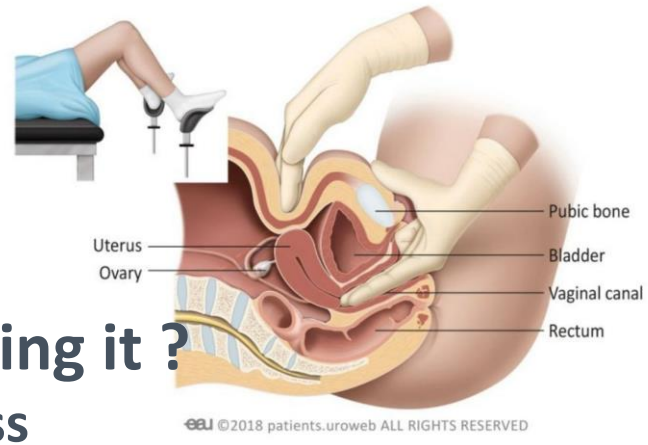
Hydrosalpinx: F.Tube abscess/ sausage like abscess

Different echogenicity, thick wall (tubo-ovarian mass)

Ovarian abscess: thick wall >1cm + heterogenous content//ovarian cyst: thin wall<1cm, homogenous content// normal ovaries : 1cm thickness

Mini OSCE – 1

- **What is the name of this examination ?**
  - Bimanual Pelvic Examination
- **What is the position of patient during it ?**
  - Lithotomy position



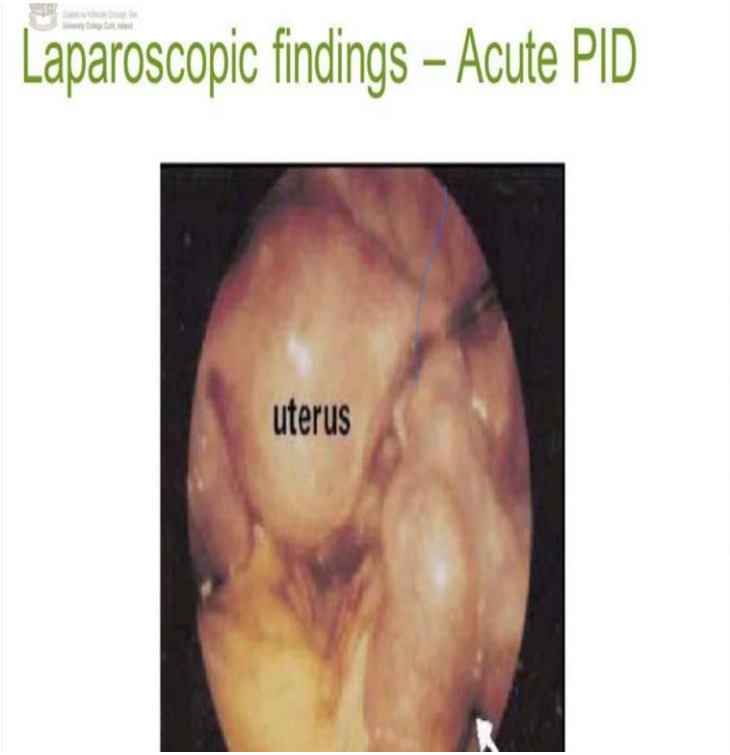
- **3-what are the structures and related findings during it ?**
  - Uterus : Size , shape , direction and position , Tenderness
  - Ovaries and Fallopian Tube (Adnexa) : Masses (cyst) , Size , shape , Tenderness .
  - Uterosacral ligament Nodularity Cervix Masses , Polyp , motion Tenderness .
  - After that inspect your gloves .
- **Your findings with :**
  - bimanual in PID : purulent endocervical discharge and/or acute
  - cervical motion and adnexal tenderness, Adnexal
  - masses

Mini OSCE – 1

Station about PID :

- **long term complication of PID ?**
  Hydrosalpinx
- **What is the diagnosis?**
  Pelvic inflammatory disease
- **if patient did a test and was 5000 IU/L what test she did and what's your diagnosis and if the test was high what's your management? مو عارف الإجابة**

السؤال لازم يكون في سيناريو عشان تنكتب إجابة



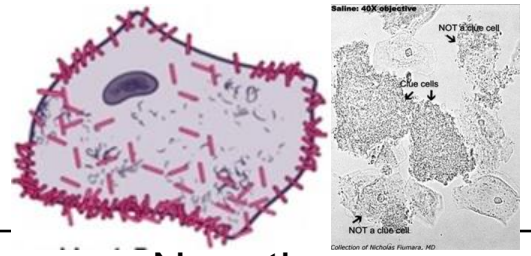
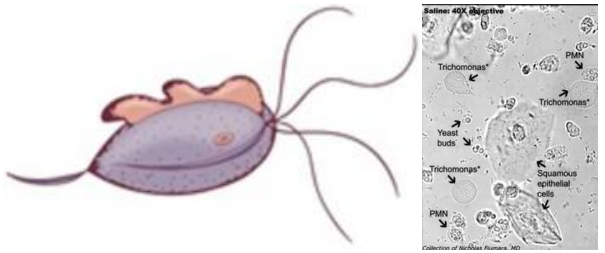
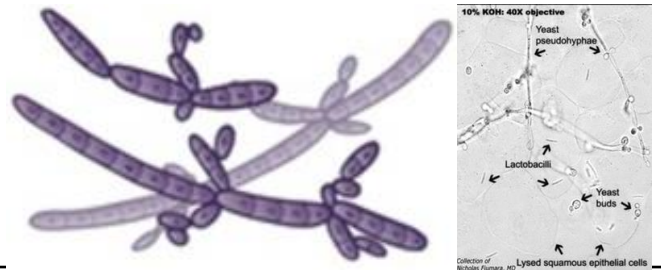
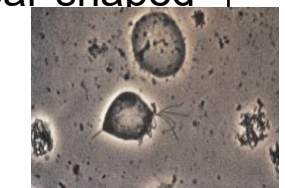
STDs

Lower Genital tract infections & sexually transmitted diseases

Vaginitis

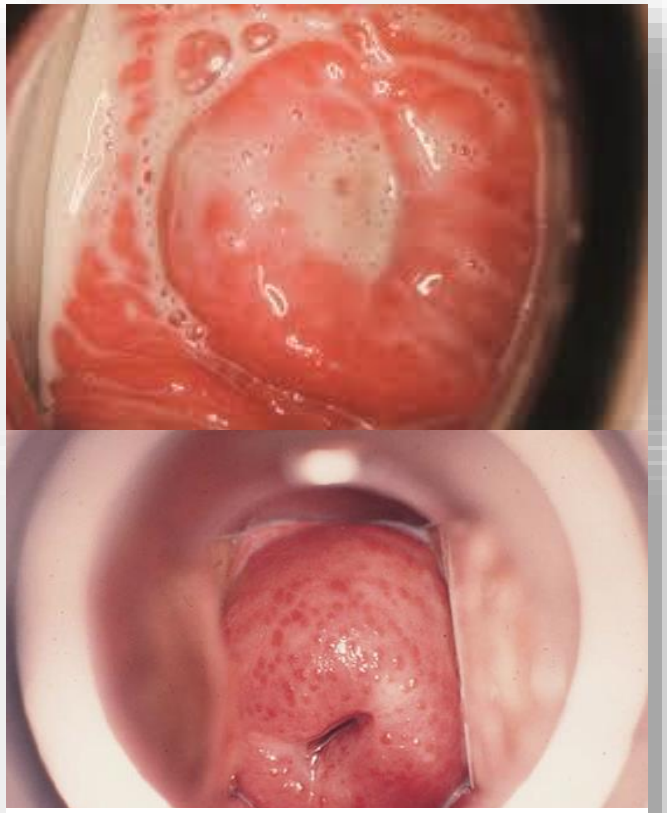
	Bacterial vaginosis	Trichomoniasis	Vulvovaginal Candidiasis
Microbiology	• Shift in vaginal flora away from lactobacilli, to diverse bacteria including anaerobes • Gardnerella vagina predominant	• Protozoan Trichomonas vaginalis infection • often accompanies bacterial vaginosis	• Overgrowth of Candida albicans (part of normal vaginal flora) • Other Candida also possible (i.e., glabrata)
Risk Factors	1. Sexual activity 2. Frequent douching	Unprotected sex (passed person-to-person via sexual contact)	1. Diabetes mellitus 2. Antibiotic use 3. Immunocompromised states
Symptoms	Non-painful	• About 50% asymptomatic • Itching, burning, & dyspareunia, painful dys	Vulvar pruritus, with possible burning, irritation, dyspareunia, & painful dysuria
Discharge	**Color**: Grey **Smell**: Fishy Thin & smooth 	**Color**: Green **Smell**: Foul Thin 	**Color**: White **Smell**: Odorless Thick 
Vaginal Exam	Homogenous milky or creamy (white to gray) discharge that smoothly & thinly coats the vaginal walls	• Erythema of the vulva and vaginal mucosa • Punctate hemorrhages of upper vagina/cervix ("Strawberry cervix") • Profuse, malodorous yellow-green discharge	• Erythematous, excoriated vagina • Erythematous, edematous valvular skin and labia • Thick, typically resembles cottage cheese, white, discharge, with curdy texture without odor

Vaginitis

	Bacterial vaginosis	Trichomoniasis	Vulvovaginal Candidiasis
pH	> 4.5	5.0-6.0	4.0-4.5
Whiff Test	Positive	Occasionally positive	Negative
Wet Mount	Clue cells (epithelial cells with bacteria) 	Motile trichomonas (bigger than WBC, smaller than epithelium cells) 	Pseudohyphae 
KOH Prep	Negative	Negative	Positive
Management	• Metronidazole 500 mg PO q2 for 7 days. • Metronidazole gel intravaginally, q1 for 5 days • Vaginal or oral clindamycin	PO Metronidazole or Tinidazole **Note**: Partner should also be evaluated and treated	PO Fluconazole (1 time) or topical azoles **Note 1**: Cases of recurrent disease may require longer PO or topical regimens **Note 2**: Glabrata treated with intravaginal boric acid
Notes	• Amsel Criteria (≥3/4): Classic vaginal discharge, pH >4.5, clue cells, fish odor (+ve whiff test) • Associated with mid-trimester miscarriage, preterm labour, rupture of membranes and endometritis	• **Culture**: Most sensitive & specific • **Microscopy**: motile, pear-shaped trichomonads 	• In pregnant women oral fluconazole is contraindicated Only use topical agents

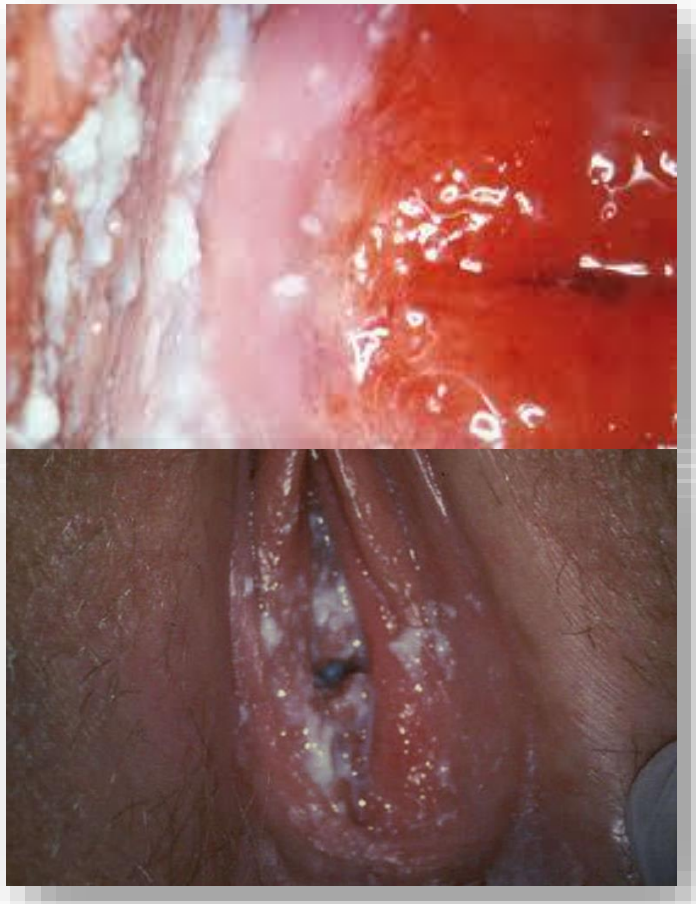
Vaginitis – Vaginal Exam

Bacterial vaginosis



Strawberry cervix

Trichomoniasis



Vulvovaginal Candidiasis

Classification of Vulvovaginal Candidiasis (VVC)

Sporadic or infrequent in occurrence	Recurrent symptoms
Mild to moderate symptoms	Severe symptoms
Likely to be C.albicans	Non albicans Candida
Immunocompetent women	Immunocompromised women (DM, immunosuppression)
• Treated with topically applied azole drugs • Or Fluconazole 150 mg oral tablet one tablet in single dose	• Require longer topical regimens • Can benefit from an additional 150mg dose of fluconazole given 72 hours after the first dose

Table 15.5 Treatment Options for External Genital and Perianal Warts

Modality (%)	Efficacy (%)	Recurrence risk
Cryotherapy Safe in pregnancy	63–88	21–39
Podophyllin 10–25% Pregnancy category C	32–79	27–65
Podofilox 0.5%* Pregnancy category C	45–88	33–60
Triochloroacetic acid 80–90% Safe in pregnancy	81	36
Electrodesiccation or cautery	94	22
Laser†	43–93	29–95
Interferon	44–61	0–67

*May be self-applied by patients at home.

†Expensive, reserve for patients who have not responded to other regimens.

Molluscum contagiosum

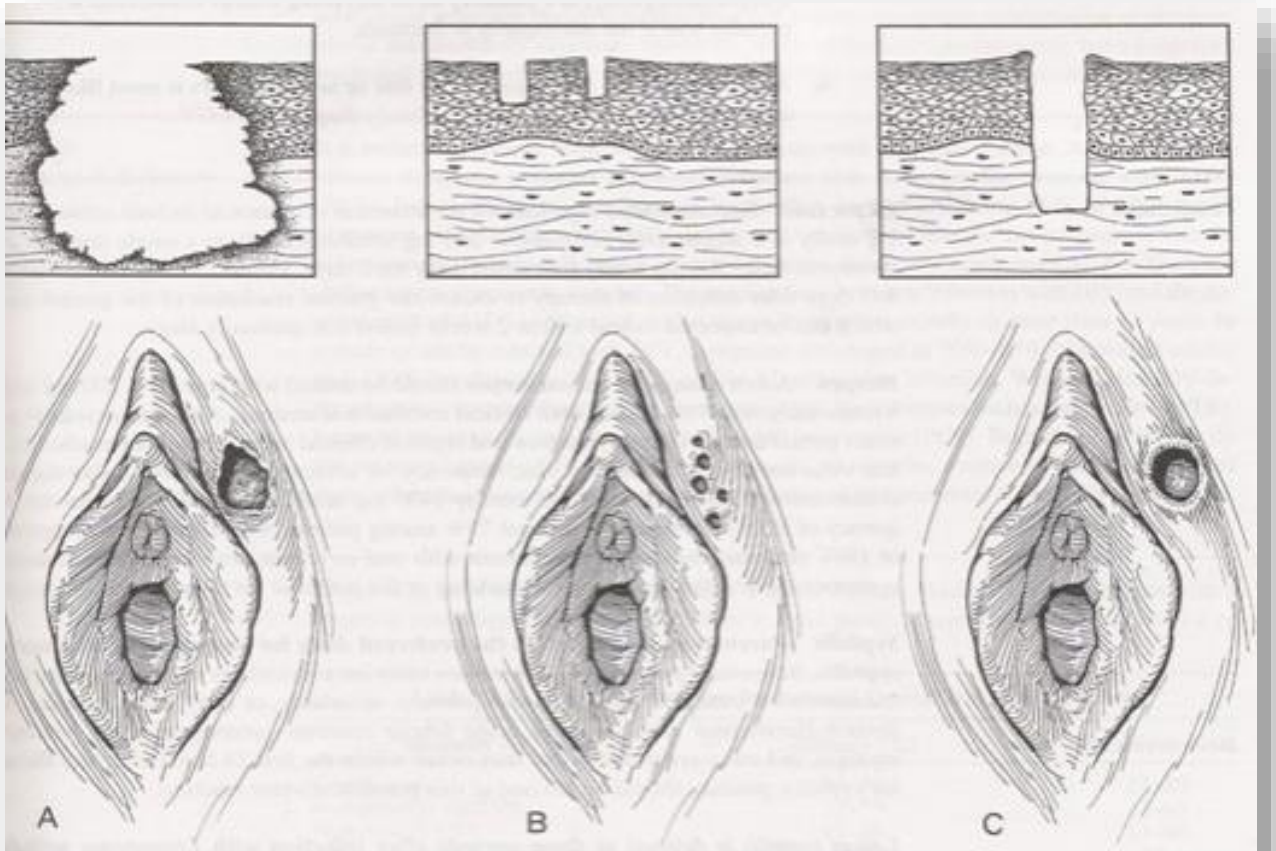
- **Causative agent**: POX virus
- **Clinical features**
  - **Shape**: dome shaped papules with central umbilication, 2-5 mm diameter
  - Spread by skin contact, autoinoculation, fomites
  - Usually asymptomatic but may be pruritic & become inflamed & swollen
  - It is usually self limited

Genital Ulcers

	Genital herpes		Chancroid	Granuloma inguinale	Lymphogranuloma venereum
Causative agent	HSV 1&2	Treponema pallidum	Hemophilus ducreyi	Klebsiella granulomatis	Chlamydia trachomatis L1,L2,L3
Ulcer	Grouped vesicles mixed with small ulcers with a history of similar lesions	Painless, minimally tender ulcer	1-3 extremely painful ulcers	Extensive & progressive ulcerative lesions	Small & shallow ulcers
Inguinal lymph node	Lymphadenopathy indicates 2ndry infection of ulcer	Tender inguinal lymphadenopathy	Tender inguinal lymphadenopathy	Without lymphadenopathy	Large, painful, coalesced inguinal lymph nodes ('buboes')
Diagnosis	Culture, Tzanck smears, PCR	Dark-field microscopy, VDRL or RPR, FTA-ABS & TPPA	Culture for H.ducreyi	Culture, Biopsy	NAAT using swabs of the anogenital lesions
Treatment	1st episode is treated with acyclovir famciclovir	Benzathine Penicillin G	Azithromycin, Ceftriaxone, Erythromycin, Ciprofloxacin	First line: Azithromycin	Doxycycline or erythromycin

Note: Herpes is relative indication for cesarean section (presence of maternal lesions within 6 weeks of birth in the absence of ruptured membranes, spontaneous ROM >>6 hours)

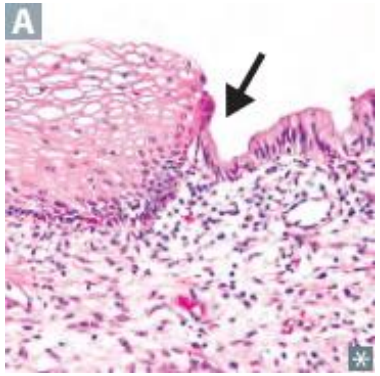
Genital ulcers



ure 15.2 **Showing the appearance of the ulcers of chancroid (A), herpes (B), and syphilis (C).** The ulcer of ancroid has irregular margins and is deep with undermined edges. The syphilis ulcer has a smooth, indurated bor- and a smooth base. The genital herpes ulcer is superficial and inflamed. (Modified from **Schmid GP, Shcalla O, DeWitt WE.** Chancroid. In: **Morse SA, Moreland AA, Thompson SE,** eds. *Atlas of Sexually Transmitted Dis-*ses. Philadelphia: JB Lippincott, 1990.)

Inguinal bubo without ulcers indicating Lymphogranuloma venereum

Cervicitis



- **Cervix epithelium**
  - **Ectocervix**: Stratified squamous epithelium, nonkeratinized
  - **Transformation zone**: Squamocolumnar junction A
  - **Endocervix**: Simple columnar epithelium
- **Cervicitis**
  - **Ectocervix**: Can be infected by the same microorganisms that are responsible for vaginitis
  - **Endocervix**: can only be infected by N.gonorrheae & C.trachomatis

Diagnosis of cervicitis

- Based on the finding of a purulent endocervical discharge, generally yellow or green in color (mucopus)
- A purulent or mucopurulent endocervical exudate visible in the endocervical canal or on an endocervical swab specimen
- Sustained endocervical bleeding easily induced by gentle passage of a cotton swab through the cervical os
- Either or both signs might be present
- Some patients is asymptomatic, but some women complain of an abnormal vaginal discharge and intermenstrual vaginal bleeding

Cervicitis

Chlamydia	Gonorrhea
Caused by C.trachomatis	Caused by N.gonorrheae
75% cases asymptomatic	50% cases asymptomatic
Commonly present with abnormal vaginal discharge, burning with urination, spotting, postcoital bleeding	Present with vaginal discharge, dysuria, abnormal uterine bleeding
Diagnosed by NAAT (nucleic acid amplification testing)	Diagnosed by culture (Thayer Martin media) & NAAT
Associated with late (1-2 weeks) neonatal conjunctivitis	Associated with early (2-5 days) neonatal conjunctivitis
Treat by Azithromycin or Doxycycline	Treat by Cefixime or Ceftriaxone
Note that when we treat cervicitis, we treat for both bacteria at the same time	

Q1 bacterual vaginosis

1.what is the diagnosis?and what is the organism?

bacterial vaginosis , Gardenella vaginitis

2.mention 4 other tests for diagnosis?

whiff test,culture,ph,gram stain

3.what is significant feature this pateint have?

fishy odor vaginal discharge

4.what is the treatment?

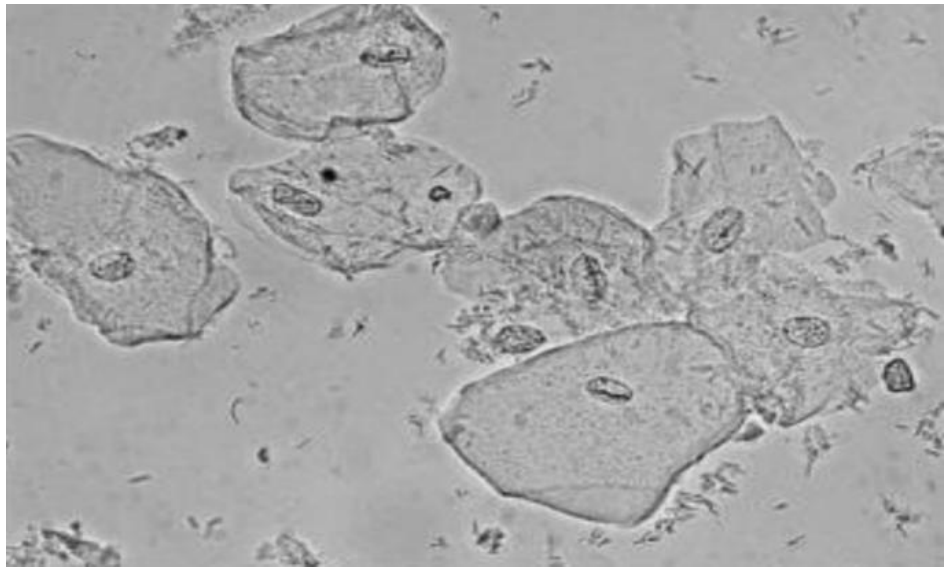
Metronidazole 500 mg orally twice a day for 7 days

5.what hygiene advice you should give this Pateint?

don't do vaginal douching

6.If this pateint came with 19 weeks gestation, what are most common complications that might happen?

preterm labour,neonatal sepsis



الصورة الي اجت كانت واضحة كثير
وكان مكتوب عليها (clue cells)

Q3

1. what is the diagnosis ?

   genital warts(condylomata acuminata)

2. What organism cause this lesion ?

   HPV

3. mention 3 modalities of treatment.

   cryotherapy , trichloroacetic acid,surgical excision,electrosurgery and laser therapy

4. How to reduce prevalance of it.

   HPV vaccination

5. If a pregnant has this lesion ,mention one specific complication in fetus.

   sepsis

Q2 causitive organism of this lesion is

causitive agent : pox virus

Q4 picture from genital tract infection

1.what is the organism and way ot transmission ?

