Unmanned OSCE File
“SAQ’s”

Done by:

Allulu Alsulayhim, Atekah Kadi, Dania Alkelabi, Haifa alwael, Haneen alsubki, Hanin Bashaikh, Laila Mathkour, Layla AlBreacan, Leena Alwakeel, Muneerah Alzayed, Njoud Alenezy, Nada AlDakheel, Raneem Alghamdi, Rawan Alqahtani, , Shahd Alsowaidan, Wejdan Alzaid, Zaina Alkaff.

Revised by:

Laila Mathkour

Editing file:

Here

اللهم لا سهل إلا ما جعلته سهلا وأنت تجعل الحزن إذا شئت سهلا

سموا بالله وتوكلوا عليه الاختبار بيكون سهل لطيف خفيف بإذن الله،

اغلب المعلومات هي من المحاضرات النظرية فما راح تأخذ منكم وقت..

قولوا اللهم لا سهل الا ما جعلته سهلا وانت تجعل الحزن إذا شئت سهلا، رب اشرح لي صدري ويسر لي امري واحلل عقدة من لساني يفقهُ قولي.

- OSCE exam is 15 stations. **5 Manned** and **10 Unmanned** "SAQs" stations.
- This file contains **unmanned stations only.**
- Don't forget to check Manned File after finishing this file.
- This file references are previous cases, doctor notes, and theoretical lectures, most of cases came previously so please don't skip any case.
- **Anything black means→ came previously,** anything gray→ didn't came previously but may come, so please try to go through it.
- You will find some discussion manned cases here because there are some SAQs stations came previously as discussion and vice versa. All the SAQs stations can come as oral discussion as well.

Thanks to everyone who worked on this file ♡ It is a single file but requires a lot of effort and time in order to complete it. Thank you all ♡

الله يوفقكم وينوّر عليكم ♡

Preconception Care

Station 1:

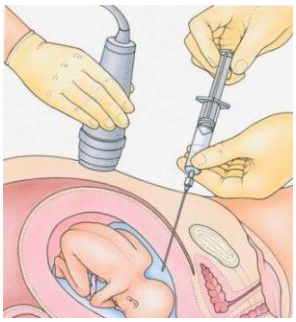
- **What is the goal of counseling a woman about pregnancy prior to conception?**
  The goal is to optimize a woman's health and knowledge before planning and conceiving a pregnancy in order to eliminate, or at least reduce, the risk associated with pregnancy for the woman and her future baby.
- **How certain medical conditions affect pregnancy?**
  Example: DM, there is a relationship between the hemoglobin A1C level and fetal malformation risk. If there is an increase in hemoglobin A1C there will be more risk for CVS, CNS and Gastric and genitourinary malformation.
- **When should preconception care start?**
  Preconception care should be started, especially in high risk women (e.g., women with obesity (≥30), DM, or HTN), 6 months to 1 year before conception is attempted.

Antenatal Care

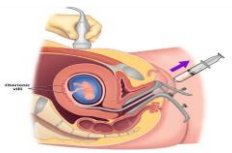
Station 1:

- **What are the routine booking investigations at the first prenatal visit?**
  - **Blood test:** CBC, Hb, WBC, Platelets, Blood group, Rh factor & Red cell antibody.
  - **Ultrasound:** To confirm pregnancy, determine the gestational age and EDD, Number of fetuses if one or twins (earlier sonograms are more accurate than later ones for both of them).
  - **Urine test:** Mid stream urine for asymptomatic Bacteriuria
  - **Routine Infections screen:** Rubella, HBV, HBC, HIV, Toxoplasmosis, syphilis.
- **Timing of the visits?**
  Every 4 weeks until 28 week, then every 2 weeks until 36 week, then weekly until delivery.

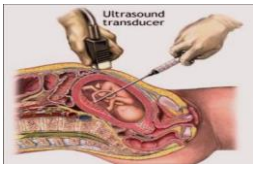
Station 2: 40 year old lady pregnant lady at 20 week of gestation having a procedure as shown in this picture.



- **What do you call this procedure?**
  Amniocenteses, done after 15 weeks.
- **Mention 4 indications for this procedure?**
  1. Genetic (karyotype).
  2. Bilirubin level (RH-isoimmunisation).
  3. Fetal lung maturity.
  4. Therapeutic in polyhydramnios.
  5. Screening for neural tube defect.
- **Mention 2 possible complications?**
  ROM, abortion and infections



- **Mention 2 other invasive diagnostic tests can be used for prenatal diagnosis and their indication.**
  - **Chorionic Villus Sampling:** (done after 10 weeks) the procedure of choice for first trimester prenatal diagnosis of genetic disorders.
  - **Cordocentesis:** (done after 20 weeks) rapid karyotyping, fetal HB assessment, fetal platelets level, fetal blood transfusion.

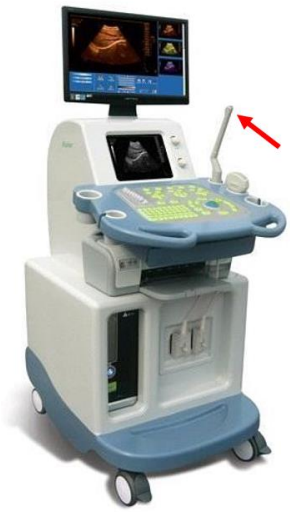


- **What is the purpose of fetal assessment?**
  To identify fetuses at risk of neurologic injury or death in order to prevent prenatal mortality & morbidity.

- **What is the most common reasons for fetal testing?**
  Decreased fetal movements, diabetes, postdates, chronic hypertension, and IUGR.

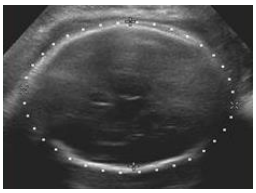
Station 3:

- **What is the machine?** Ultrasound machine.