Trichomnalis vaginalis , it is STD

2.findings on examination?

copious purulent greenish discharge, colpitis macularis (strawberry cervix)

3. mention 4 ways of management ?

-Metronidazole 2g single dose orally or 500 mg twice daily for 7 days

-Tinidazole 2g single dose orally

- treating the sexual partner to prevent reinfection.

-health education on STDs prevention

4. complication after hysterectomy ?

cuff cellulitis [refers to an infection of the vaginal cuff, which is the site where the vagina is sutured after removal of the uterus ,it can presents with fever,pelvic pain and discharge]

5.complications during pregnancy ?

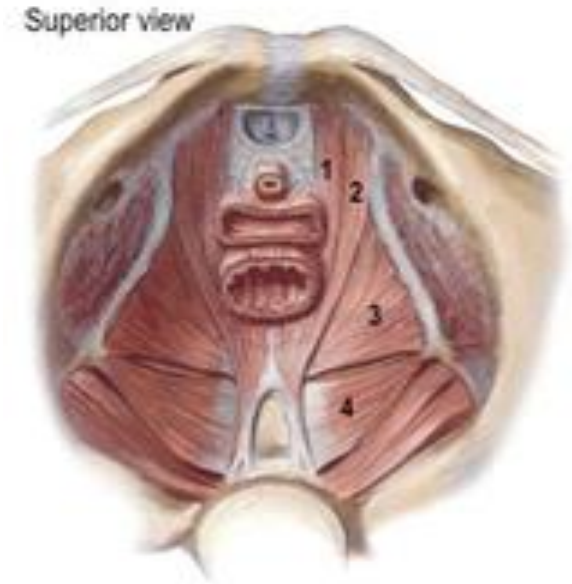
preterm delivery ,ROM, miscarriage

incontinence

سؤال سادسة

Station-1 incontinence

- Mention these structure
- 1-Puborectalis
- 2-Pubococcygeus
- 3-Iliococcygeus
- 4-coccygeus muscle



- Name the stuctures support the urethra !!!!

  1-anterior vaginal wall

  2-Endopelvic fascia

  3-The levator ani muscle

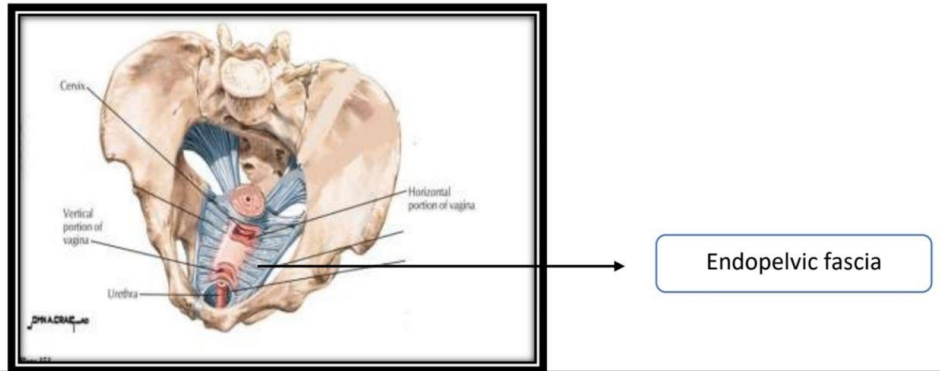
- Mention three obstetric importance of ischial spine

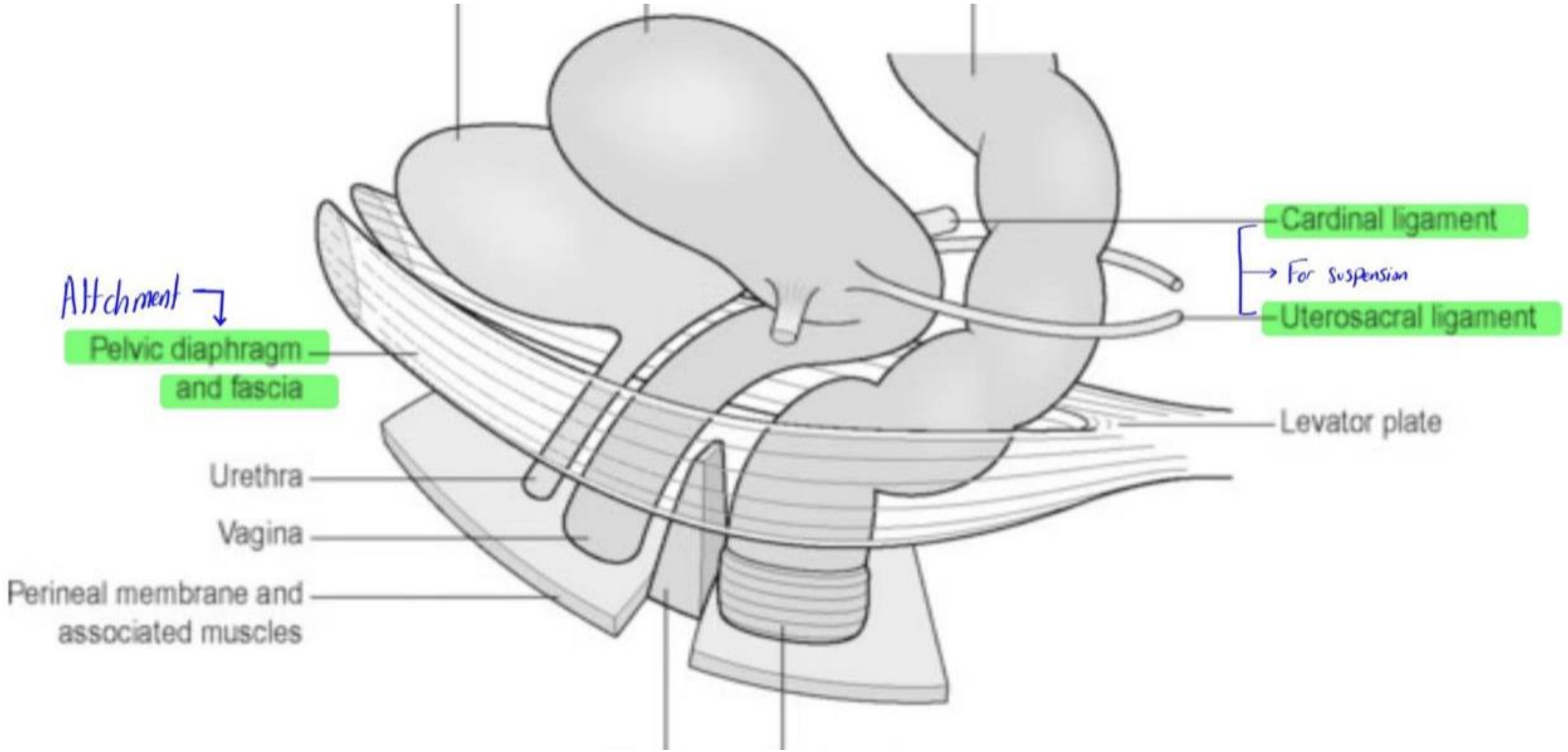
  1-To identify the station of the baby

  2-The distance between them represent the shortest diameter of the pelvic cavity

- mention urinary findings in epidural anathesia

  bladder distention, urinary retention




Attachment
Pelvic diaphragm and fascia
Urethra
Vagina
Perineal membrane and associated muscles
Cardinal ligament
For suspension
Uterosacral ligament
Levator plate

Urodynamic study for some women :

What the name of test ?

Uroflowmetry

2. **What the points (A/B/C) and the normal volume of them ?**

A : flow time (20-30 seconds)

B : flow rate (15ml/sec)

C : urine volume (400-600 cc)

3. **What this shape indicate ?**

Normal bell shape

4. **What other volume you measure it after voiding and its value ?**

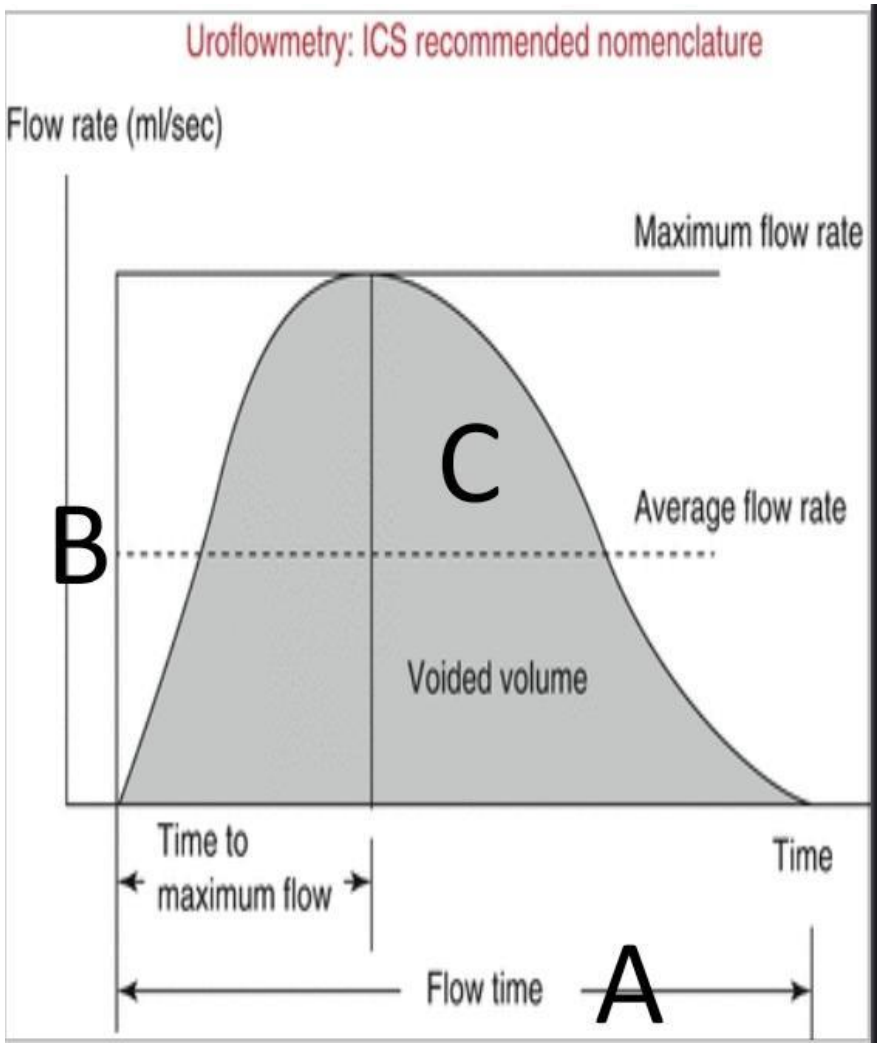
Residual urine volume (>50 ml)

5**. If she came with third stage prolapse , what the changes you see it in the graph ?**

It will cause obstructive so more flow time /intermittent / increase urine flow

6.What are the obstetric complication related to this ?

Macrosomia/ prolonged second stage of labour



POP

- It is bulging or herniation of pelvic organ as (bladder,Rectum,Cervix,Uterus,Vagina) with vaginal segment into the vagina or outside the vagina.
- **Most important risk factors** : Menopause, Age especially beyond 40 years),multiparty

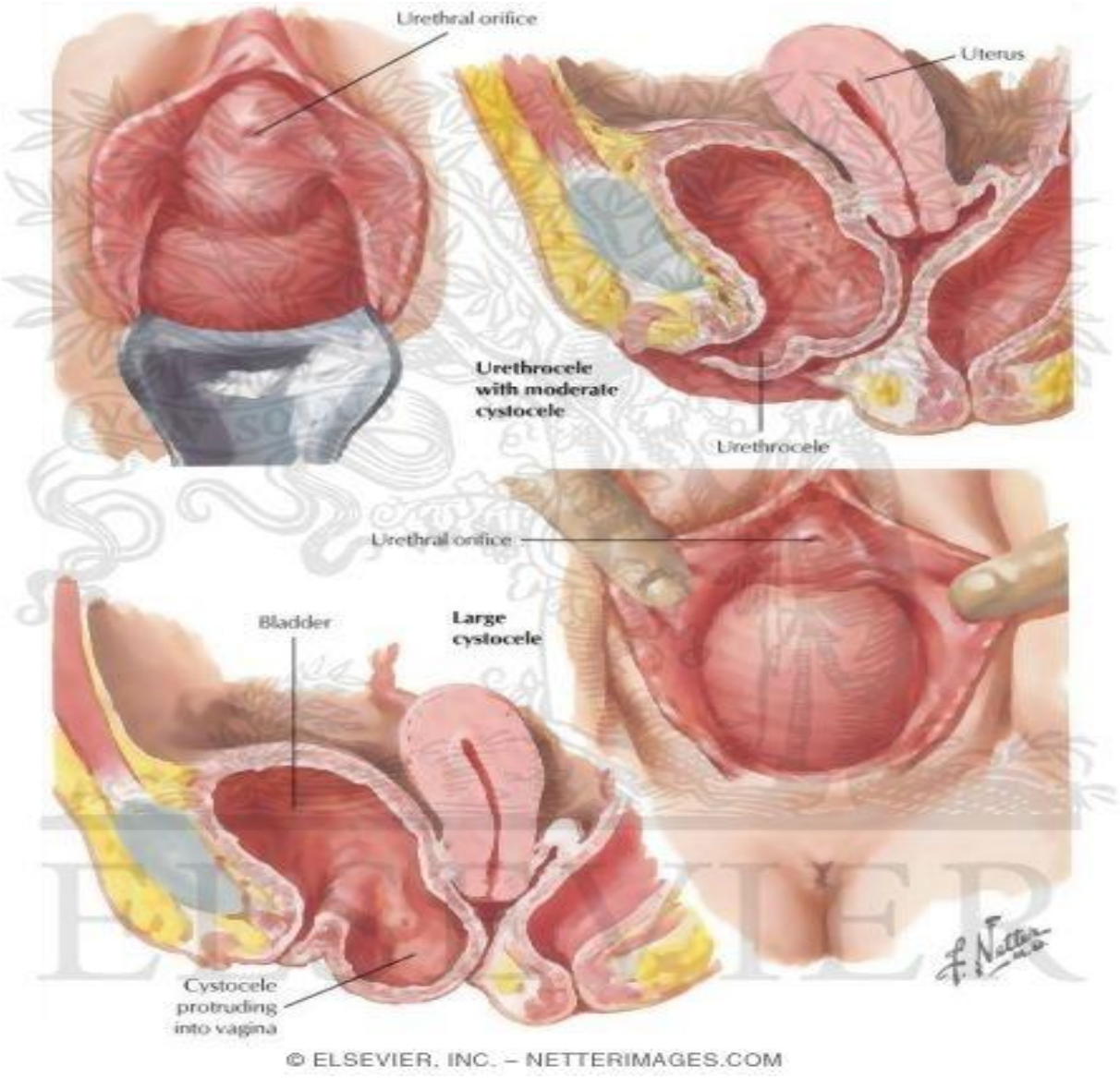
Classification

I. Vaginal wall prolapse:

A. <u>Anterior vaginal wall prolapse :</u>

(<u>Antrior compartment prolpase), with urinary symptoms</u> :

- urethrocele.
- Cystocele.
- cystourethrocele.

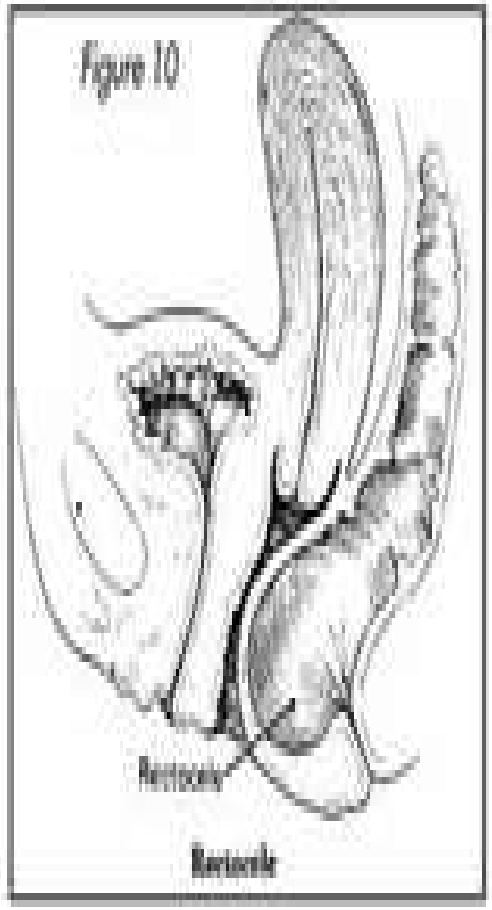


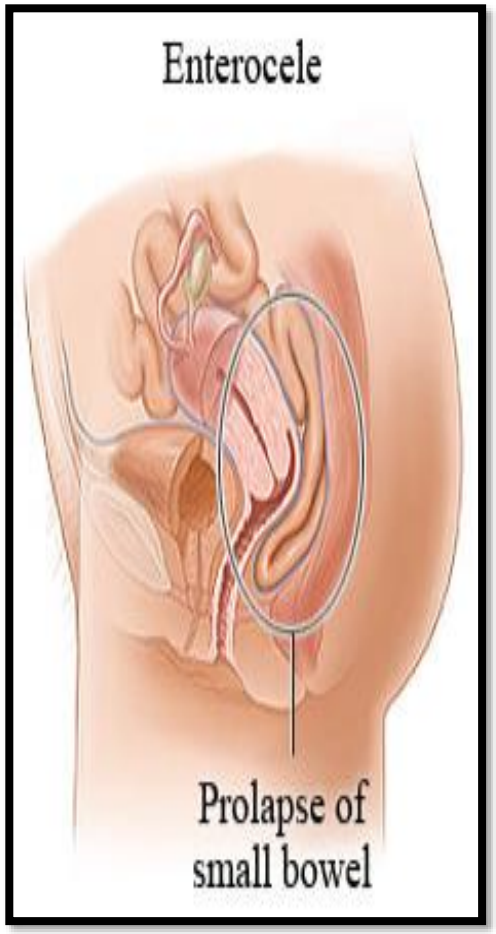
Cont.

B . <u>Posterior vaginal wall prolapse :</u>

❖<u>(Postrior compartment prolapse) with GI symptoms</u> :

- Rectocele: most common involved organ .
- Enterocele: the only true hernia , prolapse of small bowel into recto-vaginal pouch , in case of Hyestectomy , may the prolapse of small intestine present as anterior wall prolapse or Vault prolapse





Cont.

C . Apical virginal wall prolapse : Apical compartment prolapse(Uterus , cervix) or uterocervix prolapse .

- **Vault prolapse** (after hysterectomy)

Cont.

II . Uterine prolapse :

❖Shaws Classification:

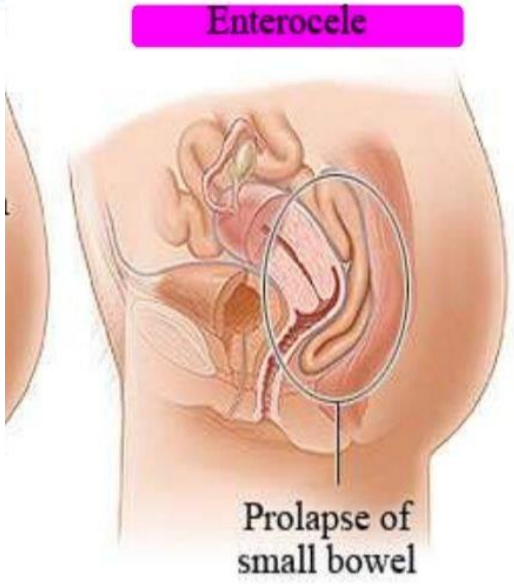
- According to its location
- Grade 1: descent within the vagina.
- Grade 2: Descent of the cervix outside the introitus but not the body of the uterus.
- Grade 3: Descent of the whole uterus outside the introitus(Procidentia).

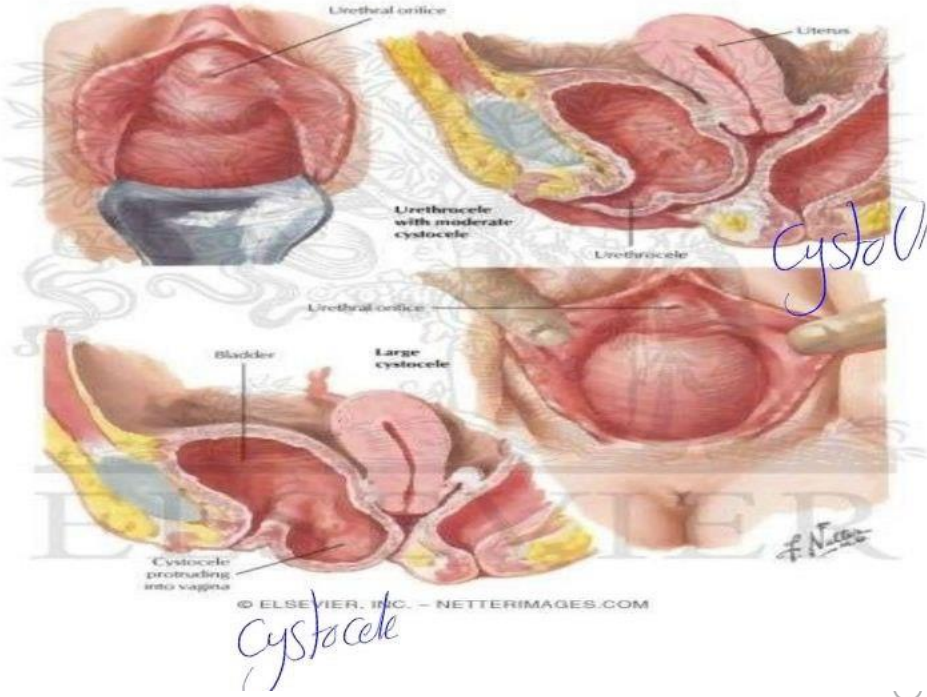
III- Combined type.

Support:

1- Mechanical: uterine axis (antiverted antiflexed)
2- Delaney's level of support
   - **Suspension**: at level of cervix and lower part of uterus and upper part of vagina suspended by uterosacral ligament and carinal ligament (parametrium) (in hysterectomy, we cut these ligaments, so upper vagina liable to prolapse)
   - **Attachment**: at level of middle part of vagina (detachment of endopelvic fascia from pelvic side wall, so middle vagina liable to prolapse involving bladder, rectum)
   - **Fusion**: distal vagina fused anteriorly with urethra and posteriorly with perineum and laterally with levator ani (perineal laxity)

Rectocele





Cystocele

Cystourethrocele

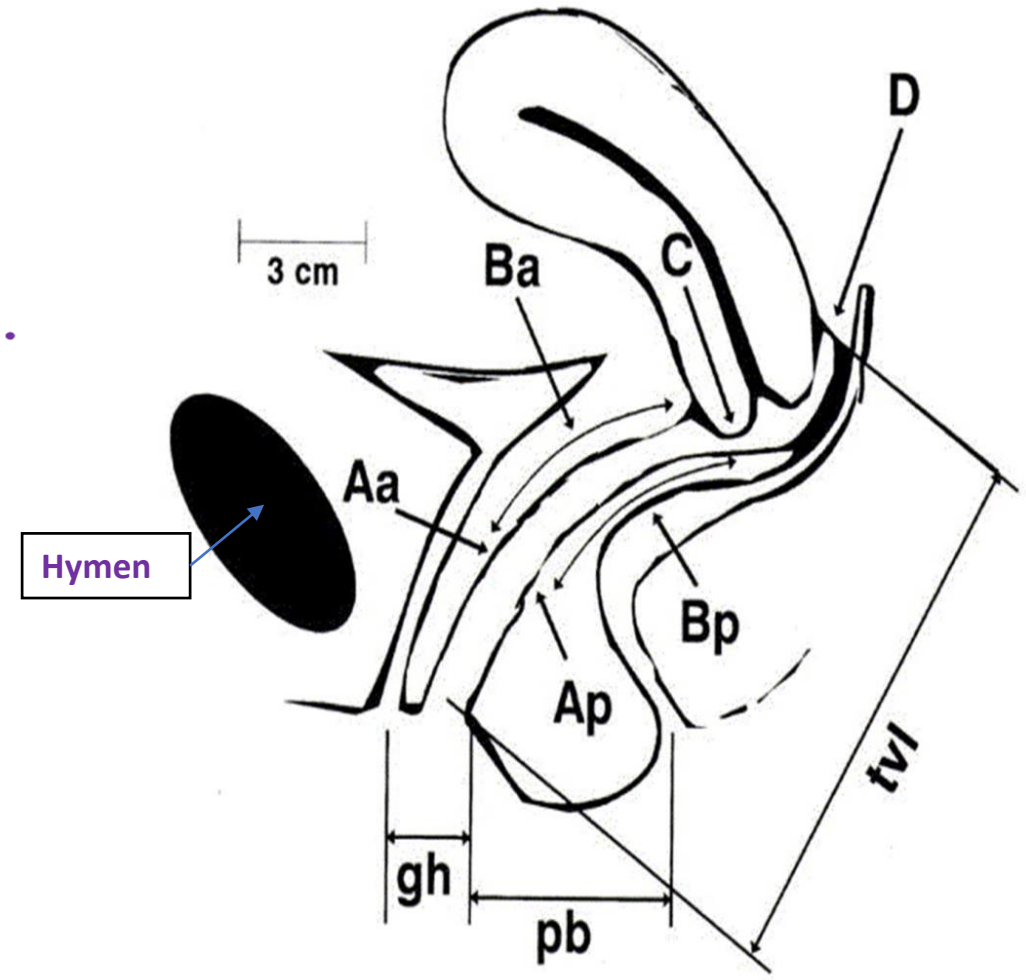
مهم فهمه ICS classifications Quantitative pop (pop-q)

- The topography of vagina is described using six points (2 on anterior vaginal wall, 2 on the superior vagina, 2 on the posterior vaginal wall). In addition to other 3 points

anterior wall **Aa**	anterior wall **Ba**	cervix or cuff **C**
genital hiatus **gh**	perineal body **pb**	total vaginal length **tvl**
posterior wall **Ap**	posterior wall **Bp**	posterior fornix **D**

Cont.

→ Aa : anterior vaginal wall , 3cm above hymen
→ Ba : anterior wall , most distal point , mid way between Aa and C
3cm from Aa , 6cm from Hymen
→ Ap : posterior vaginal wall , at level of Aa .
→ Bp : posterior wall , 6cm above hymen , parallel with Ba .
→ C : anterior lip of cervix , Cuff in case of hysterectomy .
→ D. Posterior vaginal fornix .
→ Genital Hiatus : mid point of external orifice and posterior vaginal fourchette .
→ Perineal body 3-4cm : between posterior fourchette to mid point of external anal sphincter
→ TVL : depth of vaginal canal .



Managment

❖**The choice of treatment depends on:**

- The patient wish.
- Age of patient and parity.
- Preservation of sexual function.
- The treatment is conservative and/or surgical.

1. Conservative mx :

- correct obesity, chronic cough and constipation.
- If decubitus ulcer is found, then local estrogen(improve healing) for 7 days should be used. with return the prolapse inward .
- Pelvic floor muscle exercises. Kegel Exercises
- Pessary

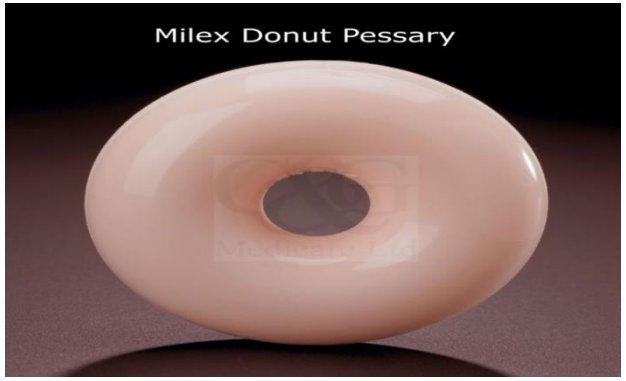
❖**Pessary: cornerstone of conservative**

❖Support Pessary: Ring Pessary: (A silicon rubber-based ring pessaries are most popular for conservative therapy)

can be retained during intercourse

With urine incontinence , Knob

Space- Filling Pessary: Donut, Gellhorn, Should be removed during intercourse



For 3,4 stages

Cont.

❖**Indications of pessaries: in case of apical prolapse**

- As a therapeutic test.
- Medically unfit for surgery (heart disease , COPD , uncontrolled DM) or refused surgery.
- During and after pregnancy. specially 1st trimester to 20-22 weeks
- While awaiting for surgery.

Surgical Management

- **Cystourethrocele**: Anterior colporrhaphy operation.
- **Rectocele:** Posterior colpo-perinorrhaphy
- **Enterocele:** Posterior colporrhaphy with excision of the peritoneal sac.
- **Uterine Prolapse:**
- Vaginal hysterectomy: in elderly patients and those who completed the family or with other uterine or cervical pathology. Adequate vault support of the utero-sacral ligement or the sacrospinous ligament (SSL fixation) is needed.

Surgical Management (Uterine Sparing)

- ❖**Manchester operation**: amputation of the cervix and create new vaginal canal
- complications : Cervical incompetence (2nd trimester miscarriage , P-PROM) , so she needs cerclage.
- ❖**Sacrohysteropexy:** this is an abdominal operation. It involves attachment of a synthetic mesh from the uterocervical junction (isthmus) to the anterior longitudinal ligament of the sacrum.
- ❖**Trans-vaginal mesh (TVM):**Meshes use in inactive sexually old female , cause in active lady the cause vaginal erosion and infection bleeding and discharge

Anterior wall

Apical and anterior

Elevate-A

Cont.

- **Vault prolapse:**
- most used Sacrocolpopexy: The vaginal vault (upper part of vagina) is attached to the sacrum by synthetic mesh.
- Sling operation: The vaginal vault is slinged to the anterior abdominal wall by two strips of anterior rectus sheath.
- **Vaginal procedures:**
- Sacrospinous ligament fixation (SSLF), Uterosacral ligament suspension, ileococcygeous suspension, Vaginal mesh kits, most used

Prolapse type	Surgical Treatment	
Cystourethrocele	**Anterior colporrhaphy operation**	
Rectocele	**Posterior colpoperineorrhaphy**	
Enterocele	**Posterior colporrhaphy with excision of the peritoneal sac**	
Uterine Prolapse	**Vaginal hysterectomy**	• Elderly patients and those who completed the family or with other uterine or cervical pathology • Adequate vault support of the utero-sacral ligament or the sacrospinous ligament (SSL fixation) is needed
	Uterine sparing	**Manchester operation**: amputation of the cervix, bringing of the cardinal ligaments and uterosacral ligaments anterior to the lower uterine segment followed by vaginal repair • Used in young aged women who wants to preserve the uterus , In stage 3 Prolapse (Cervix is outside the introitus) • Complicated by Cervical weakness or Stenosis (Can result in 2nd trimester miscarriage so they need cervical cerclage)
		Sacrohysteropexy: this is an abdominal operation. It involves attachment of a synthetic mesh from the uterocervical junction (isthmus) to the anterior longitudinal ligament of the sacrum • Used in young aged women who wants to preserve the uterus , In stage 4 Prolapse (Procidentia)
		Trans-vaginal mesh (TVM): Mesh is used in sexually inactive or old women
Vault prolapse	Abdominal approach (Hysterectomized women)	**Sacrocolpopexy**: The vaginal vault is attached to the sacrum by synthetic mesh
		Sling operation: The vaginal vault is slinged to the anterior abdominal wall by two strips of anterior rectus sheath
	Vaginal procedures (Non-Hysterectomized women)	• **Sacrospinous ligament fixation (SSLF)**: Most commonly used. • **Vaginal mesh kits (Elevate A)**: Most commonly used. • **Uterosacral ligament suspension** • **Ileococcygeous suspension**

Station 1

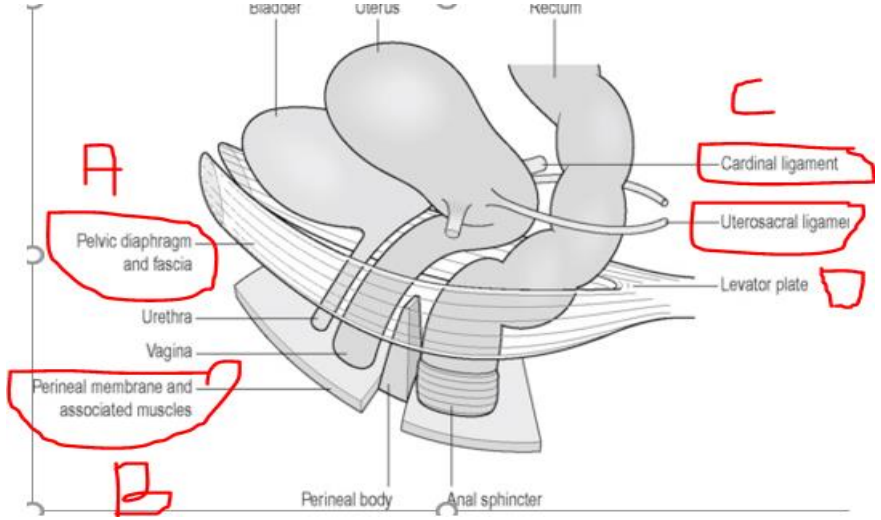
- **After the treatment of this prolapse what is the type of prolapse that you expect the patient to come with ?**
  - Vault prolapse
    - From the shape of the prolapse (loss of rouge) this is an elderly patient. Thus, most likely undergoing hysterectomy
- **If she was able to reduce it what are the findings on**
  A. **Cystometry**: Stress incontinence
  B. **Uroflowmetry**: increased volume and rate of urine flow, approaching the normal curve when the patient reduce the prolapse !?

Station Cont.

- **after the treatment of this prolapse what is the type of prolapse that you expect the patient to come with?**
  - Vault prolapse, due to complication of hysterectomy.

- **according to Delancy's levels of support at what level the defect is ?**
  - Suspention : Parametrium (cardinal ligament (transverse cervical ligament) and Uterosacral ligament defect)

Station 2



A

+2 Aa	+5 Ba	+9 C
4.5 gh	1 pb	8 tvl
+2 Ap	+5 Bp	—

B

+2 Aa	+5 Ba	−6 C
4.5 gh	1 pb	8 tvl
−3 Ap	−6 Bp	—

C

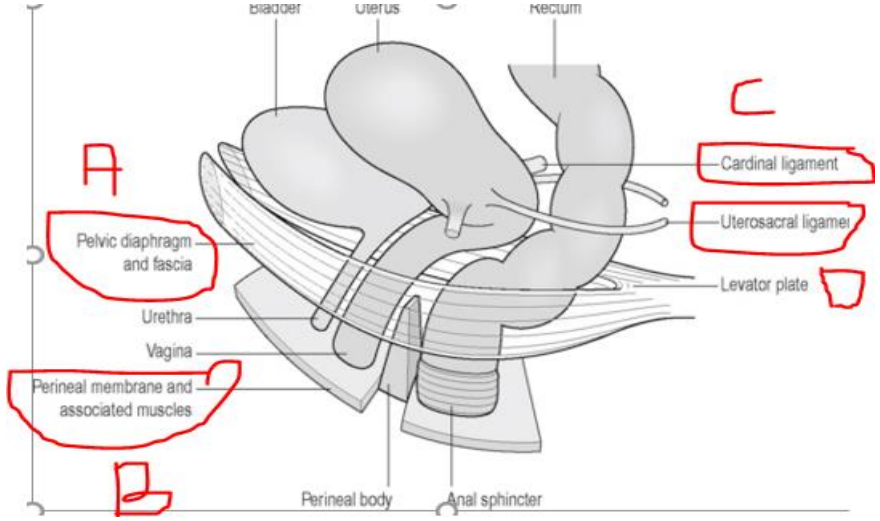
❖**In picture A write what represent a,b,c,d**?

- A- pelvic diaphragm and fascia , B- perineal membrane and associated muscle C- Cardinal ligament , D- uterosacral ligament

❖**what type of prolapse patient B suffer from?**

- Vault, apical prolapse ,and Hysterectomy done with Urinary and GI symptoms

Station Cont.



+2 Aa	+5 Ba	+9 C
4.5 gh	1 pb	8 tvl
+2 Ap	+5 Bp	—

+2 Aa	+5 Ba	−6 C
4.5 gh	1 pb	8 tvl
−3 Ap	−6 Bp	—

A B C

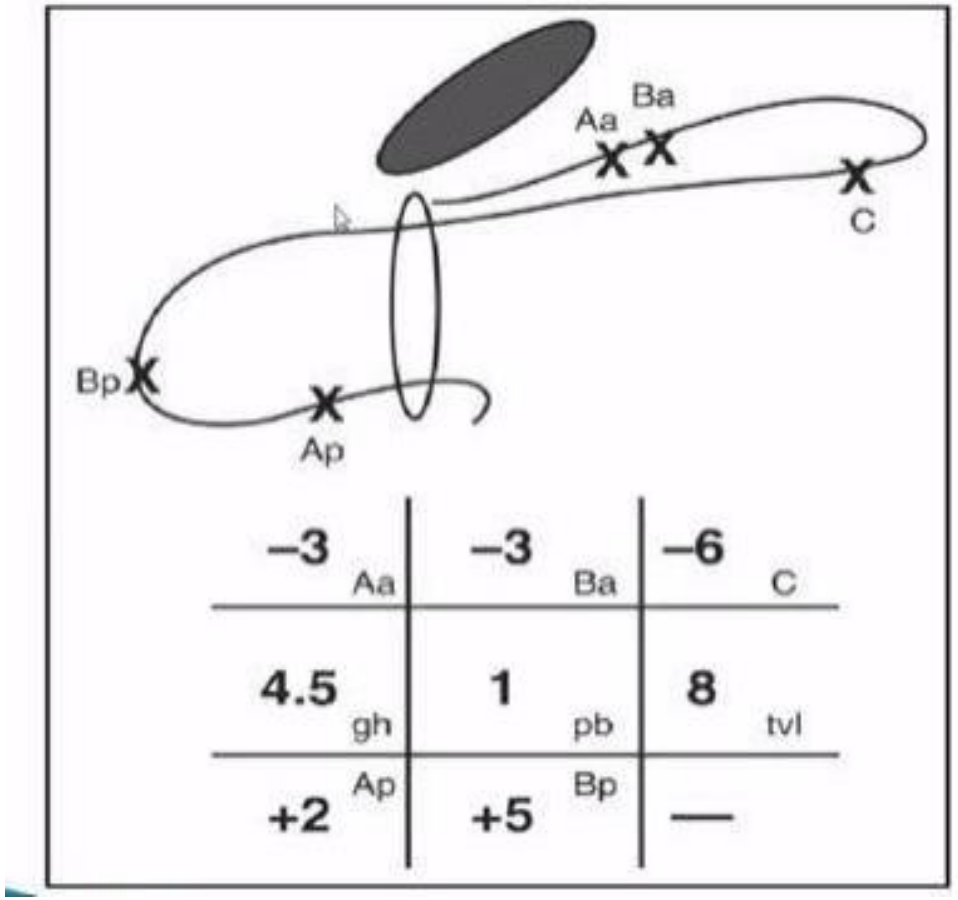
- **when patient C reduce the mass back to the vagina then start voiding , what we call that?** Splinting

- **patient B did hysterectomy and she is diabetic (uncontrolled) what is your management?** First thing she has to control her dm to be fit for surgery then , the surgery will be Sacrocolpopexy , Sacrospinous ligament fixation (SSLF), Uteroscaral ligament suspension, ileococcygeous suspension, Vaginal mesh kits

Station 3

❖**regarding this photo choose the correct answer :**

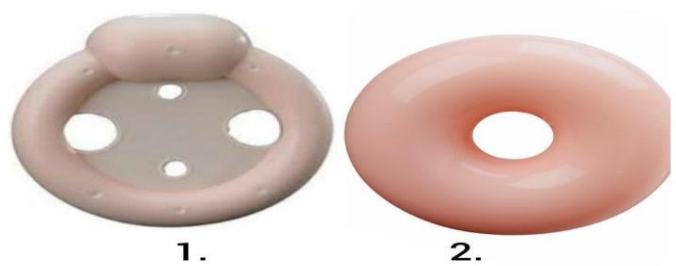
- It is a posterior wall prolapse with GI symptoms
- the patient is definitely had a total hysterectomy before .



Station 4

❖**What is the name of these two devices ?**

1. Support Pessary: Ring Pessary
2. Space- Filling Pessary: Donut



❖**Write 3 indications**

1. As a therapeutic test.
2. Medically unfit for surgery or refused surgery.
3. During and after pregnancy (Prolapse can occur during pregnancy from 1st trimester until 22 weeks of gestation).
4. While waiting for surgery.

❖**What the advantages of type A over type B**

- Easy to insert, can be inserted by patient herself
- Can have intercourse during use it

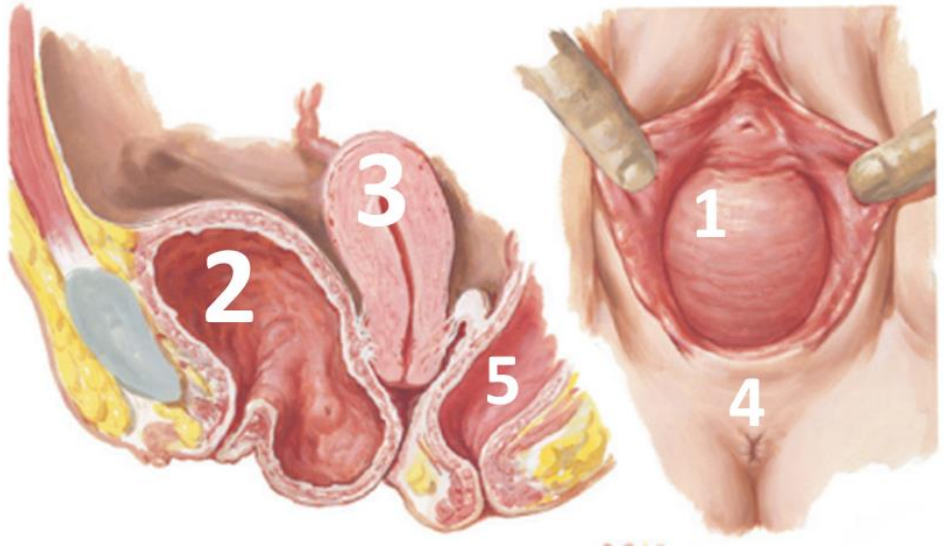
❖**Which one do you choose for 70-year-old female complaining of prolapse ?**

- (2) Donut

Station 5

❖What are the labeled structure ?

1. Cystocele !?
2. Bladder
3. Uterus
4. Peroneal body
5. Rectum

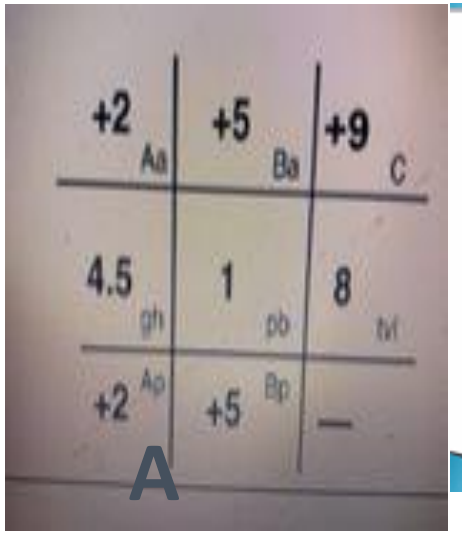


❖what are the symptoms ?

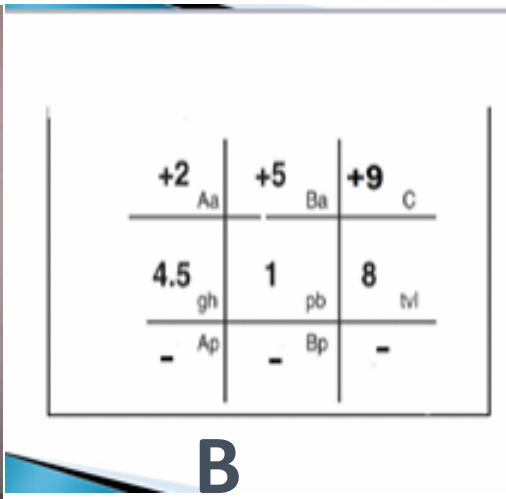
1. Feeling of pelvic heaviness or pelvic pressure
2. Lump protruding from the vagina
3. Lower abdominal and back pain
4. Frequency and Urgency
5. Stress incontinence

Station Cont.