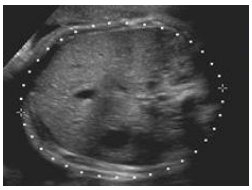


- **Mention 3 of its uses for antenatal monitoring.**
  - To determine the gestational age.
  - To check the Fetal biometry.
  - To check amniotic fluid volume.
- **What is the part pointed by the red arrow?** Transvaginal ultrasound probe.
- **Mention 3 of its uses during pregnancy?**
  - Determining gestational age
  - Fetus position
  - Placenta location
- **Mention 6 parameters you should check during pregnancy US scan.**
  1. Head circumference
  2. Abdomen circumference
  3. Femur length
  4. Biparietal diameter
  5. Amniotic fluid index
  6. Gestational age (fetal crown rump length can be measured between 6 to 11wks)

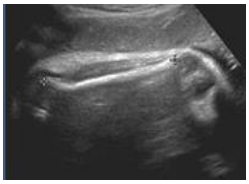
Assessment of fetal growth by ultrasound, Fetal biometry:



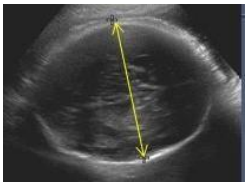
Head circumference



Abdominal circumference

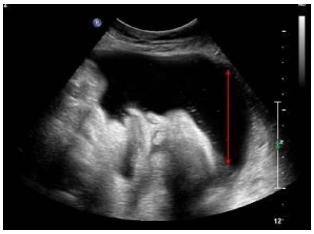


Femur length



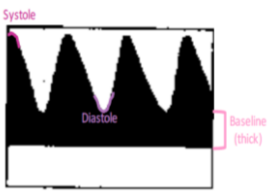
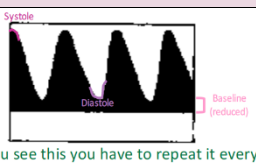
Biparietal diameter

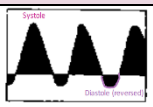
Assessment of fetal growth by ultrasound, Amointic fluid volume:
The sum of the maximum vertical fluid pocket diameter in four quarters. You will put the probe in the 4 abdominal quarts and measure the vertical line in each quarter and sum them up.



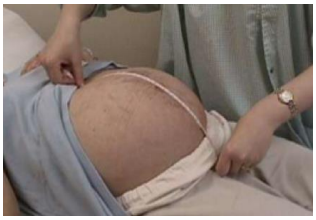
- The normal value: 5 – 25 cm.
- <5 → oligohydraminous.
- >24 cm → polyhydraminous.

Umbilical Artery Doppler: Abnormal umbilical Doppler's (absent or reversed end diastolic flow) can help predict fetuses at increased risk of poor fetal outcome.

Normal pregnancy	Reduce end diastolic velocity
	 if you see this you have to repeat it every 3-4 days to make sure if the baby going to the normal side or deteriorating

Absent diastolic velocity	Reversed end diastolic velocity
 during diastole there is no flow between the mother and the fetus. E.g. IUGR associated with fetal hypoxia.	 which means the blood go from fetus to the mother. this happen bc the fetus is hypoxic → asphyxia → more resistance → the blood can't go to the fetal circulation → return to the mother. This is very dangerous (it is the stage before fetal death) E.g. IUGR associated with fetal hypoxia.

Station 4:



- **Mention 4 causes of large for date?**
  - Incorrect dating of pregnancy (incorrect LMP)
  - Multiple pregnancy
  - Molar pregnancy
  - Polyhydramnios
- **Mention 2 Investigations you will do?**
  - Ultrasound: (to assess the number of fetus, GA, fetal growth, amniotic fluid volume)
  - HCG level.
- **What is the name of this measurement?** Fundal height measurement
- **Mention 3 parameters you should check during pregnancy US scan.**
  1. Head circumference
  2. Abdomen circumference
  3. Femur length
  4. Biparietal diameter
  5. Amniotic fluid index
  6. Gestational age (fetal crown rump length can be measured between 6 to 11wks)

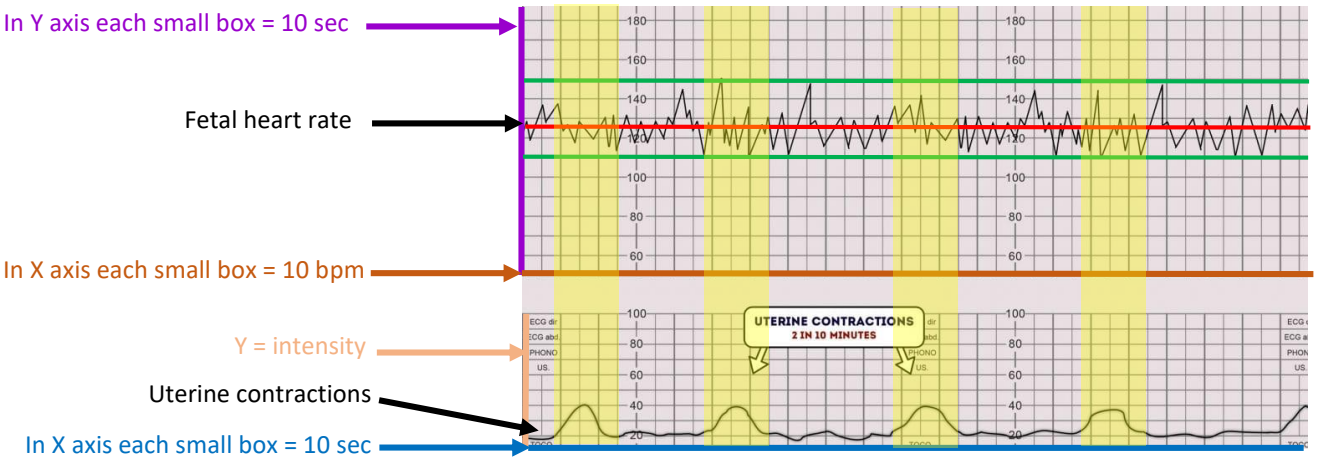
Intrapartum Care

Station 1:

- **What elements support a diagnosis of labor?**
  - **True labor** is defined as progressive dilation and effacement of the cervix in response to regular uterine contractions.
  - **False labor** is defined as contractions at term that do not result in cervical change and are termed "Braxton-Hicks" contractions.
- **What are the stages of labor?**
  - **Stage 1:** is the onset of labor to full cervical dilation (10 cm) is divided into a latent and active phase.
    - Latent phase: < 4 cm dilation "it can last for days"
    - Active phase: > 4 cm dilation "1.2 – 1.5 cm dilation every hour"
  - **Stage 2:** starts from the complete dilation to time of delivery.
  - **Stage 3:** starts from delivering the baby to the expulsion of the placenta, take up to 30 minutes.
  - **Stage 4:** is the immediate postpartum period after delivering the placenta to 2 hours later.
- **Describe the process by which the fetus descends through the birth canal and the steps of vaginal delivery.**

The fetus descends through the maternal pelvis through various flexions and rotations called the cardinal movements of labor: Engagement - Descent - Flexion - Internal rotation - Extension - External rotation - Expulsion.