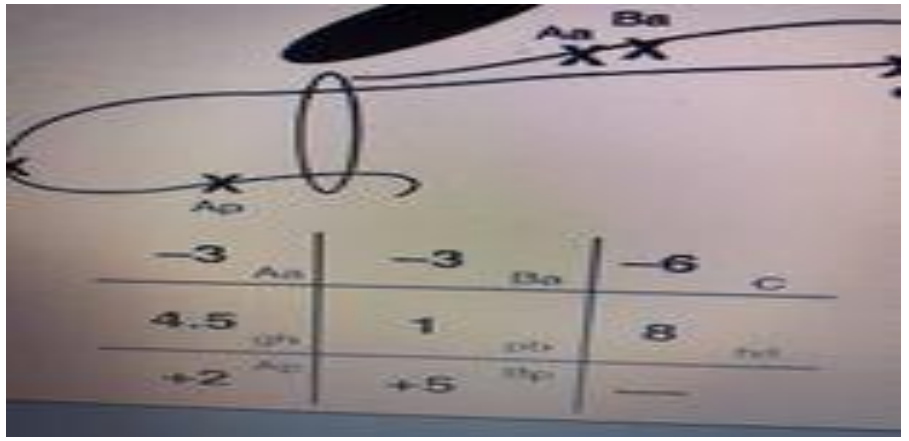
- **which pop-q describes patient A ?** (anterior wall prolapse) , none of the pic regarded as Anterior vaginal wall prolapse
- **what is the treatment ?**
  - anterior colporrhaphy
- **what symptoms according to pop-q pic C?**
  - GI symptoms :incomplete bowel emptying, constipation.
  - Total hysterectomy was done



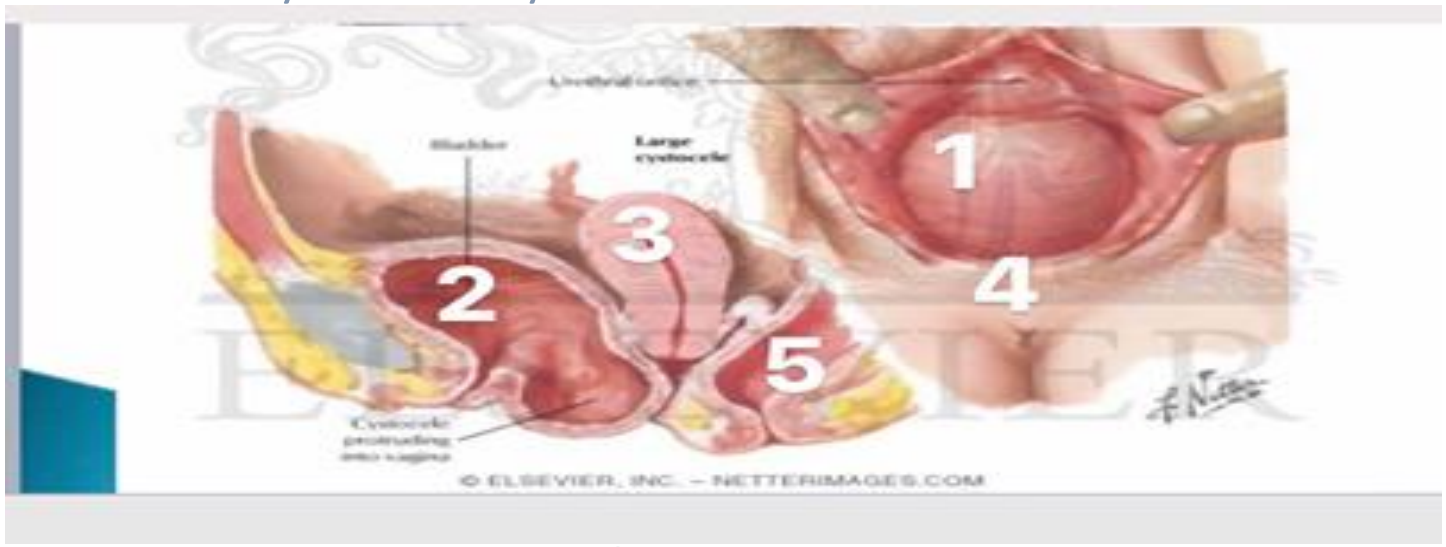
A



B



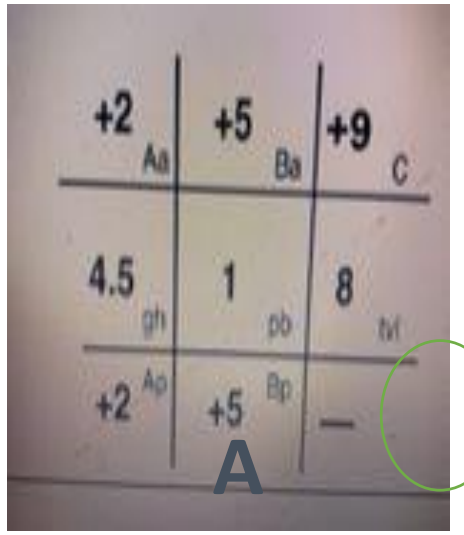
C



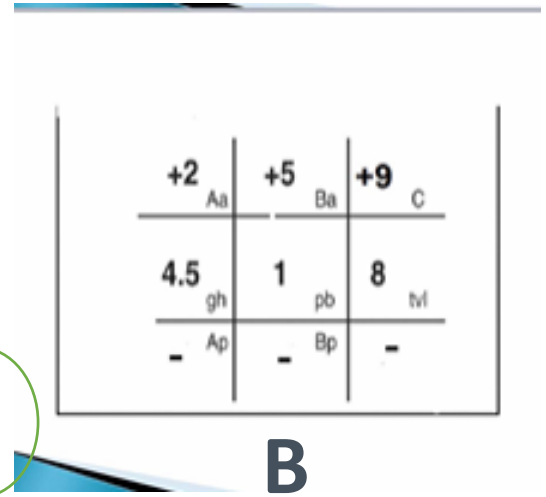
Patient A

Station Cont.

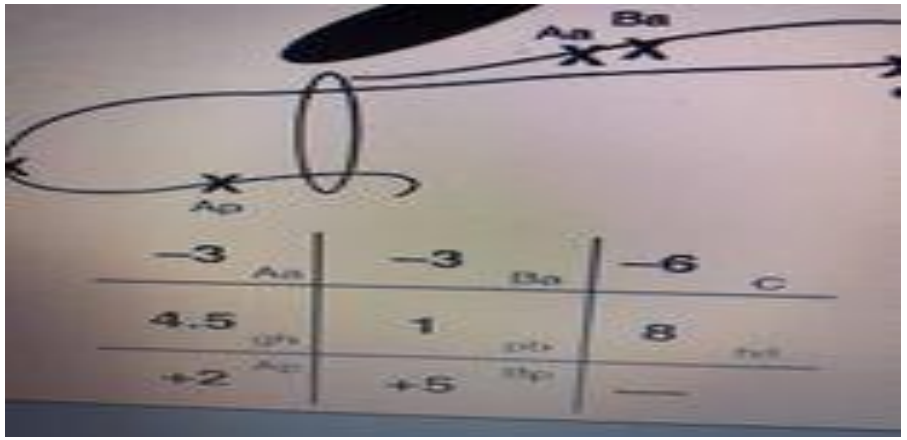
- **what is the treatment for patient pop-q A if she is 60 years (in pop-q it was procedentia) ?**
  - **Vaginal hysterectomy:** in elderly patients and those who completed the family or with other uterine or cervical pathology. Adequate vault support of the utero-sacral ligement or the sacrospinous ligament (SSL fixation) is needed.
  - if decubitus ulcer is found then local estrogen (improve the healing) for 7 days should be used .



A



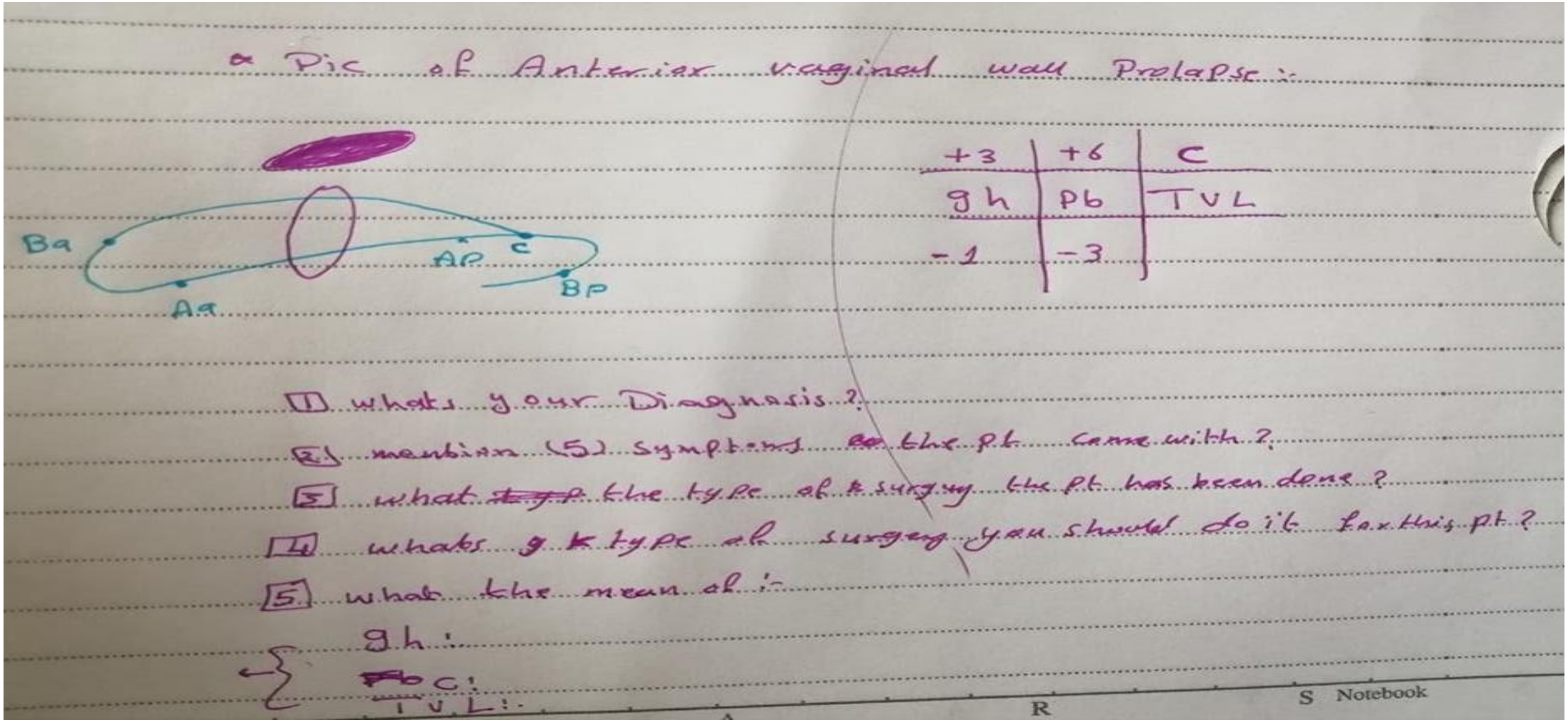
B



C

Note : الصور بالنسبة للسؤال غير متطابقين لان المريضة مش شايلة الرحم

Station 6


a Pic of Anterior vaginal wall Prolapse :-
Ba
Aa
Ap
C
Bp
+3 | +6 | C
gh | Pb | TVL
-1 | -3
1 whats your Diagnosis ?
2 mention (5) symptoms the pt came with ?
3 what the type of surgery the pt has been done ?
4 whats g & type of surgery you should do it for this pt ?
5 what the mean of :-
gh :
Pb :
TVL :
R
S Notebook

Station Cont.

1 - Anterior vaginal wall prolapse

2 - Urinary frequency, urgency, stress incontinence) in mild cases, voiding difficulty, urinary tract infections , obstruction of urethra, incomplete bladder emptying and high residual volume –in grade 3-4

3 - Hystrectomy

4 - Anterior colporrhaphy

5 :

- Gh: (Genital hiatus)Mid point of external urethral orifice and posterior vagainal forchetee
- C: Anteror lip of cevix ,cuff in case of hysterectomy(cervix)
- TVL: the total distance between posterior fornix and gh. measured at rest (depth of vagainal canal)

Station 7

What are these points

A: myometrium

B: endometrium with unseparated placenta

2. **The diagnosis and most common cause of this condition ?**

Uterine inversion caused by uncontrolled cord traction

3. **What are the symptoms of patient ?**

-severe vaginal bleeding -sever abdominal pain

4. **What you find in examination ?**

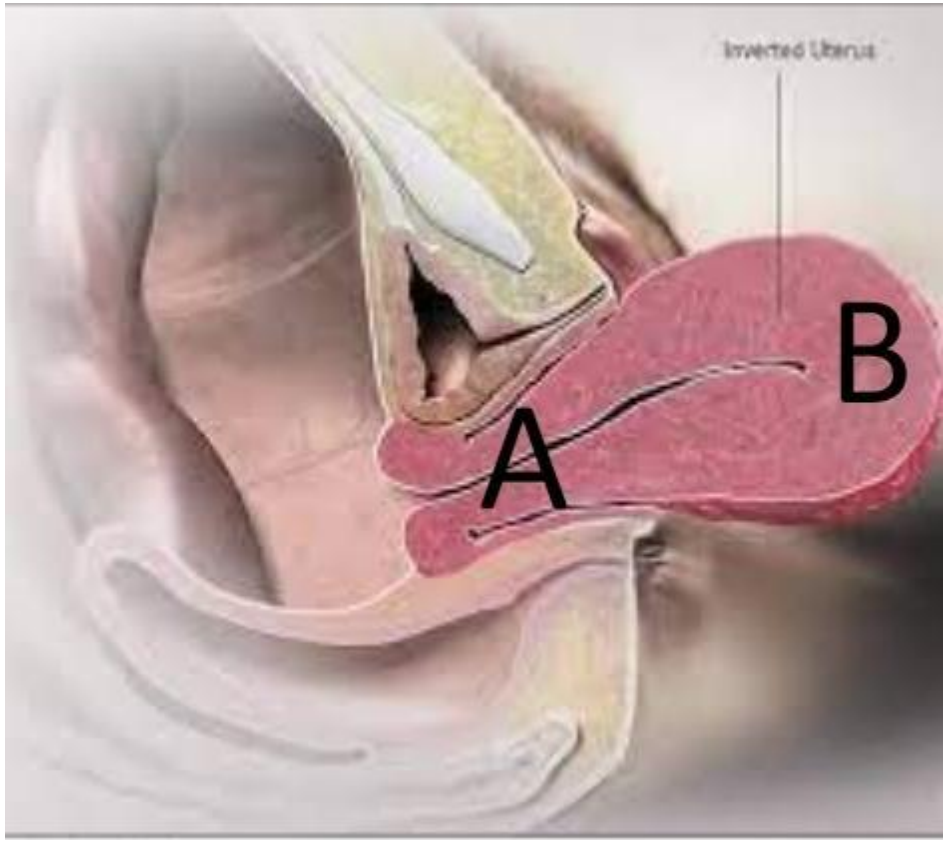
-hypotension - tachycardia

-absence of uterine fundus in abdomen

-smooth round uterus outside vagina

5. **Management ?**

Resuscitate the patient and immediately bimanual return of uterus



Station8

Q4)a 70 years old female patient complaining of mass protrusion from her vagina with cytometry image:

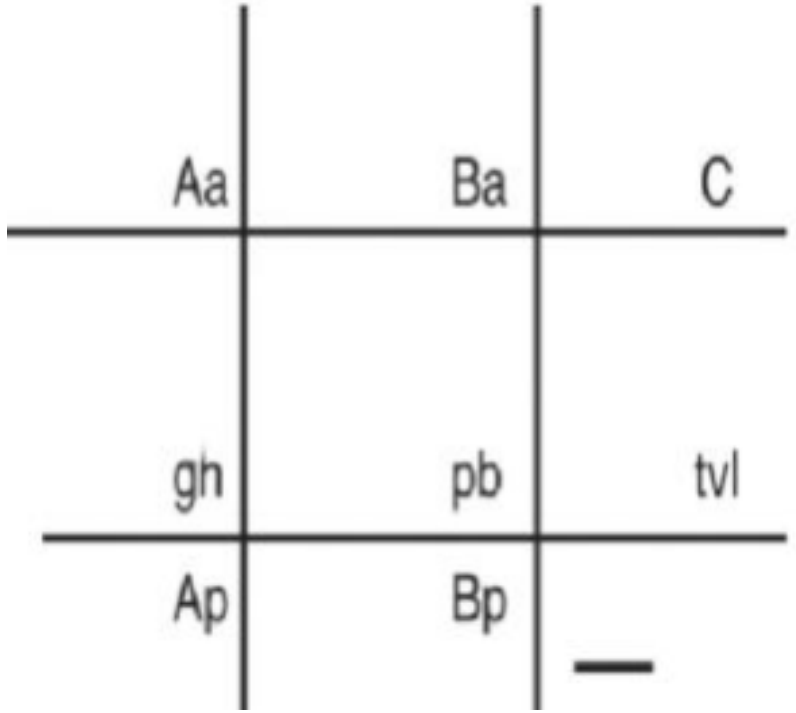
a- what are the findings in cystometry?

b-what is the probable diagnosis and what the cause of it

c-what is the pelvic floor problem in this patient?

d- give other symptoms the patient may complain

e) fill this table



Antepartum Hemorrhage

Definition and Causes

❖ **Ante-partum hemorrhage (APH):**

- Any bleeding from the **birth canal** (not from urethra or anal canal) occurring after the 24th week of gestation (some authors define this as the 20th week) and until the second stage of labor is complete (until fetus delivery).

❖ **Causes of APH :**

1. Placental abruption (30%)
2. Placenta Previa (20%) , can present as post-coital bleeding.
3. Uterine rupture (rare)
4. Vasa Previa (rare)
5. Cervical and vaginal pathologies :
   - Ectropion, polyps, tumors Mild bleeding ,spotting , post coital , can be before the age of viability.

❖ **Show** is the term used to describe the small amount of blood with mucus discharge that may precede the onset of labor by as much as 72 hours.

Placental Abruption

- Bleeding at the decidual – placental interface that causes premature separation (partial or complete) of a **normally situated placenta** from the uterine wall after 24 wks of gestation and prior to the delivery of the fetus , resulting in hemorrhage.
- A small proportion of all abruptions are related to sudden mechanical events, such as **blunt abdominal trauma** or **rapid uterine decompression**, which cause shearing of the inelastic placenta due to sudden stretching or contraction of the underlying uterine wall.
- **Suboptimal trophoblastic implantation** may also explain the increased risk of abruption among women with a prior cesarean, uterine anomalies (bicornuate uterus), uterine synechiae and leiomyoma.

Major Risk Factors

1. **Previous abruption** : **the most important risk factor.** The risk of recurrence has been reported to be 5-15 % . After two consecutive abruptions, the risk of a third rises to 20-25 %.
2. **Hypertension** : 5 fold increased risk , **THE MOST COMMON**
3. PROM
4. Chorioamnionitis
5. Abdominal trauma/accidents : observe for 24 hrs then discharge
6. Cocaine abuse
7. Polyhydramnios
8. Smoking during pregnancy : 2.5-fold increased risk
9. Maternal age (advancing age)
10. Parity
11. Multi-fetal gestation.
12. Thrombophilias : history of DVT ,congenital (factor V leaden , factor II prothrombinogen mutation) , acquired (antiphospholipid syndrome)
13. Uterine anomalies .

Station 1

❖**A 30 year old pregnant female in 34 wks of gestation came to the ER with abdominal pain radiating to back with minimal vaginal bleeding** .

1. **What is the most common cause for her condition ?**
   - Antepartum hemorrhage due to placental abruption.
2. **What is the maternal <u>obstetric</u> complication in a such case ?**
   - Emergency cesarean delivery for fetal or maternal indications.
   - Other maternal complications : excessive blood loss and DIC generally necessitate blood transfusion and can lead to hypovolemic shock, renal failure, adult respiratory distress syndrome, multi-organ failure, peri-partum hysterectomy and, rarely, death .

Station 1 Cont.

3. What is the appropriate management in a stable case ?

- **Inpatient monitoring** until the bleeding has subsided for at least 48 hours, fetal heart rate tracings and ultrasound examinations are reassuring, and the patient is asymptomatic. At that point, discharge may be considered. **Importantly,** the patient should be counseled to return immediately should she experience further bleeding, contractions, reduced fetal movement, or abdominal pain.
- Single course of antenatal **corticosteroids.**
- Serial assessment of **fetal well being tests**.
- **Anti-D** Ig for Rh(D)-negative women.
- Schedule **delivery at 37-38 weeks.**

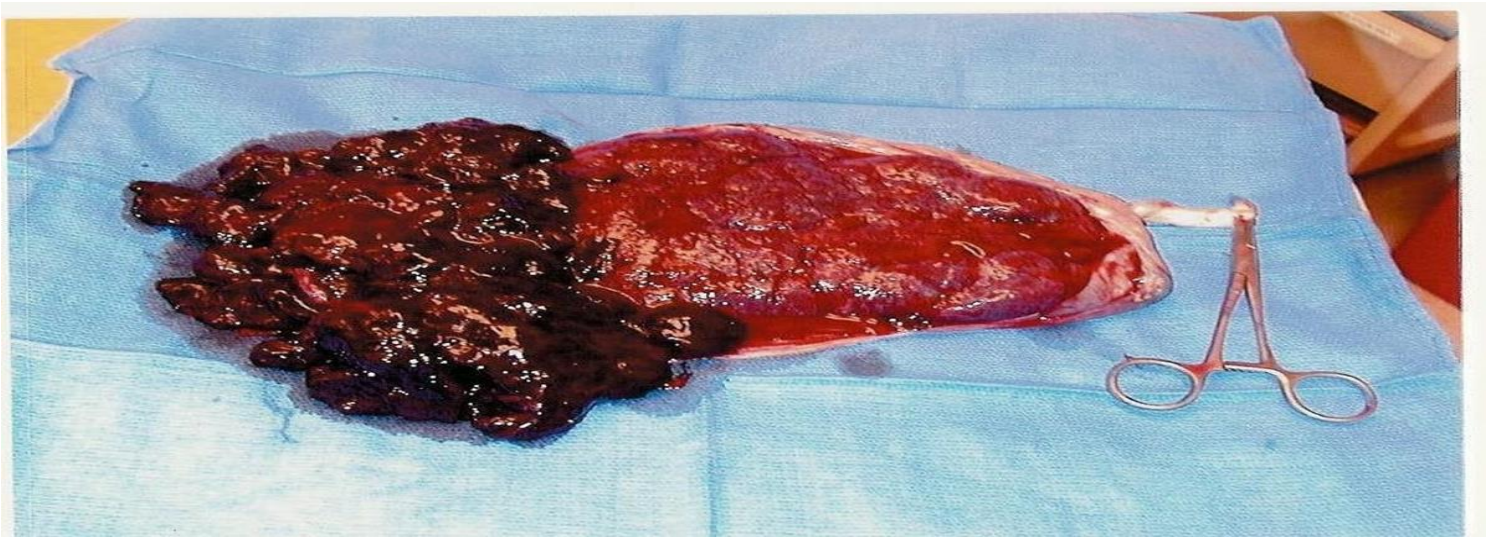
4. What do we call the condition when we do cesarean section to a case presented like this (extravasation)?