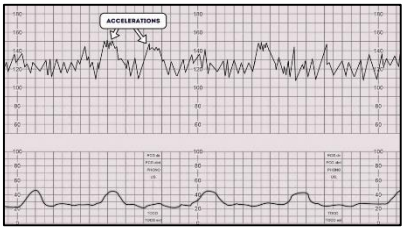
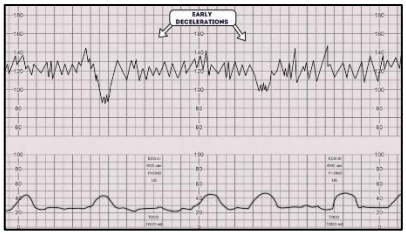
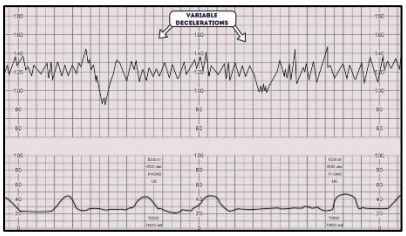
Station 2: Interpretation of CTG (this station is EXTRA but will help you in the next station)

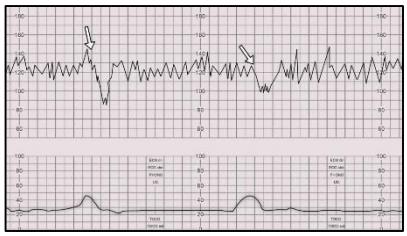
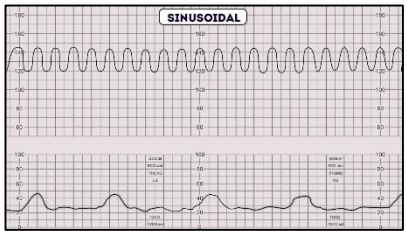


When you read a CTG you have to comment on fetal heart rate, variability, any accelerations or decelerations.
1. Fatal heart rate: draw a straight line in the middle between the fluctuations (the red line) and see the number it cross, this is the heart rate. If there is accelerations or decelerations in this step just ignore them.

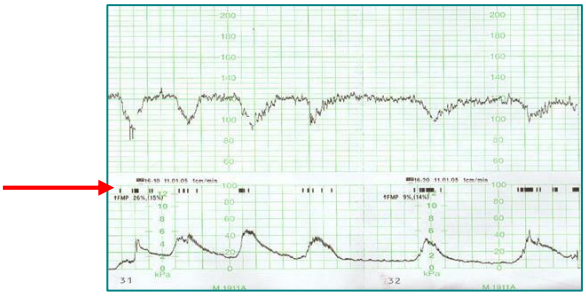
2. Look at the fluctuation (the 2 green lines) and count the boxes between them, (each small box is 10 bpm) this is the variability eg. here there is two and half small boxes, you can say the variability is 25 bpm. Normal variability is between 5-25 bpm. Again ignore any accelerations or decelerations.

3. Now search for accelerations or decelerations (Periodic fetal heart rate changes), and compare the time of deceleration with the uterine contractions (the yellow area), but nothing is here.

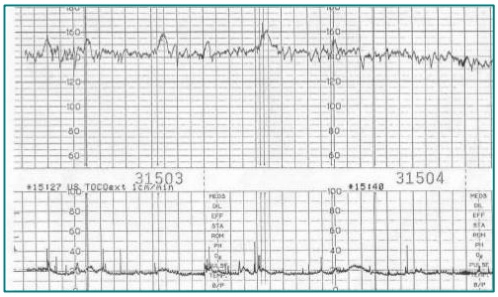
Acceleration	○ Accelerations are an abrupt increase in the baseline fetal heart rate of greater than 15 bpm for greater than 15 seconds. ○ The presence of accelerations is reassuring.	
Early deceleration	Early decelerations start when the uterine contraction begins and recover when uterine contraction stops.	
Variable deceleration	Variable decelerations are observed as a rapid fall in baseline fetal heart rate with a variable recovery phase.	

Late deceleration	Late decelerations begin at the peak of the uterine contraction and recover after the contraction ends. This type of deceleration indicates there is insufficient blood flow to the uterus and placenta. As a result, blood flow to the fetus is significantly reduced causing fetal hypoxia and acidosis.	
Sinusoidal pattern	**A sinusoidal CTG pattern has the following characteristics:** ○ A smooth, regular, wave-like pattern ○ Frequency of around 2-5 cycles a minute ○ Stable baseline rate around 120-160bpm ○ No beat to beat variability **A sinusoidal pattern usually indicates one or more of the following:** ○ Severe fetal hypoxia ○ Severe fetal anemia ○ Fetal/maternal hemorrhage	

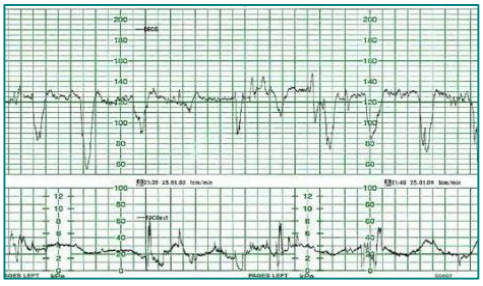
Station 3:



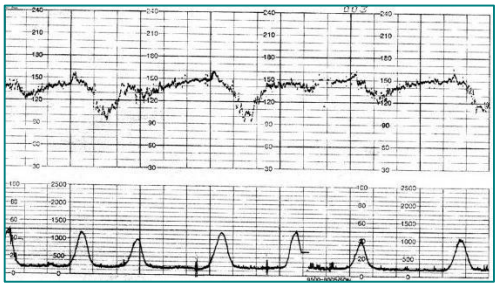
A



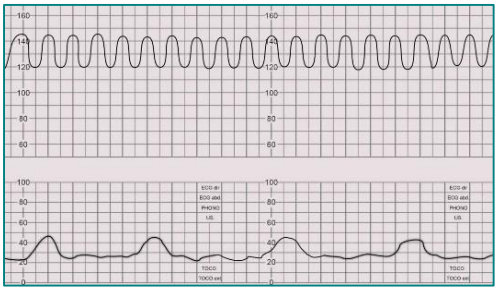
B



C



D



E

- What is name of this tracing/graph? Cardiotocograph (Don't use an abbreviation)
- Comment on each CTG, and the reasons of each abnormal pattern:
  - Early deceleration → head compression.
  - Acceleration → normal.
  - Variable deceleration → cord compression
  - Late deceleration → placental insufficiency
  - Sinusoidal wave pattern → fetal to maternal hemorrhage causing severe fetal anemia and hydrops fetalis.
- Mention the other 5 features related to CTG B.