- Blood extravasated into the myometrium (Couvelaire uterus)

Station 2

❖ What causes maternal mortality in this case ?

- Excessive blood loss and DIC can lead to hypovolemic shock, **acute renal failure** and multiple organ failure.



Station 3

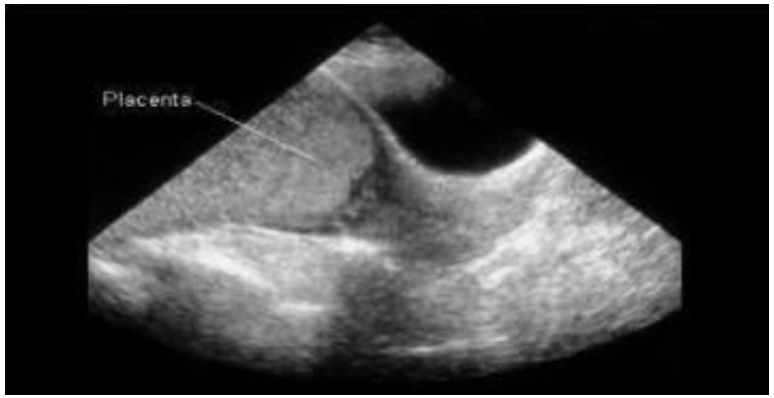
- 34 wks pregnant woman with road traffic accident is presented to you in ER with vaginal bleeding? Give **relevant points** in history ,physical examination ,investigation ,management ,complications

(antepartum hemorrhage >> placental abruption)

APH

Placenta Previa Station 1

- A multiparpus Pt. with a previous history of CS came to you complaining of bleeding after 32 wks of gestation , an ultrasound was done
  1. **What is the diagnosis ?**
     - Placenta previa
  2. **What is the treatment ?** (next slide)
  3. **What are the signs you look for on abdominal examination ?**
     - Malpresentation (as an associated condition)
     - Soft lax Abdomen
     - Uterine contractions (10 - 20% of cases)
     - Reduced SFH (placenta previa might be complicated with PROM)



HB	12
PCV	37%
PLATELETS	85*10^9/L
ALT	98
AST	120
Urine analysis	+2 protein
Na+	140
LDH	800
Creatinine	.9

Station 1 Cont.

4. What should you consider during CS ?

- Vertical incision may be considered in case of anterior location of placenta.
- Placenta previa increases the risk of intrapartum hemorrhage. For this reason, women with placenta previa are more likely to **receive blood transfusions** (make sure you have prepared suitable blood beforehand) and undergo **postpartum hysterectomy** (obtain a written consent form from the Pt. and her husband before delivery), **uterine/iliac artery ligation** or **embolization of pelvic vessels** to control bleeding. The risk is particularly high in those with previa-accreta.
- **Maternal death** is possible (state all the complications clearly in the consent form)
- Consider also the complications of anesthesia and CS in general

Management of **Bleeding** Placenta Previa

❖initial interventions for women with bleeding placenta previa : **(admission to labor room)**

A. Stabilization of the mother :

1. I.V fluid - Secure intravenous access with at least one, and preferably two, wide-bore intravenous lines.
2. Closely monitor the mother's hemodynamic status (heart rate, blood pressure, urine output). Urine output should be maintained at above 30 mL/hour and monitored with a Foley catheter.
3. Keep maternal oxygen saturation >95 percent and keep the patient warm.
4. Draw blood for a complete blood count, blood type and Rh (preparation of 4 units PRBCs), and coagulation studies.
5. Call for help.
6. Notify the anesthesia team. Anesthesia-related issues in these patients include management of hemodynamic instability, technical issues related to bleeding diathesis, and the potential need for emergency cesarean delivery.
7. Notify the blood bank so blood replacement products (red blood cells, fresh frozen plasma, cryoprecipitate, platelets) will be readily available, if needed.

B. Immediately initiate continuous fetal monitoring.

- **Severe bleeding and /or non reassuring FHR**
  - Emergency cesarean section after stabilizing the patient .
  - **Anesthesia** : General anesthesia is typically administered for emergency cesarean delivery, especially in hemodynamically unstable women or if the fetal status is non-reassuring. However, regional anesthesia is an acceptable choice in hemodynamically stable women with reassuring fetal heart rate tracings.

- **Mild bleeding + Reassuring FHR + G.A < 37 weeks**
  - Conservative management.

Conservative Management

1. Symptomatic women often remain hospitalized from their initial bleeding episode until delivery.
2. Correction of anemia.
3. 4 unites of PRBCs should be available.
4. Anti-D immune globulin for Rh(D)-negative women.
5. Schedule cesarean section at 37 weeks.
6. Delivery is indicated emergently if any of the following occur:
   - Any vaginal bleeding with a non-reassuring fetal heart rate tracing unresponsive to resuscitative measures.
   - Life-threatening refractory maternal hemorrhage.
   - Labor.

Management of **Asymptomatic** Placenta Previa

- Follow-up transvaginal ultrasound examination :

A. **For pregnancies >16 weeks :**

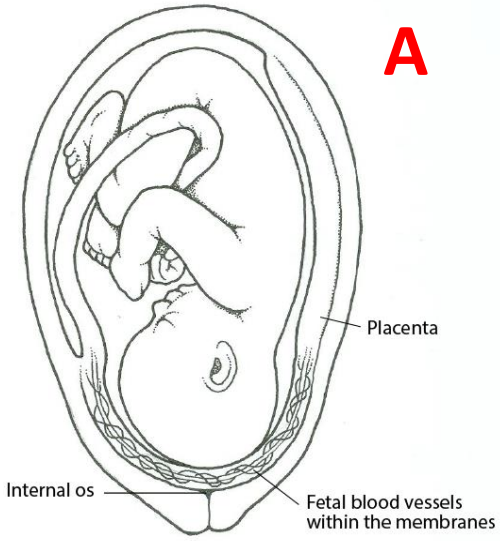
- If the placental edge is **≥ 2 cm** from the internal os, the placental location is reported as **normal** and follow-up ultrasound for placental location is not indicated.
- If the placental edge is **< 2 cm** from, or covering, the internal os : follow-up ultrasonography for placental location is performed at 32 weeks of gestation.

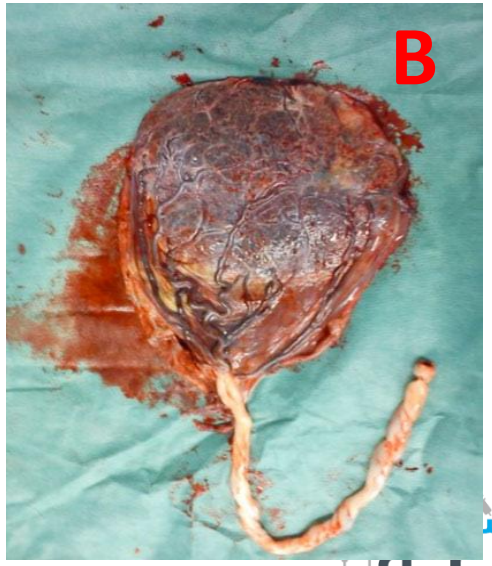
B. **At 32 weeks follow up ultrasound :**

- If the placental edge is **≥2 cm** from the internal os, the placental location is reported as **normal** and follow-up ultrasound for placental location is not indicated. And these patients can be delivered vaginally safely.
- If the placental edge is still **<2 cm** from the internal os or covering the cervical os,
  1. Admission to hospital for observation till delivery. (? Outpatient)
  2. Avoid sexual intercourse.
  3. Single course of antenatal corticosteroid should be administered to pregnancies at 26 to 35 weeks of gestation.
  4. Follow-up TVS is performed at 36 weeks. if placenta previa persists, schedule cesarean section at 37 weeks of gestation according to NICU .

Station 2

1. **What are A , B ?**
   A. Vasa previa.
   B. Velamentous umbilical cord.
2. **Most common clinical presentation with A ?**
   - Antepartum Hemorrhage.
3. **Antenatal diagnostic test for A ?**
   - Doppler velocimetry at 16 Weeks.
4. **Most important differential diagnosis should be excluded when you diagnosed A ?**
   - Cord presenting part





Station 2 Cont.

5. **In the absence of prenatal diagnosis , what is the presentation ?**
    - Vaginal bleeding that occurs upon rupture of membranes and is accompanied by fetal heart rate abnormalities : bradycardia or a sinusoidal pattern.
6. **Mode of delivery ?**
    - Cesarean section.

Station 3

- **GA is 33 wks , she is G3P2 (all by CS)**
  1. **What's your diagnosis ?**
     - Placenta previa
  2. **Mother is Rh –ve , Father is Rh +ve ,Hb 8.5, what essential lab test you must do ?**
     - Start by indirect coombs test , if positive measure the anti-D Ab titer.
  3. **What associated condition you must check?**
     - Morbidly adherent placenta (placenta accreta)
  4. **If the bleeding have stopped, and the patient is stable, what's your management ?** (Answered in prev. slides)

Station 3 Cont.

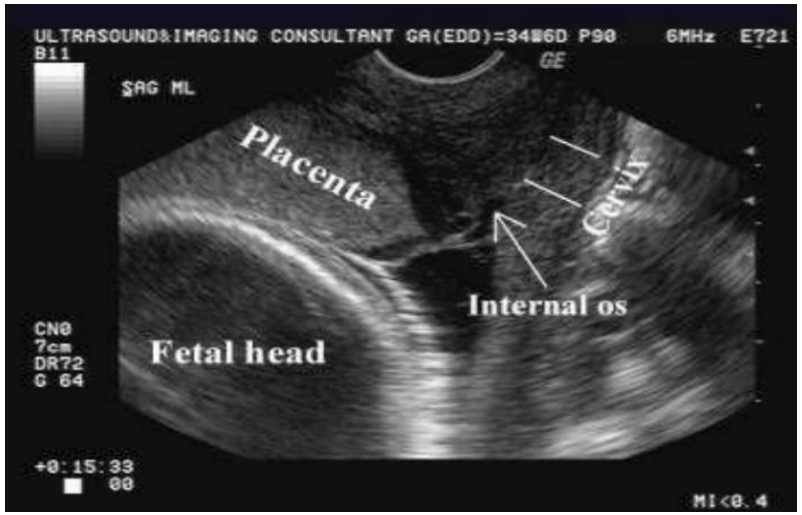
5. **What are the complications in this case?**
   - **Maternal** :
     - Increased risk of antepartum ,intrapartum , and postpartum hemorrhage (primary).
     - Women with placenta previa are more likely to receive blood transfusions and undergo postpartum hysterectomy, uterine/ iliac artery ligation, or embolization of pelvic vessels to control bleeding.
     - Maternal death
   - **Neonatal** :
     - The principal causes of neonatal morbidity and mortality are related to **preterm delivery (more than 2/3 may delivered prematurely)** , rather than anemia, hypoxia, or growth restriction.
6. **Patient refused admission what should you advise?**
   - Avoid sexual intercourse.
   - Visit the hospital if bleeding recurs.
   - Follow-up TVUS is performed at 36 weeks.
   - Single course of antenatal corticosteroids should be administered.

Station 4

- **Choose the correct statement**
  (Head / Placenta / Cervix where identified in the exam’s pic.)

A. Age isn't a risk factor for her condition.
B. Postpartum hemorrhage is an expected condition.
C. Painful vaginal bleeding is the usual presentation.
D. Elective CS should be scheduled at 39 weeks.

Station 5



❖ **G2P1 previous delivery by CS, her GA is 33w came to the clinic with vaginal spotting.**

1. what is the diagnosis ?

placenta previa

2. relevant points in hx.

-abdominal pain or contractions?

-about bleeding: color? does it occur at rest or activity?

-smoking?

3. If this is her first visit, what investigation you should ask for her?

TVUS ,CBC,blood group and cross match

cont. station 5

4.If she came after that with mild vaginal bleeding ,what is the manegment?

***If FHR is reassuring and her GA <37w we o conservative manegment**

-admission untill delivery

-stabilization if the mother

-correction f anemia,anti-D immune globulin if Rh(D)- negative mother

-continuous fetal monitoring

-single course antenatal corticosteroid

-follow up TVUS,and revia persist(CS at 37w)

***If FHR is non reassuring (emergancy CS)**

***If her GA >37 delivery by CS**

DR. Seham

Antepartum Fetal Surveillance

When does it start ?

Always after age of viability and usually after 28 weeks

❖Why is it preformed ?

To assess the risk of antenatal fetal death in high-risk pregnancies

❖What is the most affected system by complications ?

Neurological system

❖What is the general management of cases with high risk of antenatal fetal death ?

Early delivery (If the baby is preterm, considering the pros and cons, which is better? To be delivered premature or to stay in stressful intrauterine enviroment

Indications (Risk factors) of Surveillance

Maternal Conditions	Placental Conditions	Fetal Conditions	Miscellaneous
1. Hyperthyroidism 2. Cyanotic heart disease 3. Chronic renal disease 4. Diabetes 5. Symptomatic haemoglobinopathy	1. Antiphospholipid antibody syndrome 2. Systemic lupus erythematosus 3. Hypertensive disorders, including pregnancy-induced hypertension 4. Thrombophilia 5. Marked placental anomalies	1. Decreased fetal movement 2. Amniotic fluid abnormalities (Oligohydramnios, Polyhydramnios) 3. Intrauterine growth restriction 4. Post-term pregnancy 5. Alloimmunization 6. Macrosomia 7. Fetal anomalies or aneuploidy 8. Multiple gestation	1. In vitro fertilization pregnancy 2. Previous stillbirth 3. Prior neurologic injury 4. Previous recurrent abruption 5. Obesity

- **Available methods**:

o Fetal movement counting
o Non-Stress Test (NST)
o Contraction stress test (CST); Not used anymore
o Biophysical Profile (BPP)
o Modified Biophysical Profile
o Doppler Velocimetry

- **What is the order of the tests ?**

o Fetal movement counting → Non-Stress Test (NST) → Modified Biophysical Profile → Biophysical Profile (BPP) or Doppler Velocimetry
o Doppler Velocimetry is used if Modified Biophysical Profile is abnormal, and the fetus is extreme preterm (less than 28wks)

1. **Fetal movement count:**

❖**Interpretation**: Reassuring fetal kick count defined as

o Perception of at least 10 FMs during 12 hours of normal maternal activity.

o Perception of least 10 FMs over 2 hours when the mother is at rest.

1. **Non-Stress Test (NST) :**

Indications: High risk pregnancies, usually preformed after 32wks

❖Interpretation: two 2s & two 15s

o Reactive NST: ≥2 FHR accelerations in a 20-minute period, each acceleration reach a peak ≥15 bpm above the base line hear rate and last ≥15 seconds

o Non-Reactive NST: does not show such accelerations over a 40-minute period

3. Biophysical Profile :a noninvasive test that evaluates the risk of antenatal fetal death, usually performed after the 28th gestational week

❖Measured parameters: each parameter receives a score of either 0 (abnormal)

or 2 (normal) points (see table next slide).

o Ultrasound exam: Fetal movement, Fetal tone, Fetal breathing, Amniotic fluid volume; takes

30-minute to preform

o NST; usually already done and there is no need to be repeated

4. Modified Biophysical Profile: NST + Amniotic fluid index (AFI) only;

o If either the NST or the AFI is abnormal, a complete BPP or CST is performed.

o it is be as reliable predictor of long-term fetal well-being as the full-BPP

Amniotic fluid volume Assessment

Deepest Vertical Pocket (DVP)

o Description: refers to the vertical dimension of the largest pocket of amniotic fluid not containing umbilical cord or fetal extremities

o Can be used all through the pregnancy

o Interpretation: Normal: 2.1-8 cm, oligo: <2cm, poly: >8cm

❖Amniotic-Fluid Index

o Description: Calculated by first dividing the uterus into four quadrants using the Linea nigra for the right and left divisions and the umbilicus for the upper and lower quadrants. The sum of maximum vertical amniotic fluid pocket diameter in each quadrant not containing cord or fetal extremities is the AFI

o Used in singleton pregnancies 24 weeks or more

o Interpretation: Normal: 5-25cm, oligo: <5cm, poly: >25cm

Doppler Velocimetry

Uterine Artery	Umbilical Artery	Umbilical Vein	MCA	Ductus Venosus
–	Assess placental function		Assess brain perfusion	–
1. Preeclampsia 2. Assess risk of prematurity	1. IUGR 2. Placental insufficiency Umbilical artery change first later the umbilical vein change indicating a more severe case		1. Anemia 2. Rh isoimmunization	Indicates embedding death

❖Umbilical Vein

- Blood flow in the umbilical vein is continuous in normal pregnancies after 15 weeks of gestation.
- In pathological states, such as fetal growth restriction, flow in the umbilical vein may be pulsatile, which reflects cardiac dysfunction related to increased after-load.

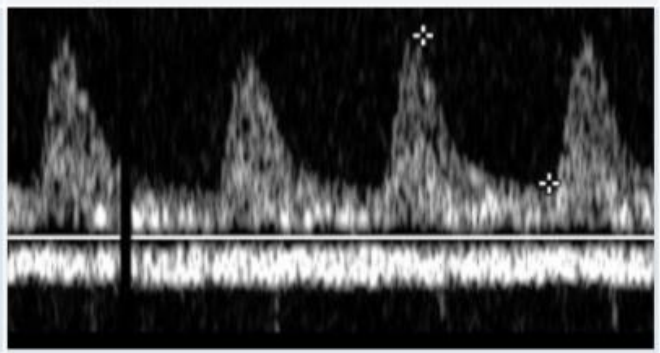
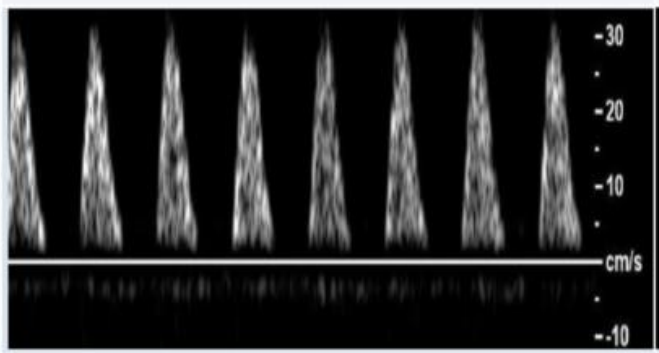
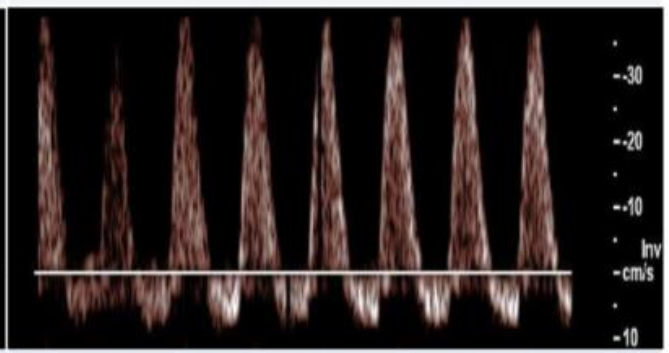
❖Middle cerebral artery

- In the compromised fetus, systemic blood flow is redistributed from the periphery to the brain this is called Brain-sparing effect.

❖Ductus Venosus

- The ductus venosus regulates oxygenated blood in the fetus and is resistant to alterations in flow except in the most severely growth restricted fetuses.

Assessment of the Umbilical Artery

	Elevated indices only	AEDV	REDV
BPP Frequency	Weekly	Twice weekly	Daily
Decision to Deliver	• Abnormal BPP • term • >36wks with no fetal growth	• Abnormal BPP • >34wks • Conversion to REDV	• Any BPP <10/10 • >32wks of dexamethasone give
			

Intrapartum fetal Surveillance

Antenatal factors that increase the risk of fetal compromise

1. Oligohydramnios or polyhydramnios
2. Multiple pregnancy
3. Antepartum haemorrhage
4. Previous caesarean section
5. Hypertension or pre-eclampsia
6. Diabetes
7. Prolonged pregnancy
8. Intrauterine growth restriction
9. Induction of labor with prostaglandin/oxytocin
10. Regional anesthesia
11. Maternal pyrexia: ≥ 38°C
12. Meconium or blood-stained liquor
13. Pre-term labor
14. Uterine hyperstimulation

Fetal Heart Rate Monitoring (FHR)

❖**Intermittent Auscultation**

o Indication: healthy women without risk factors

o Method: A baseline heart rate is assessed by listening and counting FHR between uterine contractions

o FHR is counted for 60 seconds. And is assessed at least every 30 minutes in the first stage of labor and every 15 minutes in the second stage.

o If abnormal, EFM is recommended

❖**Electronic fetal heart monitoring**

o Indication: all situations where there is a high risk of fetal hypoxia/acidosis, also when abnormalities are detected during intermittent fetal auscultation

o The electronic FHR monitor is a device with two components. One establishes the FHR, and the other measures uterine contractions

o CTG has been shown to decrease the occurrence of neonatal seizures.

o EFM may be performed with an external or internal monitor

Interpretation of electronic fetal monitoring

❖**Assessment of uterine contractions**

o Resting tone: The lowest intrauterine pressure between contractions

o Normal resting tone is 5-10 mmHg, but during labor it may rise to 10-15 mmHg

o Pressure during contractions rises to ~25-100 mmHg (varies with stage)

o A resting pressure above 20 mmHg causes decreased uterine perfusion

❖**Assessment of fetal heart rate**

o Baseline FHR is the approximate mean FHR rounded to 5bpm during a 10-minute segment

o Normal baseline rate is between 110 and 160 bpm

o Values between 100 and 110 bpm may occur in normal fetuses, especially in postdate pregnancies

o Tachycardia: A baseline value above 160 bpm lasting more than 10 minutes

o Bradycardia: A baseline value below 110 bpm lasting more than 10 minutes

Assessment of fetal heart rate

❖Baseline variability refers to the fluctuations in the baseline FHR

❖Evaluated as the average bandwidth amplitude of the signal in 1-minute segments

o Take 1 minute from the CTG without any acceleration or deceleration

o Subtract the highest value from the lowest value

❖Normal variability of 5–25 bpm

o Less than 5 bpm minimal

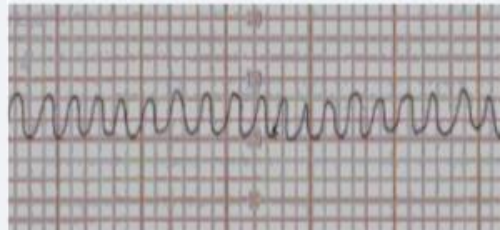
o 5 to 25 bpm moderate

o > 25 bpm marked

❖Hypoxia and acidosis, fetal sleep, medications, (e.g., narcotics, sedatives, b-blockers, betamethasone), prematurity, fetal tachycardia, and congenital anomalies decrease FHR variability