- Baseline is 140 bpm
- Normal variability
- Presence of acceleration
- Active fetal movement
- No uterine contractions

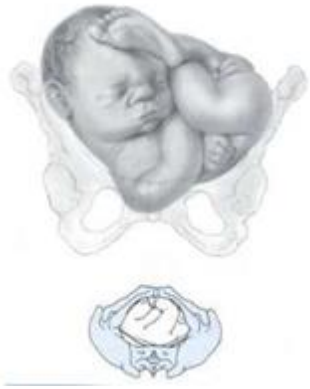
- **What do the lines pointed by the arrow A represent?** Fetal movement
- **Is the patient B in labor? What is your explanation?** No, because there are no uterine contractions.
- **Mention 2 indications for this test.**
  - Decreased fetal movement.
  - Premature rupture of membrane.
- **What are the neonatal risks if the amniotic fluid has meconium?**

  Meconium aspiration syndrome result in: Severe respiratory distress, Mechanical obstruction, Chemical pneumonitis.
- **How would you manage such a case of abnormal heart tracing during fetal monitoring?**
  - Alter position to left or right side.
  - 100% O2 by face mask.
  - Discontinue oxytocin.
  - Rule out cord prolapse by vaginal examination.
  - Preform fetal scalp stimulation.
  - Consider terbutaline.
  - If persist abnormal patterns, consider fetal scalp blood pH [pH ≤ 7.20 deliver immediately].

Abnormal Presentation

Station 1:

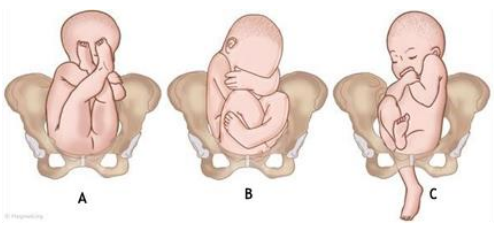
- **What is the Lie?** Transverse lie.



- **Mention 4 risk factors for this lie?**
  - Uterine anomalies
  - Uterine fibroids
  - Polyhydramnios
  - Multiple gestation
- **She is 39 weeks, mention 2 ways to deliver?**
  - In order to enable vaginal delivery: External cephalic version
  - C-section
- **Finding in abdominal examination?**
  - Low fundal height to date.
  - Feel the head on abdominal lateral sides, feel the back of the fetus running transverse lie.

Station 2:

- **Identify A, B, C.**
  - A. Frank breech.
  - B. Complete breech.
  - C. Footling breech.



- **What would you do for her antenataly? and what are its Prerequisites', contraindications, and complications of it?**
  Will do External cephalic version(ECV).

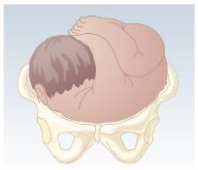
Prerequisites for ECV	Contraindications For ECV	Complications OF ECV
- Done after 38 weeks. - If blood group is rhesus negative should receive anti D immunoglobulin. - It should be done in the theater with everything ready for C-section. - Known placental location (NOT placenta previa).	- Contracted pelvis. - Scared uterus (prior uterine surgery). - Uteroplacental insufficiency. - Placenta Previa. - Hypertensive patient. - Intrauterine growth restriction. - Oligohydramnios.	- Membrane rupture. - Uterine rupture. - Abruption placenta. - Cord prolapse.

- **Mention 4 risk factors for this condition?**
- Prematurity (The most common), uterine anomaly, fetal anomaly (e.g. hydrocephaly), prior breech, multiple gestation and polyhydramnios.
- **If she presented in at labor her 37th week with this presentation. What would you do for her?** C-section. Before 36 do nothing, just wait.

Face: Mento-anterior

Face: Mento-posterior

Shoulder presentation



Brow presentation

Induction of Labor

Station 1:

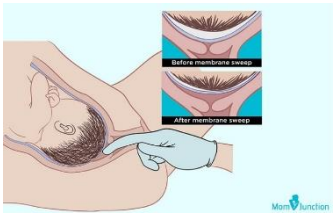
Bishop Score

This whole table is not from the slides.	0 points	1 points	2 points	3 points
Cervical position	Posterior	Midline	Anterior	
Cervical consistency	Firm	Moderately firm	Soft (ripe)	
Cervical effacement	Up to 30%	31% - 50%	51% - 80%	> 80%
Cervical dilation	Closed or 0 cm	1 – 2 cm	3 – 4 cm	> 5 cm
Fetal station	-3 cm	-2 cm	-1 / 0 cm	+1 / +2 cm

Modified Bishop score:
Used to assess the cervix and the likelihood of a successful induction.
Interpretation:

- Bishop score ≥ 8 → favorable cervix for vaginal delivery.
- Bishop score ≤ 6 → unripe or unfavorable cervix; not ready for vaginal delivery.

Simplified Bishop Score: considers only fetal station, cervical dilation, and cervical effacement; a score ≥ 5 indicates a favorable cervix for vaginal delivery.



Sweeping of the membranes

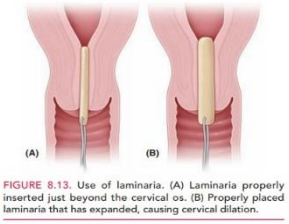
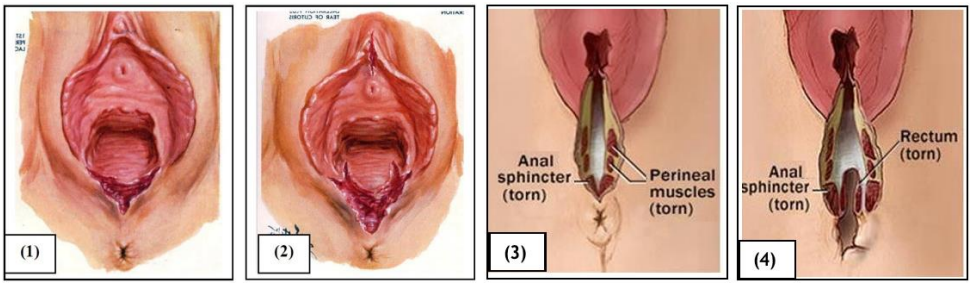


FIGURE 8.13. Use of laminaria. (A) Laminaria properly inserted just beyond the cervical os. (B) Properly placed laminaria that has expanded, causing cervical dilation.

A mechanical method
Hydroscopic dilator (Laminaria tents)

Operative Delivery & C Section

Station 1:



- What is the complication seen?
  - 1st degree perineal laceration.
  - 2nd degree perineal laceration.
  - 3rd degree perineal laceration.
  - 4th degree laceration.
- What are these lesions most likely caused by? Vaginal delivery.
- What are the anatomical layers that are damaged in each category?
  - **1st degree:** involves the skin and the vaginal mucosa but not the underlying fascia and muscle.
  - **2nd degree:** also involves the fascia and the muscles of the perineal body but not the anal sphincter.
  - **3rd degree:** Involves the anal sphincter but doesn't extend through it.
  - **4th degree:** laceration involve 3+laceration into rectal mucosa(complete sphincter transection).
- What are the predisposing factors? Mention three
  - Instrumental delivery.
  - Macrosomic baby.
  - Primigravida.
- How can we avoid "3" complication? Mediolateral episiotomy.

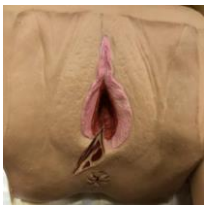
Station 2:

- What is it? Surgical incision made in the perineum to enlarge the vaginal opening and assist in childbirth.
- When it's performed? Incision is done at the time of head crowning.
- Done by what? Incision done by using Episiotomy scissor. You have to know how it looks like

Indications	Advantages	Complications	Contraindications
They will ask you to mention 2-3 only			
- Shoulder dystocia. - Non-reassuring fetal monitor tracing. - Delayed second stage of labor. - Fetal distress in second stage. - In cases of prematurity to protect fetal head. - Forceps or vacuum extractor vaginal delivery. - Vaginal breech delivery. - Narrow birth canal. - Imminent perineal tear.	- Ensures quicker, easier and safer delivery of the fetus. - It saves unnecessary wear and tear upon the fetal skull. - Avoids irregular lacerations of the vagina of perineum. - Avoids injury to the maternal soft tissues with subsequent Uterovaginal (UV) prolapse.	- Tear and extension. - Excessive blood loss. - Hematoma. - Infection. - Incontinence. - Wound dehiscence. - Dyspareunia.	**Absolute:** - Patient's refusal for the procedure[1] - Women with bleeding abnormalities. **Relative:** - Women with HIV infection[2]. Rhesus negative mother with a rhesus positive child[3]. - Abnormalities of the perineum. - Inflammatory bowel disease, - Lymphogranuloma venereum. - Severe perineal scarring, and perineal malformation.

[1] The most important contraindication.
[2] This is relative contraindication and not absolute, hence may be done in some cases.
[3] This is relative contraindication and not absolute, as Rhogam anti D immunoglobulin may be given after delivery.

- Mention the type of episiotomy?

	Midline	Mediolateral
Procedure	Incision is made in the middle of the vaginal opening, straight down toward the anus	Incision begins in the middle of the vaginal opening and extends down toward the buttocks at a 45 degree angle
Advantages	○ Less perineal pain. ○ Less bleeding. ○ Easy repair and improved healing	Lower risk of extension into rectum.
Disadvantages	Increased risk for tears that extend through the anal muscles	○ More perineal pain. ○ More bleeding. ○ Harder to repair.
How it looks like (it may orally or SAQ, so know how it looks like)		

Station 3:

- Identify the picture. Long curved Simpsons forceps.
- Mention 2 indications, 4 prerequisites and 3 complications for this instrument.

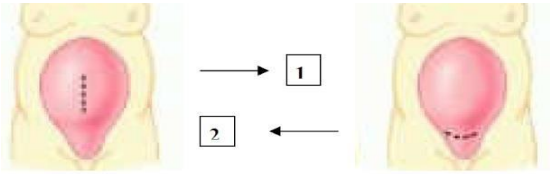
Indications	Prerequisites	Complications
- Breech presentation. - Prolonged 2ND stage labor - Fetal distress. - Avoid maternal pushing: in which pushing efforts may be hazardous e.g., cardiac, pulmonary, retinal detachment or neurologic disorders.	- Engagement of the head. - Anesthesia. - Empty bladder. - Dilated Cervix. - Ruptured membrane.	- Maternal trauma. - Facial palsy. - Maternal bleeding. - Fetal skull fracture

Station 4:

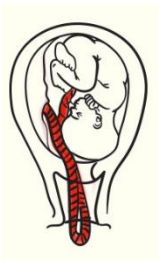
- Identify the Instrument 1 & 2.
    1. KiWi Vacuum Extractor (plastic vacuum)
    2. Vacuum extractor (soft cups)
- Mention 3 indications, 3 prerequisites and, 2 contraindications and 4 complications.

Indications	Prerequisites	Contraindications	Complications
- Prolonged 2nd stage labor. - Fetal distress. - Avoid maternal pushing: in which pushing efforts may be hazardous e.g., cardiac, pulmonary, retinal detachment or neurologic disorders.	- Engagement of the head. - Anesthesia. - Empty bladder. - Dilated Cervix. - Ruptured membranes	- Preterm labor. - Breach and face presentation	**Maternal:** - Vaginal laceration & soft tissue injury. - Bleeding from laceration. **Fetal:** - Cephalohematoma. - Subgleal hemorrhage is the most feared complication. - Chignon

Station 5:

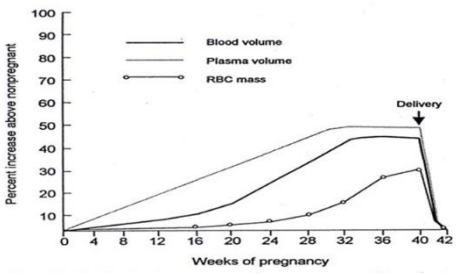


- **What types of uterine incisions are used in caesarean section?**
  - Lower segment transverse
  - Upper Segment (Classical)
- **Which one is the most commonly used and why?**
  Lower segment because it has less complications and rupture of the scar in the future is less compared to the upper segment.
- **Give two (2) indications for elective caesarean section?**
  Breech presentation, Multiple pregnancy, Active herpes, 2 previous CS, hx of myomectomy.
- **Give two (2) emergency indications for type A CS.**
  Cord prolapse, Fetal distress, Vasa previa , Severe Preeclampsia toxaemia
- **Name 4 complications.**
  Hemorrhage, Infections, Injury to surrounding organs, Fetal injury
- **What additional risks are faced when doing CS for placenta Previa?** Bleeding


Cord Prolapse

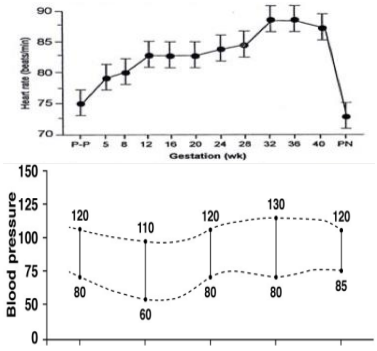
Physiological Changes in Pregnancy

Station 1:



- **What does this picture show you?**
  During pregnancy the blood volume and RBCs mass will increase, and because of the dilution of the blood there will be anemia. This will dissolve very quickly after delivery.
- **What are other hematological changes happening during pregnancy? Mention 3**
  1. Increase coagulation factors
  2. Fall in platelets
  3. Increase in WBCs
  4. Decrease hematocrit

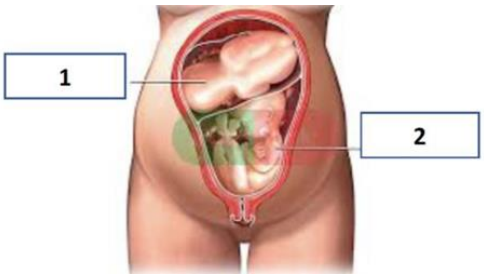
Station 2:



- **What does those pictures show you?**
  During pregnancy there is increase in heart rate and decrease in blood pressure. All those changes are physiological and will go back to normal immediately after delivery.
- **What are the other cardiovascular changes that happen during pregnancy? Mention 3.**
  1. Increased loudness of both s1 and s2
  2. Loud s3 by 20 weeks' gestation.
  3. Systolic ejection murmur
  4. Peripheral edema
  5. Raised JVP

Multiple Gestations

Station 1: A primigravida known to have twin pregnancy presented to the antenatal clinic at 38 weeks gestation.