Assessment of fetal heart rate

	Tachycardia	Bradycardia
Definition	A baseline value above 160 bpm lasting more than 10 minutes	A baseline value below 110 bpm lasting more than 10 minutes
Causes	1. Maternal pyrexia (most common) 2. Fetal hypoxia. 3. Medications (beta-agonist drugs) 4. Fetal arrhythmias (SVT) 5. Fetal anemia	1. Sudden drop in oxygenation, such as occurs with placental abruption 2. Decrease or cessation in umbilical blood flow, such as occurs with a prolapsed cord or uterine rupture 3. Maternal hypothermia, maternal hypotension, administration of beta-blockers, and fetal arrhythmias such as atrioventricular block are other possible causes
Management	1. Left lateral position 2. IV hydration 3. Oxygen 4. Stop oxytocin	1. Left lateral position 2. Increase IV hydration 3. Oxygen 4. Vaginal exam

	Early Decelerations	Variable Decelerations	Late Decelerations	Prolonged Decelerations	Sinusoidal Decelerations
Cause	Caused by fetal head compression and do not indicate fetal hypoxia/acidosis	Caused by chemoreceptor stimulation secondary to cord compression	Found in association with uteroplacental insufficiency	They indicate hypoxia	It occurs in association with severe fetal anemia
Notes	• Gradual decrease in the FHR and return to baseline associated with uterine contraction • Uterine contraction → head compression → vagal stimulation → deceleration • The onset, nadir, and recovery of the decelerations coincide with the beginning, peak, and ending of the contraction	• Most common type • It is unrelated to uterine contractions, abrupt onset, recovery stage is seen (increase in FHR above the basal FHR after the end pf the deceleration) 	**Management** • Maternal left lateral position • Correct maternal hypotension with IV fluids • Stop oxytocin infusion • Administer O2 by mask • Vaginal examination • If persistent perform fetal scalp pH	• Usually lasting more than 3 minutes. • If associated with reduced variability, they indicate acute fetal hypoxia/acidosis and require emergent intervention.	**Severe fetal anemia** • anti-D alloimmunization • fetal-maternal hemorrhage • ruptured vasa previa A regular, smooth, undulating signal, resembling a sine wave 

Fetal blood sampling for pH and lactate

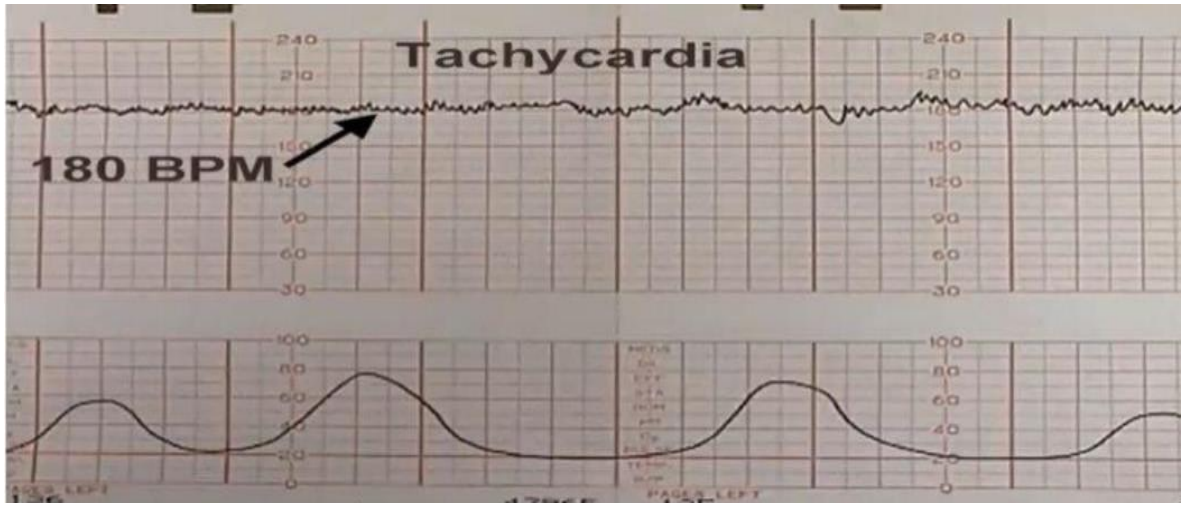
- FBS may be used in cases of abnormal CTG.
- A vaginal examination needs to be performed prior to the procedure to assess the nature and position of the presenting part.
- **Contraindications**: maternal infection, women seropositive to hepatitis B, C, or to HIV, suspected fetal blood disorders, uncertainty about the presenting part, preterm fetus.
- CTG + FBS results in a reduction in cesarean deliveries when compared with CTG alone

Interpretation	pH	Lactate (mmol/L)
Normal	≥ 7.25	< 4.2
Repeat in 30 mins	7.21 – 7.24	4.2 – 4.8
Birth expedited	< 7.20	> 4.8
Urgent delivery	< 7.15	> 5.0

Mini OSCE – 1

39 weeks gestation came with ROM 4 hours ago.

- What do you see on CTG ?
  - Abnormal CTG, fetal tachycardia
- What is the underlying cause ?
  - Chorioamnionitis
- What other clinical findings might support your diagnosis ?
  - Fever , abnormal vaginal discharge ?
- How to manage ?
  - Antibiotic and deliver vaginally
- Mention 2 complications ?
  - Post partum hemorrhage , neonatal sepsist



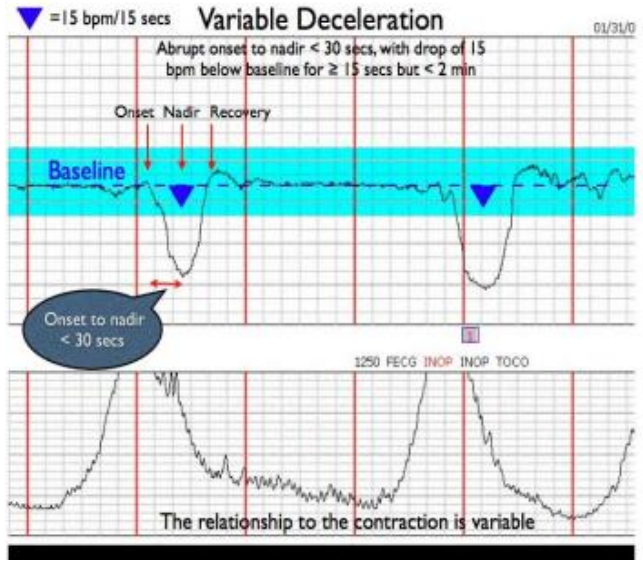
Mini OSCE – 2

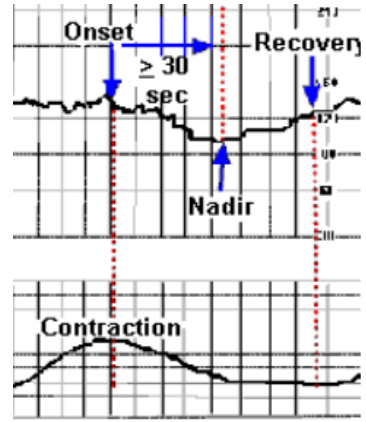
A 29-year-old G2P1 (previous cesarean section) admitted at 38 weeks of gestation with Labor pain, check her CTG on admission and during the second stage of labor and choose the correct answer

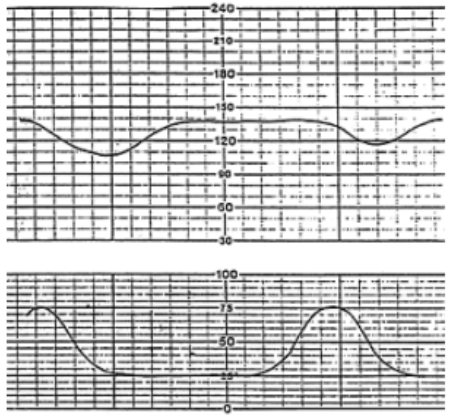
First pic was variable decelerations

Second pic was late decelerations

ANSWER :patients history necessitates continuous fetal heart monitoring during labor



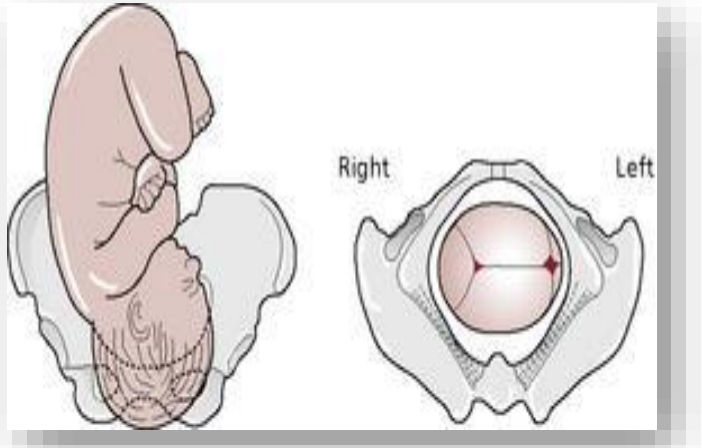




سؤال سادسة

Mini OSCE – 3

Occipitolateral at level of ischial spine



- ❖Mention what you should find in examination?
  - engaged head , vertex presentation, occipitolateral position,
- ❖What is the next mechanism of labor at this level?
  - internal rotation at level of pelvic muscle
- ❖Does epidural prolong delivery and how?
  - yes, in the 2nd stage of labor for a primigravid patient the normal duration is 1 hour, with epidural it's 2 hours
- ❖If after 1-hour CTG shows recurrent late decelerations, what's your management?
  - IV fluids, O2 by mask, left lateral position, stop oxytocin, CS if persistent
- ❖If the patient has same findings after 2 hours what's your next step?
  - instrumental delivery

Satation 4 !!!!!!!

Pregnant women irregular visit to clinic

Postdate 42 week

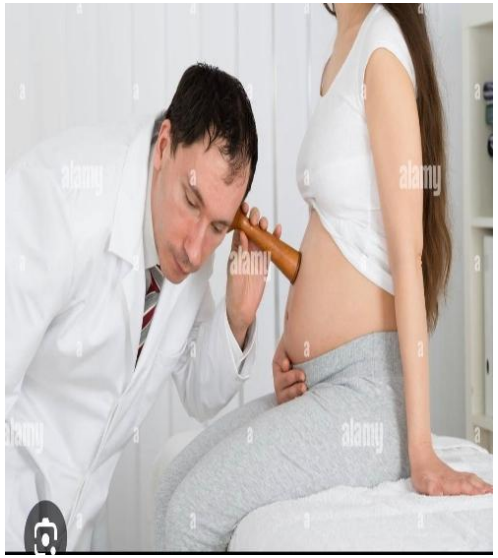
-History findngs: sure date

-Name of each test and findings on each one

-Name of this tool and where doctor hear pulse of the baby: above umbilicus

-What is the position of the baby:

Breech position because hear pulse above umbilicus



IUGR

❖**Appropriate-for-gestational-age**: birth weight 10th – 90th percentile for. gestational age

❖**Large for gestational age:** More than 90th percentile for gestational age

o Most commonly due to maternal DM

❖**Small for gestational age:** Less than 10th percentile for gestational age

o Constitutionally small (70%)

o Growth restricted (30%): (FGR aka IUGR)

• Definition: a fetus that has not reached its growth potential because of genetic or environmental factors

• Most of the FGR fetuses are SGA. But sometimes the FGR fetuses have a weight slightly greater than the 10th percentile for gestational age

• They are at high risk of perinatal mortality and morbidity and long-term complications

• Estimated fetal weight <3rd percentile is consistently associated with adverse outcome

❖IUGR at examination:

- Symphysial-fundal height (if less than 3 cm diagnosed as IUGR)

FGR – Types

	Symmetric FGR	Asymmetric FGR
Percentage	20-30% of FGR	70-80% of FGR
Timing	Begins early in gestation	Begins in the late 2nd or 3rd trimesters
Description	All fetal organs are decreased proportionally due to global impairment of early fetal cellular hyperplasia	Characterized by a relatively greater decrease in abdominal size (liver volume and subcutaneous fat tissue) than head circumference
Etiology	Usually is caused by intrinsic factors (**3Cs**): **C**hromosomal, **C**ongenital infection & **C**ongenital anomalies	Usually is caused by utero-placental insufficiency "**M**ama **M**ade **P**oor **U**terus **S**ick" **M**aternal HTN, **M**aternal Antiphospholipid, **P**lacental insufficiency, **U**terus anomalies, **S**ubstance abuse
Management	Management of FGR associated with congenital or chromosomal anomalies depends on the specific abnormality	In FGR fetuses due to uteroplacental insufficiency: Serial ultrasound evaluation of 1. fetal growth 2. fetal behavior (biophysical profile [BPP]) 3. Impedance to blood flow in fetal arterial and venous vessels (Doppler velocimetry)

FGR – Etiology

Maternal factors	Placental factors	Fetal factors
1. Severe maternal starvation during pregnancy 2. Chronic maternal hypoxemia 3. Hematologic and immunologic disorders 4. Maternal medical disorders and obstetrical complications 5. Viruses and parasites 6. Maternal substance abuse 7. Toxic exposures 8. High altitude 9. Demographic variables	❖ Any mismatch between fetal nutritional or respiratory demands and placental supply can result in FGR ❖ FGR results from an accumulation of placental injuries, such as 1. abnormal uteroplacental vasculature 2. chronic inflammatory lesions 3. abruptio placentae 4. thrombophilia-related uteroplacental pathology 5. gross placental structural anomalies	1. Karyotypic abnormalities The presence of a chromosomal abnormality often results in the appearance of FGR early in pregnancy, most likely of the symmetric type 2. Genetic syndromes 3. Major congenital anomalies Conotruncal and septal defects, were twice as likely to be small for gestational age 4. Multiple gestation 5. Fetal infection (TORCH)

FGR – Complications

Complications	Long-term Complications
1. **Premature infants** Had significantly greater rates of neonatal death, necrotizing enterocolitis, and respiratory distress syndrome (RDS) 2. **Impaired thermoregulation** Because of increased heat loss and reduced heat production 3. **Hypoglycemia** Typically occurs within the first 10 hours after birth 4. **Polycythemia and hyperviscosity** Polycythemia due to increased erythropoietin production resulting from fetal hypoxia 5. **Impaired immune function** Cellular immunity can be impaired in FGR infants in the newborn period and through childhood 6. **Mortality** Fetal, neonatal, and perinatal mortality are increased in FGR fetuses	1. **Impaired Physical growth** Severely affected FGR infants frequently weigh less and are shorter than AGA infants throughout childhood and adolescence 2. **Impaired Neurodevelopment** 3. **Cerebral Palsy (4-6 times higher)** 4. **Increased risk for ischemic heart disease, hypertension and chronic kidney disease**

FGR – Diagnosis & Screening

- **Diagnosis** by ultrasound
- **Screening** (After detailed history)
  - High risk pregnancy for FGR: Sonographic screening should be done
  - Low risk pregnancy for FGR: Symphysis-fundal height measurement
    - Suspicion of FGR arises when this length is noted to be **discordant** with the expected size for dates
    - **Discordancy**: fundal height in centimeters that is more than 2 cm below the GA in weeks
- **Sonographic screening diagnosis criteria**
  1. **Abdominal circumference (AC):** the most sensitive single morphometric indicator of FGR (especially during the 3rd trimester)
  2. **Estimated fetal weight (EFW**): the single best morphometric test to screen for and diagnose FGR (Can't differentiate between wrong date and FGR)
  3. **Growth velocity**: Serial sonographic examinations at two-week intervals, there is a significantly lower rate of change over time of AC or EFW in FGR (differentiate between wrong date and FGR)
  4. **Body proportions**: HC/AC ratio, FL/AC ratio, and ponderal index

FGR – Diagnosis & Screening

❖**Sonographic screening diagnosis criteria cont.**

5. **Amniotic fluid volume**: Oligohydramnios is one of the sequelae of FGR
   - Oligohydramnios is a poor screening modality for suboptimal growth
   - However, if it is present in the absence of ruptured membranes, congenital genitourinary anomalies, or prolonged pregnancy, FGR is the most likely etiology
6. **Doppler velocimetry**
   - The primary surveillance tool for monitoring pregnancies in which FGR is diagnosed. Perform weekly Doppler velocimetry of the umbilical artery upon diagnosis of FGR
   - The most examined vessel: umbilical artery
   - FGR is associated with diminished flow and abnormal Doppler waveforms in both maternal and fetal vessels
   - Deliver any fetus past 32 weeks with reversed umbilical artery flow, and any past 34 weeks with absent umbilical artery flow
7. **3D ultrasonography**, New modality

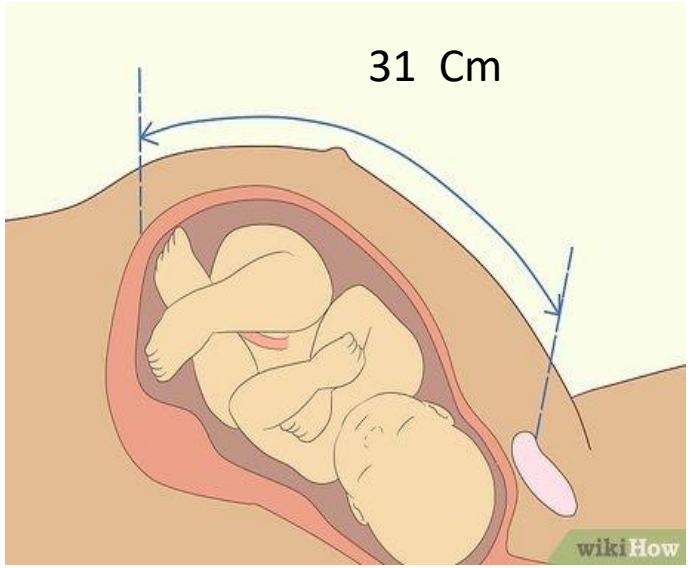
Management of FGR

- One course of antenatal corticosteroids is given between 24 and 34 weeks of gestation in the week before delivery is expected.
- In smokers, an intensive smoking cessation program may be of value and has other pregnancy and health benefits.
- **Factors affecting when to deliver include**
  - Gestational age
  - Doppler ultrasound of the umbilical artery
  - BPP score (or nonstress test)
  - The presence of risk factors for, or signs of, uteroplacental insufficiency
- **Mode of delivery**: Consider C/S in the following
  - Evidence of deteriorating fetal status
  - An unripe cervix
  - Any indication of additional fetal compromise during labor

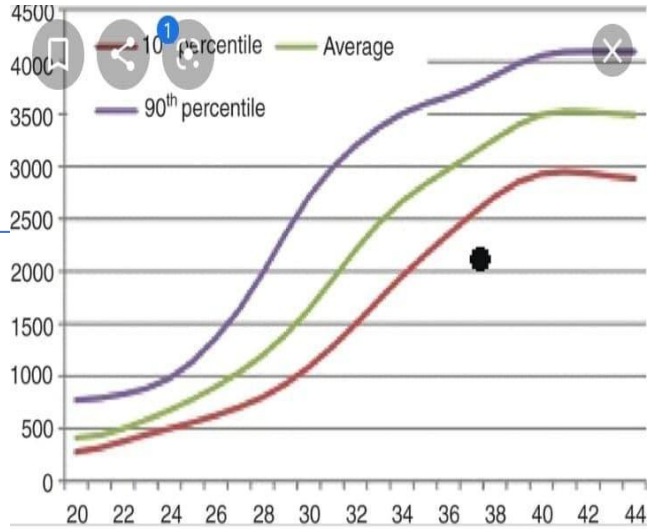
Mini OSCE – 1

35-weeks pregnant women.

- ❖ According the first pic the interpretation is ?
  - Symphysial fundal height 31 cm less gestational age 35 week (if less than 3 cm diagnosed as IUGR)
- ❖ DDx of this abnormality ?
  - Small gastation ddx
- ❖ Interpretation of CTG مش موجوده الصوره



Mini OSCE – 2

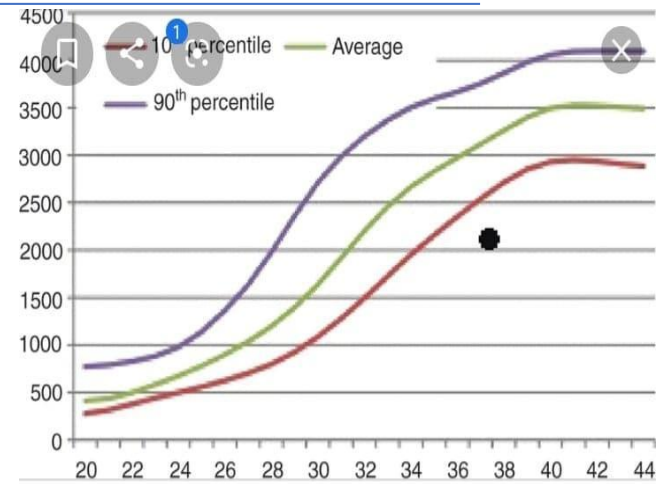


+2 picture shows HC and AC

39-year-old patient , on antenatal visit BP 130/85

- ❖What is your diagnosis according to the chart ?
  - IUGR
- ❖What other parameters you will look for on us ?
  - Growth velocity ,amniotic fluid , body proportion.
- ❖If she camas later with bp 140/100 what is your diagnosis ?
  - Preeclampsia
- ❖What points on examination will support your diagnosis on q 3 ?
  - Symphysial fundal height (if less than 3 cm diagnosed as IUGR)
- ❖What is your management ?
  - Management of IUGR according to Doppler finding of umbilical artery so baby from chart 37 so delivery (IUGR not indication of CS)

Mini OSCE – 3



- ❖Your diagnosis :
  - SGA
  - not IUGR because there's only Chart w/o sonographic — انتبه عليها
- ❖Mention two obstetric complication In this case :
  - Intrauterine death
  - Increase CS rate
  - Oligohydrominus
- ❖ Fetus GA =30 weeks, what you do for this pregnant women :
  - Delivery plan- according to doppler U/S: Normal (36 W)/absence (34 W) /reversed(32W)
- ❖If this pregnant come with abd pain and heavy bleeding , fetus show bradycardia on doppler
  - A) your DX : I think placenta abruption
  - B) your definitive management : Deliver the baby

Mini Osce

4th station: a woman came to the clinic at 34w

Regarding image A (image shows 29 cm)

1. What is the name of this part of physical examination? - symphyseal fundal height
2. What is your interpretation?

• Small for gestational age (date-height discrepancy)

3. Other findings on obstetric examination?

• Determine fetal lie, presentation and engagement

4. Mention 4 causes of this finding

• Wrong date, oligohydramnios, IUGR, IUFD, preeclampsia

Regarding image B

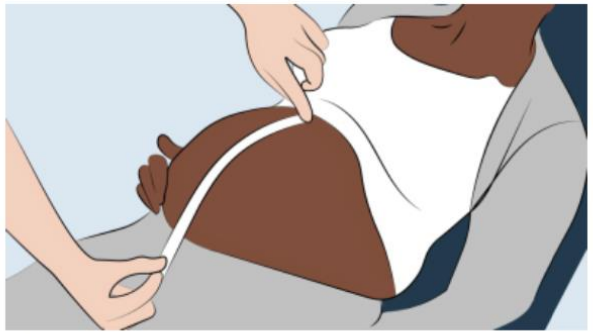
5. What is your interpretation?

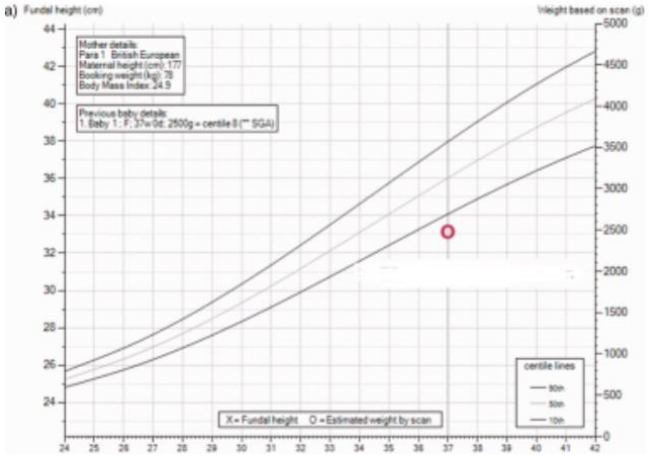
• Small for gestational age

6. What is your management?

• Follow-up by serial ultrasound to determine growth velocity,

and serial BPP, weekly doppler velocimetry





Congenital screening lecture station

Introduction

Definition: structural or functional anomalies, including metabolic disorders, which are present at the time of birth

❖The most common severe congenital anomalies are heart defects, neural tube defects (NTDs) and Down syndrome.

❖Etiology:

o Genetic abnormalities

• Chromosomal disorders: Down syndrome

• Single gene (monogenic) disorders: AR (Cystic fibrosis), AD (Marfan), X-linked (Hemophilia)

• Multifactorial disorders: Cleft lip/palate, congenital heart disease, and NTDs

o Non-genetic etiologies include environmental factors

• Maternal PKU or DM, Teratogens, Infections, and twining

o About 40-50% of cases the etiology is unknown

Terminology		
Term	**Definition**	**Notes**
Malformations	Intrinsic developmental defect; occurs during embryonic period due to genetic or environmental forces	1. **Major malformations**: • Have medical and/or social implications • E.g., NTDs: Meningomyelocele or orofacial clefting (cleft lip and palate) 2. **Minor malformations**: • Have mostly cosmetic significance • E.g., ear tags, clinodactyly (incurving of the 5th finger), and single transverse palmar creases

Deformations	Extrinsic mechanical distortion; occurs during fetal period	• **Causes**
		  • **Intrauterine forces**: Decreased amniotic fluid, uterine tumors, and uterine malformations (e.g., bicornuate or septated uterus) can lead to fetal compression.
		  • Fetal crowding due to multiple gestations
		• **Common deformations**: Clubfoot, congenital dysplasia of the hip (CDH), and plagiocephaly (lopsided or flattened skull due to compression)
		• **These often can be corrected by** physical therapy, casting, or the use of a special helmet to remodel the skull while the fontanelles are still open

Disruptions	2° breakdown of tissue with normal developmental potential	Amniotic band sequence (ABS) is the most common example of intrauterine disruption
Dysplasia	Result from the abnormal organization of cells into tissues	An example is abnormal growth of bone resulting in skeletal dysplasias, such as achondroplasia
Syndrome	A pattern of anomalies that occur together and are pathogenetically related	
Sequence	Abnormalities result from a single 1° embryologic event (e.g., oligohydramnios → Potter sequence)	
Association	Two or more anomalies that are not pathogenetically related and occur together more frequently than expected by chance (e.g., VATER or VACTERL association)	

Introduction

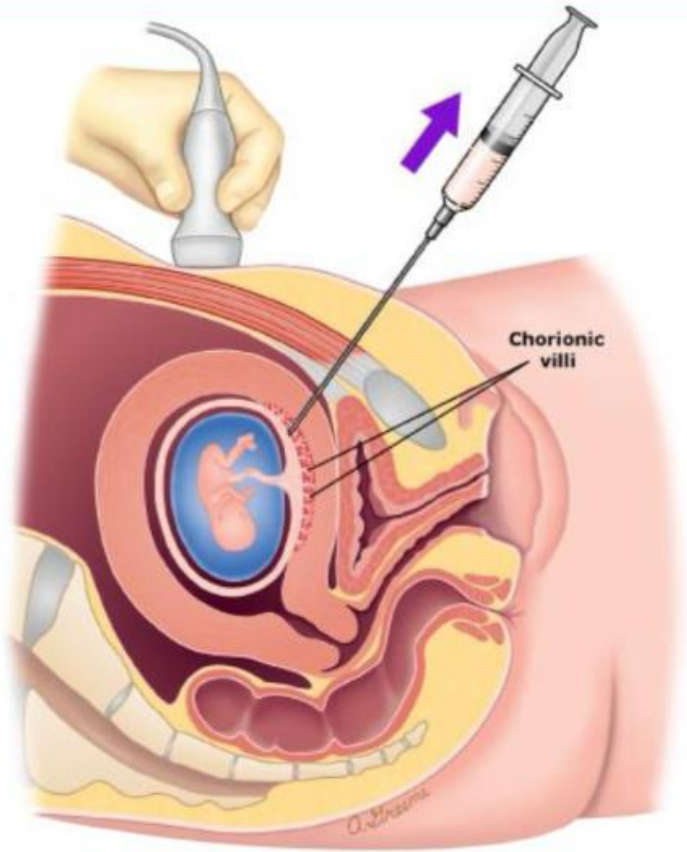
- First trimester combined test:
  - 11-14 weeks of gestation.
  - Consists of three markers :
    1) Maternal serum beta human chorionic gonadotropin (beta-hCG)
    2) Maternal serum pregnancy-associated plasma protein-A (PAPP-A)
    3) Ultrasound measurement of nuchal translucency (NT)
- Second trimester Quadruple test:
  - 15 to 18 weeks of gestation.
  - Four maternal serum markers:
    1) Alpha-fetoprotein (AFP)
    2) Unconjugated estriol (uE3)
    3) Human chorionic gonadotropin (hCG)
    4) Inhibin A

Chorionic villus sampling (CVS)

- Small samples of the placenta are obtained under real-time ultrasound guidance for prenatal genetic diagnosis(PGD).
- After this procedure must give anti D for mother due to risk of Fetomaternal hemorrhage.
- 10 and 14 weeks of gestation.
- Complications
  - Fetal loss: 0.6 to 1.0 %
  - Failure to obtain a sample , Maternal cell contamination
  - Limb-reduction defects and oromandibular hypogenesis : if performed before 9 weeks of gestation.
  - Bleeding
  - Infection.
  - Fetomaternal hemorrhage.
  - Rupture of membranes: Acute rupture of membranes is rare. Delayed rupture of membranes days to weeks after the procedure has been reported in 0.3% of cases.

Chorionic villus sampling (CVS)

Technique for transabdominal chorionic villus sampling (CVS)



In the transabdominal CVS technique, the physician guides a needle from the patient's abdomen into the placenta under ultrasound guidance.

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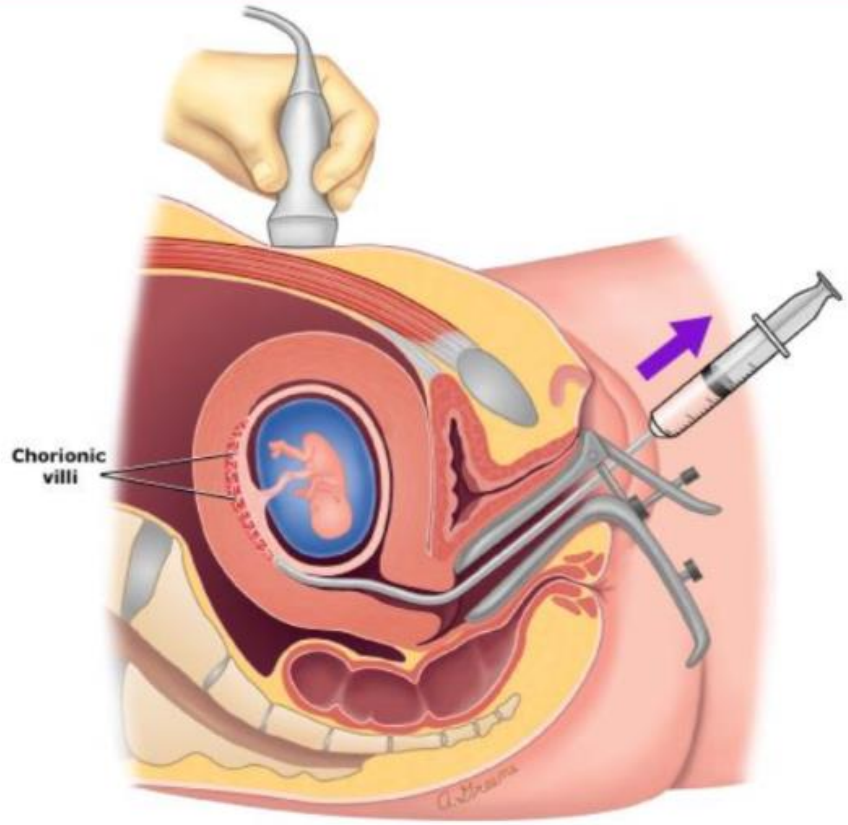
Technique for transcervical chorionic villus sampling (CVS)



In the transcervical CVS technique, the physician guides a cannula (a small tube used for collection of the chorionic villi) through the vagina into the placenta under ultrasound guidance.

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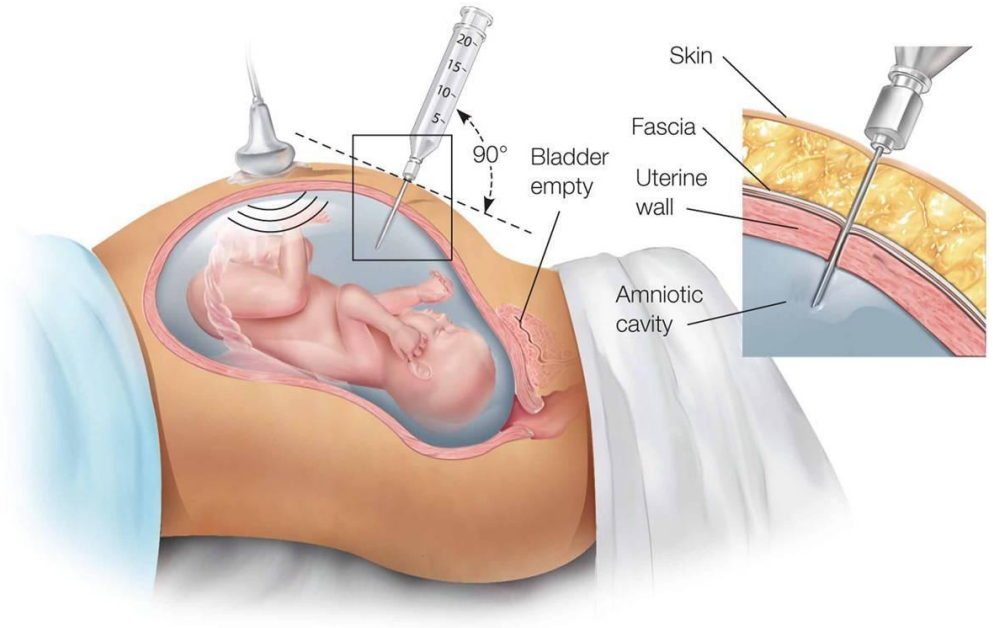
Amniocentesis

- A technique for withdrawing amniotic fluid (AF) from the uterine cavity using a needle via a trans-abdominal approach under ultrasound guidance
- The most common diagnostic indications: Prenatal genetic diagnosis (PGD) and assessment of fetal lung maturity
- Evaluation of the fetus for infection, degree of hemolytic anemia, blood or platelet type, hemoglobinopathy and NTD
- For prenatal genetic studies, optimally to be done at 15-17 weeks of gestation.
- No need for antibiotic prophylaxis for amniocentesis

Amniocentesis

❖ **Complications**:

- Leakage of amniotic fluid.
- Direct fetal needle injury.
- Vertical transmission.
- Innoculation by bowel flora
- Fetal loss.
- Cell culture failure.



Mini OSCE – 1

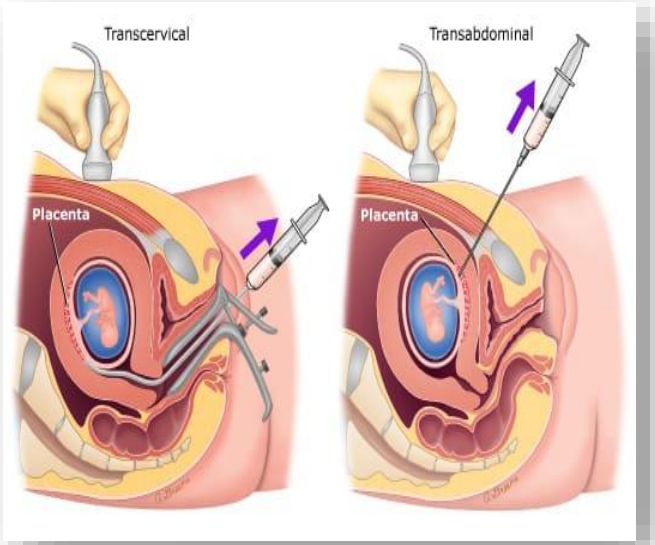
A female in her 11th week of gestation

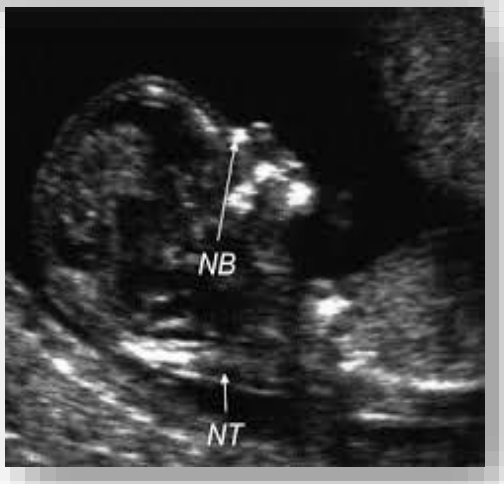
- Mention the abnormalities in the ultrasound
  - 1-nuchal translucency 2- nasal bone absent
- Mention the abnormalities seen in the combined test?
  - Increase in HCG / Decrease in Papp
- Name the procedure to be done at this gestational age ?
  - CVS
- Mention 2 complications of the procedure done in the previous question?
  - Rupture of membranes / infection/ loss of fetus / bleeding
- What is your diagnosis?
  - Down syndrome

Mini OSCE – 2

pic for CVS and NT name of structure at arrow in first pic

- ❖Absence of this structure indicate ?
  - Normally absent in second trim
- ❖What is the abnormality in the pic ?
  - Hyper Lucency more than 3.5 mm indicated Down syndrome
- ❖Name of procedure in second pic .?
  - TA CVS





Note :Look for Tip of needle

❖If at placenta called CVS chorionic Villus sampling (CVS> 2 type transabdominal and trans vaginal)

❖If at amniotic fluid called Amniocentesis

Mini OSCE – 3

39-year-old patient , g2p1 she is epileptic, and she use carbamazepine, previous CS ?

❖What points on the case above support the diagnosis ?
- The drug (S/Es: decrease folic acid, class D drug) ????

❖ The yellow arrow is ?
- Nuchal translucency

❖What is the name of this test ?
- combined test
  - according to the table

❖At which gestation age we do it ?
- 11-14 week

❖If she camas in preconception what you will advice her ?
- Choose safe anti epileptic drug and lowest dose esp. monotherapy instead of multi also taken folic acid

❖What is your management ?
- If high risk at combined test go to CVS if at quadrable test go for amniocentesis

A table which shows

❖ **High hCG, Low ppapA, Absent nasal bone**

Mini OSCE – 4

❖Regarding this procedure, select one:

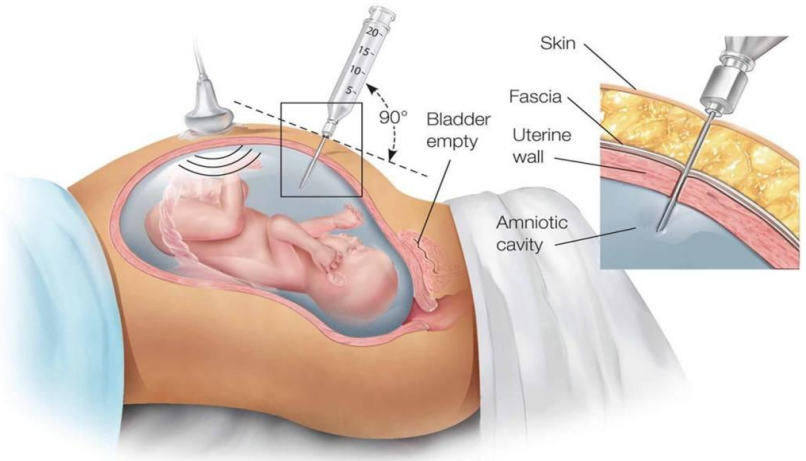
a. It is performed at 13 W of gestation

b. It is used as a screening test for chromosomal abnormality

c. The risk of miscarriage is 0.5%

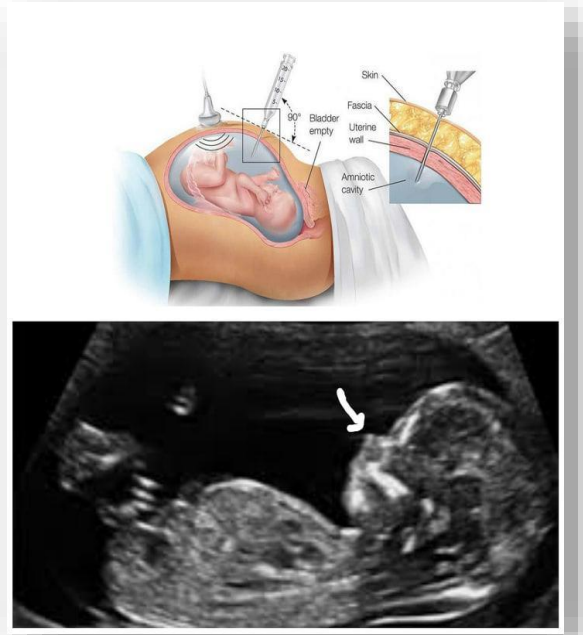
d. Placental mosaicism is more common compared to other method

e. anti-d prophylaxis is considered after doing this procedure in a woman with rh negative blood group and indirect coombs test of 1:8



Mini OSCE – 5

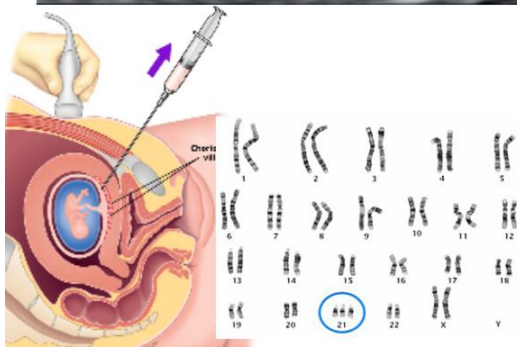
- What's the abnormality in picture 2?
  - Down syndrome, increase NT, depressed Nasal bone
- What's the structure pointed by arrow?
  - Tip of the nose
- What the procedure done ?
  - Amniocentesis
- What the benefit of this procedure?
  - Prenatal genetic diagnosis (PGD) and assessment of fetal lung maturity. Phosphatadyl glycerol, Evaluation of the fetus for infection, degree of hemolytic anemia, blood or platelet type, hemoglobinopathy, and NTDs.



Mini OSCE – 5

- What the risk of it when its done
  - Leakage of amniotic fluid.
  - Direct fetal needle injury.
  - Vertical transmission
  - Innoculation by bowel flora.
  - Fetal loss.
  - Cell culture failure:
- At which gestational week you can do it?
  - optimally to be done at 15-17 weeks (> 15w of gestation).
- What are screening test used for diagnosis of this congenital anomaly, and when it done?
  - First trimester combined test 11-14w
  - Second trimester quadrable test 15-18w
- fetal "cell-free (cf)" nucleic acids as early as the fifth postmenstrual week, and almost always by the ninth postmenstrual week

2nd station: a 12 week pregnant woman came to the clinic because she is worried that her baby might have congenital anomalies, she did the following tests



1.

•Look at image A What are the features shown? And their significance Absent nasal bone

Increased nuchal translucency

Significance: soft markers that mean increased risk of fetal aneuploidy

•

2. Other tests that can be used at this stage • Bhcg and PAPP-A

Regarding Image b

3. what is the test called?

• Transabdominal chorionic villous sampling

4. How can it be used to be helpful for the mother?

• The collected sample can be karyotyped to diagnose and confirm aneuploidy 5. Complications of this procedure (only 2)

• Infection, fetomaternal hemorrhage, rupture of membranes, bleeding, fetal loss, contamination

6. Image c shows 21 trisomy, later on, what other findings can be found on ultrasound?

• Nuchal fold, congenital heart defects, short long bones (humerus, femur) duodenal atresia (double bubble sign)

Multiple gestation

Diagnosis of Multiple Gestation by US

- All women with a twin pregnancy should be offered an ultrasound examination at 10–13 weeks of gestation to assess :
  - Number of fetuses.
  - Cardiac activity (Viability).
  - Chorionicity.
  - Major congenital malformation (Anencephaly).
  - Nuchal translucency.
- 5 weeks : Visualization of multiple gestational sacs with yolk sacs.
- 6 weeks : Multiple embryos with cardiac activity.
- Before 8 weeks gestation : Clearly separate gestational sacs, each surrounded by a thick echogenic ring, is suggestive of dichorionicity.
- Later in gestation : if the fetuses are discordant for sex or two distinct placentas are seen, a DC gestation can be confirmed with confidence.

Diagnosis of Multiple Gestation by US

- Dichorionicity : Membrane thickness of >2 mm.
- Placentation is MC : If only (2) layers are present post-delivery.
- Placentation is DC : If there were (3) or (4) layers post-delivery.

- **DC twins** identified by visualization of a triangular projection of placenta between the layers of the dividing membrane (Lambda sign).
- **MC twins** identified by presence of the "T" sign, which refers to the appearance of the thin intertwin membrane as it takes-off from the placenta at a 90-degree angle.

DC Twins – Lambda sign

MC Twins

MC Twins – T sign

Diagnosis of Multiple Gestation by US

- Serial sonographic assessment of fetal growth is recommended in multiple gestations :
- Every 3 - 4 weeks from 18 weeks gestation in DC twins, or every 2 weeks if growth restriction or growth discordance (>20%) is discovered.
- MC twins, as well as all higher-order multiple gestations, serial growth scans are performed every 2 weeks from 16 weeks gestation.

Timing of delivery

- All twin fetuses should therefore be delivered by 39 weeks of gestation because of the rising perinatal morbidity and mortality beyond that date.
- Uncomplicated DC twins is 37-38 weeks.
- Uncomplicated MCDA twins 36 -37 weeks.
- For MA twins delivery at about 32 weeks should be suggested because of the increasing risk of perinatal mortality in the third trimester (Higher risk for Cord entanglement) and it's done by CS.