- **What is the lie of twin 1?** Transverse
- **What is the presentation of twin 2?** Frank Breech presentation
- **What mode of Delivery is advised and why?** C-Section because of the abnormal presentation of the twin.
- **What type of chorionicity in this twin?** Monochorionic diamniotic.
- **Mention 3 other types of twins (depending on chorinicty and amniocity).**
  Monochorionic–monoamnionic, Monochorionic–diamnionic, Dichorionic–diamnionic.
- **What nutritional deficiency will present in this case?** Folic acid, Calcium and Iron.
- **With the following types of presentation, what will be your preferred mode of delivery?**
  - Cephalic - Cephalic: vaginally
  - Breech – Cephalic: CS
  - Cephalic – Breech: vaginally
  - Breech – Breech: CS
- **Mention 3 risk factors.**
  - Dizygotic twins are most common. Identifiable risk factors include by advance maternal age, family history, or ovulation induction.
  - Monozygotic twins have no identifiable risk factors.
- **What complications may happen to the mother during antenatal period? Mention three (3).**
  - Gestational diabetes
  - Pre-eclampsia
  - Anemia
  - Hyperemesis gravidarum
- **Mention one postpartum maternal complication.** Postpartum hemorrhage

Rhesus Isoimmunization

Station 1: A primigravida known to have twin pregnancy presented to the antenatal clinic at 38 weeks gestation.

- **What's Rhesus Isoimmunization ?**
  It's when a pregnant woman (-Rh) develops antibodies of her current or previous fetus(+Rh).
- **What's the pathophysiological response of the mother's body when exposed to the baby's Rh+ blood?**
  Initially, Production of IgM antibodies followed by the production of IgG antibodies that are able to cross the placenta to the fetal blood, causing fetal hemolysis known as Erythroblastosis Fetalis.
- **Which tests to order for the suspected mother and fetus?**
  - **For the mother:** Kleihur-Betke test
  - **For the fetus:** MCA Doppler to detect anemia, Amniotic fluid spectrophotometry to estimate bilirubin concentration (RBCs destruction → enlarged liver → high bilirubin) and Queenan chart.

- **What does Kleihur-Betke test detects?**
  The amount of fetal RBCs in the mother's blood.
- **When should the pregnant woman receive Rho-GAM?**
  - **Prophylactically:** At 28w gestation and after 12w if delivery has not yet occurred.
  - **Therapeutically:** within 72h of delivery, bleeding or any other invasive obstetric procedure during pregnancy.
- **What's the is the dose?** 300mcg
- **What's the only direct measure of fetal anemia?** Percutaneous Umbilical Blood Sampling (PUBS)
- **In positive maternal antibodies screen, what's the critical titer range associated with fetal hemolytic disease?** Between 1:16 and 1:32.

PROM

Station 1: Pregnant lady presented with gush of fluid.

- **What is your Ddx?**
  - PROM.
  - vaginal discharge.
  - urinary leakage (e.g. incontinence).
  - Semen (ask about history of intercourse)
- **Investigations to confirm the Dx?**
  - Pooling in speculum examination (important to know name of speculum)
  - Nitrazine paper test (chance of false +ve if other alkaline fluid as semen or urine or alkaline infection… so amnisure is better)
  - Ferning test
  - AmniSure
- **How would you manage this patient conservatively?**
  - Dexamethasone for maturing of lung (if less than 22 months' gestational age they will NOT benefit from dexamethasone because surfactants develop after 24 weeks)
  - prophylactic antibiotics (to increase latency period which is the period between rupture of membrane and spontaneous labor)
  - fetal monitoring (check biophysical profile)
  - Obtain swabs to rule out Chlamydia trachomatis, Neisseria gonorrhea and group B streptococcal infection
  - Hospitalize the mother and:
    - Do WBC labs twice per week
    - Make sure chorioamnionitis doesn't develop (signs include foul discharge and uterus tenderness at palpation) because chorioamnionitis puts both mother and baby at risk of septicemia.
    - Urinalysis and culture (try to avoid UTIs as possible because puts at risk for labor)
- **What are the complications if it was a PROM?**
  - Premature delivery, cord prolapse, Intrauterine infection (chorioamnionitis)
  - If continuous oligohydramnios state before 22 weeks, then big chance the baby will die because poor alveoli development, but if 24-26 weeks there is a bigger chance for survival.
- **What risk factors may cause PROM?**
  Ascending infections, Short cervical length, Smoking (the risk is doubled), History of PROM, Polyhydramnios, Multiple gestations.

Preterm Pregnancy

Station 1:

- **What characteristics distinguish Braxton-Hicks contractions from true labor contractions?**

Braxton-Hicks contractions	True Labor Contractions
Irregular and sporadic contractions (↑ in the last 4-8 wks. Of pregnancy)	Regular intervals
Painless or mild intensity	Progressively ↑ in frequency and intensity
Not associated with progressive cervical dilation and effacement	Associated with cervical dilation
Resolve with rest, hydration, and/or sedation	Not resolve with sedation

- **What are the sign and symptoms of preterm labor?**
  Menstrual-like cramps, Abdominal pressure, Low & dull backache, Increase or change in vaginal discharge (mucous, watery, light bloody discharge).

Post Term Labor

Station 1:

- **What is the most common cause of post-term pregnancy?** Inaccurate estimation of gestational age
- **What are the concerns of post-term pregnancy?**

Antenatal	Intrapartum	Neonatal
- Macrosomia - Post maturity syndrome - Oligohydramnios - Perinatal death	- Labor dystocia - infant birth trauma - Maternal perineal trauma Cesarean delivery - Postpartum hemorrhage - Meconium passage	- Meconium aspiration syndrome. - Hypoglycemia - Hyperbilirubinemia

- **What is the cause of post-maturity syndrome?** It results from placental insufficiency.
- **What are the features of post-maturity syndrome?**
  A. Loss of subcutaneous fat
  B. Abundant hair
  C. Long fingernails
  D. Dry, peeling and wrinkled skin.

Bleeding in early pregnancy

Station 1: Mrs. Nada presented at 7 weeks of amenorrhea, lower abdominal pain and vaginal bleeding. The pregnancy test came positive.

- **What is your diagnosis?** Ectopic pregnancy.

- **What are the clinical signs that supports your diagnosis?**
  A. **Unruptured:** unilateral adnexal and cervical motion tenderness.
  B. **Ruptured:** Hypovolemia (hypotension and tachycardia).
  C. Peritoneal irritation (Abdominal guarding and rigidity).

- **What are the risk factors for this condition? Mention 4.**
  A. Previous ectopic.
  B. History of PID, Salpingitis, Endometriosis.
  C. Tubal ligation.
  D. Uterine leiomyomas, adhesions & abnormal uterine anatomy.

- **What is the most common place for ectopic pregnancy to occur?** Ampullary.

- **What are the investigations you will ask for?**
  A. Serial B-HCG. If positive, it will be >1,500 mIU.
  B. US.

Remember:

- Vaginal sonography is able to visualize an intrauterine pregnancy by the 5th week where the level of β-HCG >1,500 mIU.
- Abdominal sonography is able to visualize an intrauterine pregnancy by the 6th week where the level of β-HCG >6,500 mIU.

- **What are the treatment options?**
  A. **Surgical:** Salpingostomy or Salpingectomy.
  B. **Medical:** Methotrexate.

- **List some of the contraindications of methotrexate:**
  A. Hemodynamic instability.
  B. Liver or kidney abnormalities.
  C. Active lung disease.
  D. Breast feeding.
  E. Inability to comply with B-HCG follow up testing.

Station 2:

- **What is the deferential diagnosis for 1st trimester bleeding?**
  A. Abortion (spontaneous, incomplete, etc.).
  B. Ectopic pregnancy (ruptured, unruptured).
  C. Molar pregnancy.
  D. Physiological implantation bleeding.

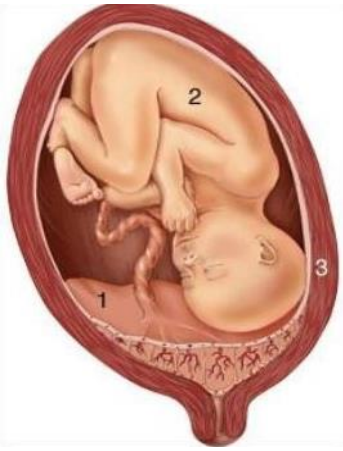
- **List some types of Abortions?**
  A. **Threatened:** Pregnancy is complicated by vaginal bleeding before 20 weeks in absences of other explanations.
  B. **Inevitable:** Pregnancy is complicated by both vaginal bleeding and cramp-like lower abdominal pain.
  C. Incomplete: in addition to vaginal bleeding, cramp-like pain, and cervical dilation, there's partial explosion of products.
  D. Missed: When the fetus has died but is retained in the uterus, usually for more than 6 wks.

E. **Complete:** Passage of all products of conception.

- **What is the most common cause of 1st trimester loss?**
  Increased maternal age which increases risks for: Chromosomal abnormalities such as Turner syndrome & Trisomy 21 (Down's syndrome).
- **What is the most common cause of 2nd trimester loss?**
  A. Maternal systemic disease (thyroid disease, luteal phase defect, autoimmune diseases, and TORCH infections.
  B. Antiphospholipid syndrome.
  C. Abnormal placentation.
  D. Other anatomic considerations.
- **What is the most common cause of recurrent pregnancy loss?** Anti-phospholipid syndrome.
- **Name an important consideration after pregnancy loss?**
  Blood typing for Rh factor is essential followed by RhoGAM injection if patient is Rh negative. This is vital to prevent Rh sensitization in a subsequent pregnancy.
- **What are treatment options for spontaneous abortion?**
  For incomplete, inevitable and missed abortions, management may include expectant, medical or surgical management. We start with Medical management with prostaglandins, or expectant management it may be associated with bleeding and still require surgical evacuation. If it's failed, we will move to Surgical management with dilation and curettage or manual vacuum aspiration which is more definitive.

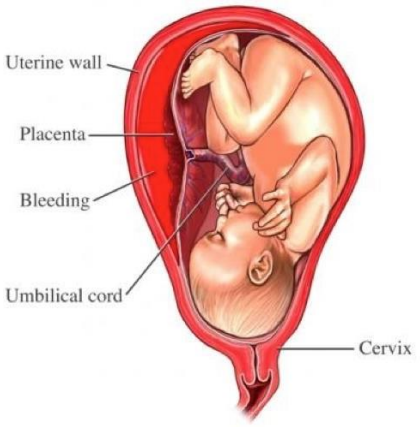
Bleeding in Late pregnancy (3rd trimester)

Station 1:



- **What is the diagnosis in this picture?** Placenta Previa
- **In which trimester do patient usually present?** 3rd trimester
- **If a patient presented with minimal vaginal bleeding at 30 weeks, how would you manage her?**
  Expectant management (Admit her to the hospital, limited movements and consider corticosteroids therapy for lung maturity, avoid DIGITAL CERVICAL EXAM)
- **What is the mode of delivering a patient with this condition?** C-Section
- **Mention three (3) complications of this condition?**
  A. Painless Bleeding
  B. Abnormal extension of the placental tissue (placental accreta, increta, percreta)
  C. Preterm labor
- **What are the three other clinical types of this condition?**
  A. Total complete or central previa
  B. Partial previa
  C. Marginal or low lying previa
- **What do you call it if it is morbidly adherent?** Placenta accrete, increta or percreta

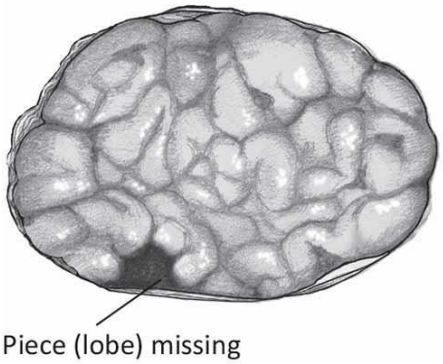
Station 2:



- **What is this?** Placenta abruption (Complete separation with concealed hemorrhage).
- **Define this condition?**
  An Abruptio placenta is defined as the premature separation of the placenta from the uterus.
- **In which trimester do patient usually present?** 3rd trimester
- **What are the two other clinical types of this condition?**
  Partial separation, marginal separation.
- **List 4 Risk factors.**
  - Maternal hypertension
  - Maternal trauma
  - Cigarette smoking
  - Alcohol consumption
  - Pervious abruption
- **What is the Classical presentation?** vaginal bleeding + abdominal pain ± DIC.
- **How to manage? mention 4.**
  - Admit (History & examination assess blood loss, Confirm normal placenta location by US)
  - Restore blood loss by IV fluids or blood products
  - Assess fetal well-being
  - conservative hospital observation if mother and fetus are stable, decreasing bleeding, contraction subsiding
  - emergency C-section if maternal of fetal jeopardy is present.
- **What is the meaning of (Couvelaire uterus)?**
  It is a one of serious complication of placenta abruption, when there is bleeding that penetrates into the uterine myometrium forcing its way into the peritoneal cavity.