Complications of multiple gestation

Fetal complications

1. Prematurity (The mean duration of pregnancy decrease with ↑ number of fetuses)
2. Growth restriction (comprise almost ~1/4 of very-low-birth-weight infants)
3. Higher Stillbirth rates and infant mortality rates (Singleton < twins < triplets …)
4. Higher incidence of severe handicap

❖Maternal complications

o Multiple gestations are associated with significantly higher risks for

1. Hypertension
2. Preeclampsia (26%)
3. HELLP syndrome (9%)
4. Anemia (24%)
5. Placental abruption
6. Preterm labor (78%)
7. Preterm premature rupture of membranes (pPROM) (24%)
8. Gestational diabetes (14%)
9. Acute fatty liver (4%)
10. Chorioendometritis (16%)
11. Postpartum hemorrhage (9%)

Twin-Twin Transfusion Syndrome (TTTS)

Occurs because of an imbalance in blood flow through vascular communications in the placenta, which leads to overperfusion of one twin and underperfusion of its co-twin.

❖Epidemiology: It occurs in 15% of MC twin pregnancies.

❖Etiology: Arterio-venous unidirectional anastomoses result in net transfusion of blood from the donor to the recipient fetus.

❖Associated with a high risk of fetal/neonatal mortality, and fetuses who survive are at risk of severe cardiac, neurologic, and developmental disorders.

❖The donor fetus is hypoperfused, demonstrating signs of intrauterine growth restriction, anaemic and oligohydramnios.

❖The recipient fetus is hyperperfused, hypertensive, demonstrate biventricular hypertrophy and diastolic dysfunction, and polyhydramnios.

❖Management approaches for the treatment of severe TTTS before 24 to 26 weeks gestation:

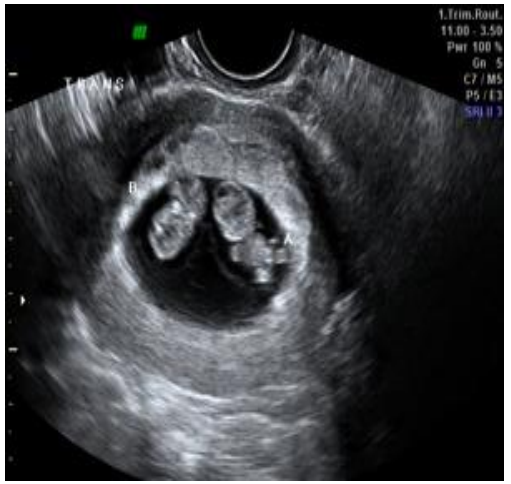
o Serial reduction amniocenteses

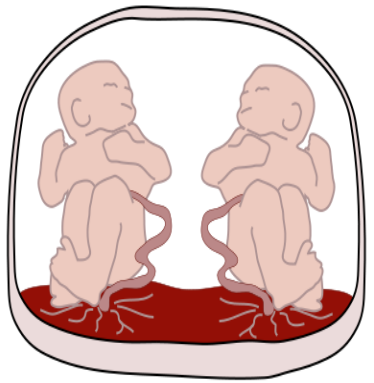
o Amniotic septostomy

o Selective fetoscopic laser coagulation of placental anastomoses.

Mini OSCE – 1

G1P0 8 weeks –Rh with +Rh father (on exam pictures left embryo larger than right)





- Type of placentation?
  - Monochorionic monoamniotic
- Vaginal spotting and active fetal heart by us, Diagnosis?
  - threatened miscarriage
- Give two investigation for her?
  - CBS, klehur test.
    - Not coombs test (first bleeding episode, first time pregnancy)
- What is the best delivery date for this patient and why?
  - 32 weeks risk of fetal loss and cord entanglement
- True or false
  - This type of chorionicity occurs if division after 12 days (**F**) (after 8 days)
  - Should take low dose aspirin in the beginning of 2nd trimester (**T**)
  - In this case IVF is a risk factor (**F**) (ART is a risk factor for dizygotic twins)
  - singleton same risk for previa like multiple gestation (**F**) more than

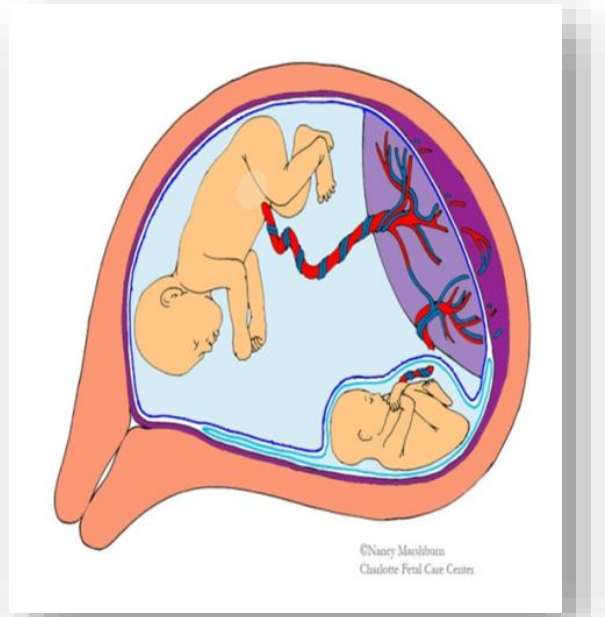
Mini OSCE – 2

Ultrasound for 9 weeks pregnant women

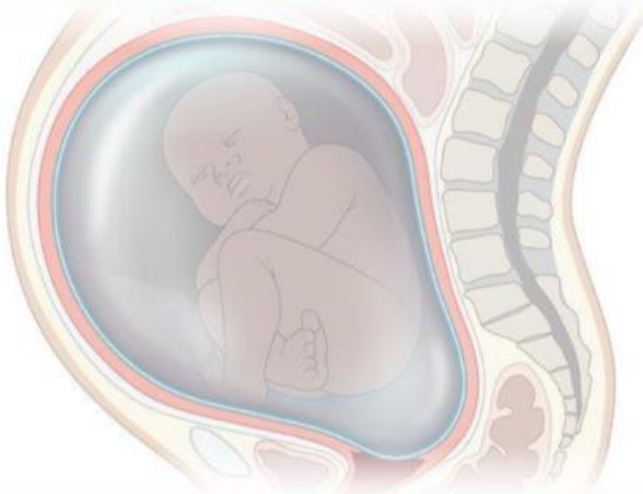
- What are the findings in the ultrasound ?
  - T sign
  - 2 gestational sacs with thin intertwin membrane
- What is your diagnosis
  - monochorionic diamniotic twins
- When the next visit should be and why ?
  - Bec it's monochorionic diamniotic the next visit will be within 2 weeks (11 week)
    - this true but started at 16w so the next visit will be in 13 w after 4 w as normal visit but not because it monochorionic but to confirm viability من المحاضرة
- If the pt. reach 32 weeks without complications at which GA you will deliver and by what?
  - At 36-37 weeks by CS or vaginal according to presentation …

Mini OSCE – 2

- What is the name of the complication that is shown in the picture ?
  - twin to twin transfusion
- What are the finding on ultrasound for this complication ?
  - a) single placenta
  - b) sex concordance
  - c) growth discordance
  - d) discrepancy in amniotic fluid
  - e)one fetus will be hydropic
  - f) abnormal umbilical artery Doppler



Aberrant liquor

	Oligohydramnios	Polyhydramnios
		
Definition	• Amniotic fluid volume is less than expected for gestational age	• Amniotic fluid volume is more than expected for gestational age
Etiology	• Idiopathic (most common cause of mild oligohydramnios) • Fetal anomalies, e.g., urethral obstruction, bilateral renal agenesis, autosomal recessive polycystic kidney disease • Maternal conditions, e.g., placental insufficiency, late or postterm pregnancies (> 42 weeks of gestation), premature rupture of membranes	• Idiopathic (most common) • Fetal anomalies, e.g., gastrointestinal (esophageal atresia, duodenal atresia and stenosis), CNS (anencephaly, meningomyelocele), pulmonary (cystic lung malformations), twin-to-twin transfusion syndrome, fetal anemia • Maternal conditions, e.g., diabetes mellitus, Rh incompatibility
Diagnosis	• Decreased fundal height • Ultrasound: amniotic fluid index < 5 cm, fetal anomalies	• Increased fundal height • Ultrasound: amniotic fluid index ≥ 25 cm, fetal anomalies
Treatment	• Amniotransfusion • Treat underlying cause	• Amnioreduction • Treat underlying cause
Complications	• Intrauterine growth restriction • Birth complications • Potter sequence: pulmonary hypoplasia, craniofacial abnormalities, wrinkling of the skin, limb anomalies	• Fetal malposition • Umbilical cord prolapse • Premature birth

Mini OSCE – 1

- What you see and diagnosis ?
  - Single deepest pocket less than 2 , oligohydramnios
- One single important finding during abdominal examination ?
  - decrease fetal movement or small uterus
  - SF-height (less 3 cm than GA)
- 3- causes for this condition ?
  - RENAL AGENESIS, URETHRAL OBESTRACTION, IUGR, ACEI
- Clinical importance for amniotic fluid ?
  - Screening of fetal malformation
  - genetic testing
  - Assessment of fetal well-being .
  - Diagnosis of PROM (fern test)
  - Assessment of fetal lung maturity

Induction of labor

Mini OSCE – 1

33-week pregnant female came with vaginal discharge.

- What relevant points on history ?
  - Onset, amount , color, odor, soaking clothes or not, bloody.
  - Hx of previous PPROM or PTL or Fx
  - If association of abdominal pain and contraction (labor pain?)
  - Previous data to confirm GA and CTG data
  - Fetal movement
  - Past medical (genital tract infection) and past surgical
  - Hx of smoking
- What is the impotent points on examination ?
  - Vital sign and general look, obs examination (SFH, lie, presentation …), Sterile speculum exam: Cervix (open or closed) pooling sign on posterior fornix.

Mini OSCE – 1

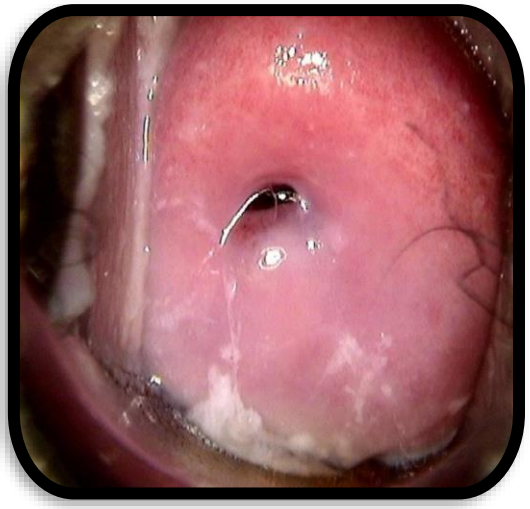
- If you found on examination pooling sign and closed cervix what is your diagnosis?
  - preterm premature rupture of membrane
- What is your management ?
  - Admission , prophylaxis antibiotic , hydration , dexamethasone , CTG
- 5- what is the complication ?
  - Chorioamnionitis

Mini OSCE – 2

- 1) what's this instrument?
  - Amnio hook
- 2)name of procedure?
  - Amniotomy, artificial rupture of membrane
- 3) 4 advantages of this procedure?
  - Enhance uterine contraction
  - Shorten active phase of first stage
  - Assess fetal well being from liquor state
  - To check if there's cord prolapse
- 4)if pt. pregnant with 24w , length of fundal public height 29cm, what's the sequence if this procedure make to she?(polyhydramnios)
  - 1- abruptio placenta
  - 2- cord prolapse
  - 3- fetal bradycardia

Mini OSCE – 3

34 y old female P3G2+0 , 29W , came to the hospital with gush of fluid : answer the followings : (exam pic. differ)



- ❖Name of this method/procedure:
  - Speculum cervical examination
- ❖Describe the findings in the image:
  - Dilated/Closed cervix ?
  - Absence/prescience of pooling sign ?
- ❖Other investigations to your diagnosis
  - Nitrazine test – CBC – Urinalysis – CRP – U/S – vaginal swab for infection
- ❖Your management
  - Admission - Detect chorioamnionitis – corticosteroids – Antibiotics (Erythromycin 250 mg *4 for 10 days)
- ❖Q5- At any week you want to deliver her , and the method ?
  - 34 W , vaginal delivery

(the image is missed ☹)

Mini OSCE – 4

38 years female with twins pregnancy 32 weeks , came with abdominal pain, and this CTG :

- ❖1-Question relevant to history?
  - Fetal movement , pelvic and abdominal pain , vaginal discharge , spotting , rupture of membrane, uterine contractions , frequency and amplitude, urgency , dysuria , blurred vision , epigastric pain , headache , fever .
- ❖She came with 2cm dilation , Long cervix and intact membrane ,Your Diagnosis ?
  - Pre term labor
- ❖Your management ?
  - Admission, IV fluid , Prophylactic antibiotic , antenatal corticosteroid, tocolysis.

Mini OSCE – 5

Pregnant lady comes to the hospital with sudden gush of fluid, she denies presence of abdominal pain (36 weeks GA) she admitted to the hospital for induction:

1.Take relevant history from the patient?

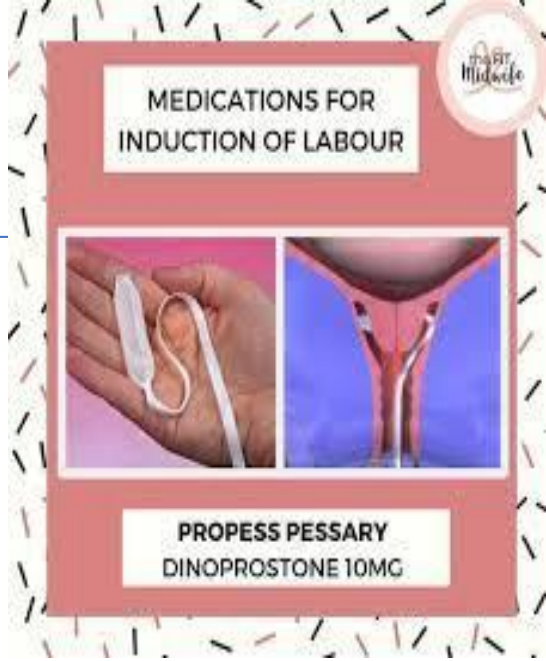
- Onset, amount , color, odor, soaking clothes or not, bloody.
- Hx of previous PPROM or PTL or Fx
- If association of abdominal pain and contraction (labor pain?)
- Previous data to confirm GA and CTG data
- Fetal movement
- Past medical (genital tract infection) and past surgical
- Hx of smoking

2. Physical examination?

- Vital signs and general look
- Abdominal exam and obs exam
- Sterile speculum: cough or pooling signs

3. What is the type of method of induction used for her?

- Slow-release pessary



Mini OSCE – 5

4. During induction , CTG shows decelerations, what is the type of these decelerations?

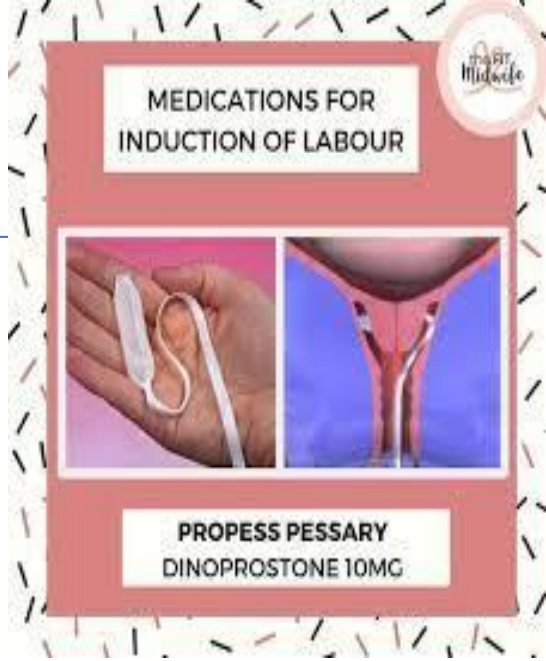
- Late decelerations

5. What cause of this type of decelerations ?

- Uteroplacental insufficiency

6. What's your management?

- Left lateral position
- IV hydration
- Oxygen
- Stop induction



Dr.Omar

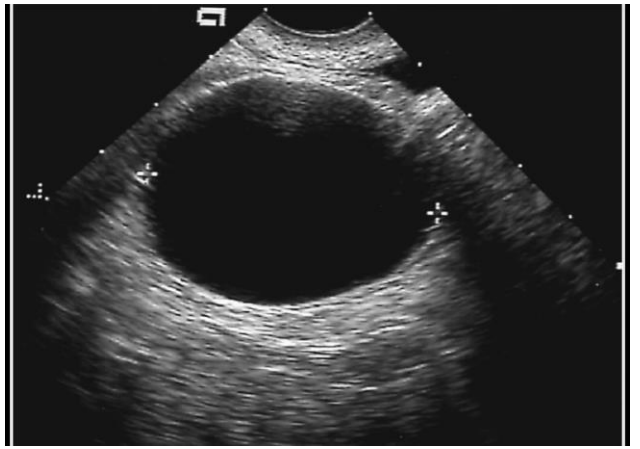
Mini OSCE – 1

سنوات 1

27-year-old lady married complaining of primary infertility?

سنوات 1

25-year-old leady complaining from menstrual irregularity U/S done for her?



- Describe the U/S finding ?
  - 1)unilocular cystic mass 2)Thin wall
  - 3)No solid component 4) 5 cm in diameter
- Management at this time?
  - follow up for 3 cycles
- Complications ?
  - 1) Torsion 2)Hemorrhage 3)Rupture 4)Infection
- If patient present with acute pain, management?
  - Emergent laparoscopic ovarian cystectomy
- Complications of recurrent ovarian cystectomy?
  - 1.decrease ovarian reserve 2.Pelvic adhesion

سؤال سادسة

Mini OSCE – 2

OGTT : 190/140/180

- Diagnosis:
  - Geststional DM
- Mention 6 relative history question:
  - 1-Age>25
  - 2-family history of DM
  - 3-personal history of impaired glucose tolerance
  - 4- previous macrocosmic baby
  - 5- current use of glucocorticoids
  - 6-medical history (PCOS)
  - 7-HTN or hx of PET
- Management:
  - 1-low diet 2- Hypoglycemic agents 3- Insulin
- if patient come at 43 week ,baby is well, no labor ,your next step?
  - (induction of labor)

Mini OSCE – 3

open question with multiple possible answers

57 years woman on US with increased endometrial thickness :

- Possible question on history?
  - 1-analysis of the chief complain and associated symptoms
  - 2- previous cycles
  - 3- drug history
  - 4- family history (حسب جواب الدكتور بالمحاضرة)
- DDX? (you should start with the most common):
  - 1-Fibroid 2-adenomyosis 3-endometrial hyperplasia 4- Endometrial cancer 5- ovarian cancer

Mini OSCE – 3

- Things to check on physical examination?
  - (General look ,vital signs ,Lymph node, breast examination, abdominal masses, pelvic examination)Don’t forget to start with general look and vital signs.
- What ovarian cancer do the following picture?
- Sex cord stromal tumors

From Google

Mini OSCE – 4

- ultrasound for 55 years old post-menopausal female complaining of right ovarian mass ?
- 1- Describe the findings in the ultrasound ?
  - Solid component with thick wall
- 2- What is your diagnosis ?
  - epithelial ovarian cancer
- 3- Mention 3 finding on examination ?
  - adnexal mass, cervical lymphadenopathy, ascites
- 4- Calculate the risk malignancy index if CA125 is 150:
  - RMI =U *M*CA125 = **1350**
    - U=multilocular/solid so, U=3 & M= she is menopaused so, M=3.
- 5- Management ?
  - Cytoreductive surgery

(الصورة من جوجل)

Mini OSCE – 5

GDM : OGTT 1h =195, 2h =140 ,Fasting =105

- ❖Interpretation ?
  - Elevated fasting glucose and 1 h OGTT – GDM
- ❖Immediate management ?
  - Diet , hypoglycemic agent , insulin
- ❖Antenatal OBS complication?
  - Polyhydramnios , macrosomia , preeclampsia
- ❖Management if she will deliver vaginally :
  - No morning insulin (6hr before delivery)
  - Glucose infusion
  - Insulin infusion
  - Monitor maternal glucose level
  - CTG

Mini OSCE – 6

- ultrasound for 50 years old post-menopausal female complaining of right ovarian mass : (I think US >> contain solid component , multi-locular)
- 1- Describe the findings in the ultrasound ?
  - There is multilocular cyst ,with solid areas and thick wall .
- 2- What is your provisional diagnosis ?
  - epithelial ovarian cancer (m.c. Is serous carcinoma)
- Mention 3 finding on examination ?
  - adnexal mass , palpable inguinal or cervical lymphadenopathy , acanthosis ,ascites.
- 4- Calculate the risk malignancy index if CA125 is 100 ?
  - RMI =900
- 5- What is your plan for management ?
  - it's high risk So >> cytoreductive surgery

(أقرب صورة من جوجل)

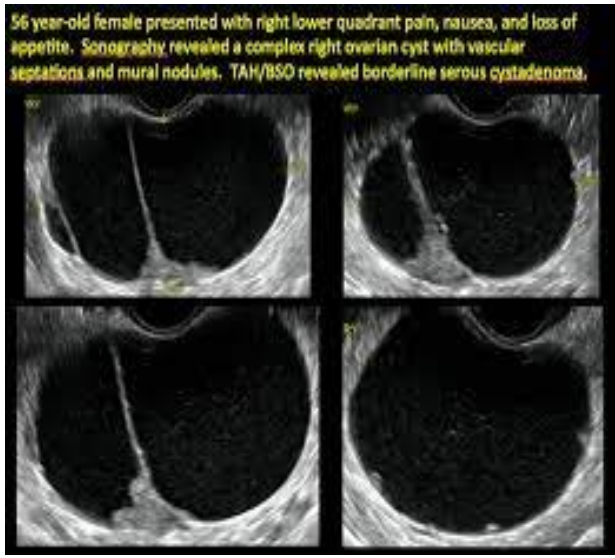
Mini OSCE – 7

Pregnant woman complaining of erythema, pain and hotness in her right leg.

- ❖1-What is your diagnosis
  - deep vein thrombosis
- ❖2- Mention 3 diagnostic tests?
  - Venous duplex imaging , MRI and D-dimer
- ❖3- Management during pregnancy?
  - low molecular weight heparin (safe during pregnancy)
- ❖4- The most common complication if she came in labor ?
  - blee
- ❖5- What is post partum management and the type of contraceptive you should offer for her?
  - Warfarin or continue LMWH for 6 weeks .
  - Marina (IUD)
  - Progesterone only pills (the other methods are contraindicated because they ass. With clots formation)

Mini OSCE – 8

From google



- U/S of septated Ovarian cyst with solid component
- 1-Describe mass?
  - septated Ovarian cyst with solid component
- 2- what are aspect of you should consider in examinations ?
  - Adenxal mass, cervical lymphoadenopathy, ascities
- 3- Diagnosis ?
  - Epithelial ovarian carcinoma
- 4- Calculate Risk of Malignancy Index (If she is menopause and her CA-125 = 100) ?
  - 900
- 5- what is the treatment ?
  - cytoreductive surgery