Post-partum Bleeding

Station 1:



- **What is the diagnosis in this picture?** Missed lobe, retained placental tissue
- **Mention 1 symptom.** Postpartum hemorrhage.
- **Mention 3 management options.**
  - Stabilize vitals.
  - IV fluids, blood cross matching (If needed).
  - Manual exploration and removal, uterine curettage (under US guidance).
  - Emergency hysterectomy (If needed).
- **What are the complications if diagnosis was missed.**
  - DIC
  - Infection
- **Name 2 other conditions that give similar presentation (PPH).**

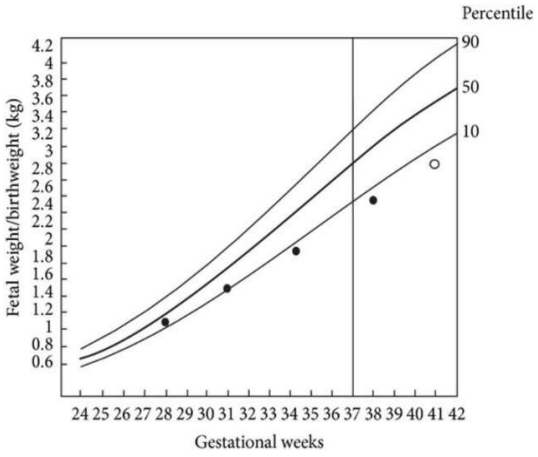
- Uterine atony.
- Perineal lacerations
- tears- Coagulopathy.

- **Two steps of the active management in the third stage of labor.**
  - Inject oxytocin
  - controlled perform cord traction while massaging the uterus

- **What is the most common cause of PPH and what are the risk factor for that?**
  The most common is Uterine atony, risk factor (Hx of PPH, Grand multiparity, protracted labor, Oxytocic augmentation of labor, Over-distended uterus (multiples, hydramnios, fetal macrosomia)

IUGR - IUGD

Station 1: 36 weeks gestation age lady presented to the ER because she noticed decreased fetal movements



- **What is the dx (without abbreviation)?** Intrauterine growth restriction (IUGR).
- **Define IUGR?**
  Fetus with estimated fetal weight (EFW) <5−10 percentile for gestational age.
  Another definition is <2.5 Kilograms
- **What are the 2 types? and how can you differentiate between them? What other parameters will you need to differentiate?**

Symmetric IUGR:

A. All ultrasound parameters (HC, BPD, AC, FL) are smaller than expected.
B. Amniotic fluid index is often normal.

Asymmetric IUGR:

C. Ultrasound parameters show head sparing, but abdomen is small.
D. Amniotic fluid index is often decreased, especially if uteroplacental insufficiency is severe.

- **Mention three maternal conditions associated with this diagnosis**

Asymmetric IUGR: etiology is anything decreases placental perfusion

A. chronic hypertension, preeclampsia
B. small vessel disease (SLE, long standing type 1 diabetes)
C. cardiovascular diseases

- **Mention two fetal conditions associated with this condition**

Symmetrical IUGR: Etiology is decreased growth potential

A. Aneuploidy(21, T18, T13), early intrauterine infection(eg,TORCH), gross anatomic anomaly(congenital heart disease, neural tube defects , ventral wall defect)

- **Mention three investigations to do for fetal assessment.**

A. Non stress test
B. Amniotic fluid index
C. biophysical profile
D. umbilical artery dopplers
E. serial sonograms

- **If results were normal, how frequent will you assess the fetus?** every 2-3 weeks.

Station 2:

- **What's fetal demise?** Fetal death after 20w gestation.
- **What is the most important and first thing to do in fetal demise management?** Confirm the diagnosis!
- **What are treatment options?**
  A. **Watchful expectancy:** spontaneous labor onset within 2-3w of fetal demise.
  B. **IOL:** 12-28w via prostaglandins or misoprostol, after 28w via misoprostol followed by oxytocin.
- **What are the associated maternal risks?** Consumptive Coagulopathy and DIC.
- **How to avoid maternal coagulative complications?** Weekly monitoring of fibrinogen, hematocrit & platelets.

Gestational Diabetes

Station 1:

- **What is your diagnosis?** Macrosomia
- **What is the definition of macrosomia?**
  Birth weight greater than 4000-4500 g or greater than 90% for gestational age.
- **Name 4 risk factors for this condition?**
  - Gestational diabetes mellitus
  - Past history of macrosomic baby.
  - Maternal Obesity.
  - Prolonged gestation.
- **Mention 3 maternal complications should you anticipate in a delivery of macrocosmic baby.**
  - Postpartum hemorrhage.
  - pelvic floor injury
  - perineal lacerations
- **Mention 3 neonatal complications that may occur to macrosomic baby**
  - Shoulder Dystocia.
  - Cervical Bone fracture.
  - Asphyxia.
- **What is the characteristic of the placenta for this baby?**
  - The placenta of the macrosomia fetus can be either:
  - Significantly thin
  - Significantly calcified
  - Extremely small
  - Significantly large

Station 2: 30 y/o obese pregnant has glycosuria.

75 g of glucose	Fasting:	Less than 95 mg/dL or 5.3 mmol/L
	1-hour:	Less than 180 mg/dL or 10.0 mmol/L
	2-hour:	Less than 153 mg/dL or 8.5 mmol/L

- What is your Dx? Gestational Diabetes
- Risk factor from the scenario? Age, obesity
- The baby what will have? Macrosomia
- How to conform the Dx?
  Oral glucose tolerance test (diagnostic if any value of the following is abnormal)

Preeclampsia

Station 1: A 20 year old primigravida attends the antenatal clinic at 34 week gestation and she is noted to have a blood pressure of 150/95 mmHg. Urinalysis is ++ protein. Her blood pressure had previously been recorded in the range of 130-150 to 80-85 mmHg in the midtrimester. The fetal size is clinically appropriate for dates.

- What is the differential diagnosis? Mention 2.
  1. Preeclampsia toxemia
  2. Chronic HTN superimposed with preeclampsia
- What is the most likely diagnosis? Preeclampsia
- What information in the above scenario helps to support your likely diagnosis in 2? Mention 2.
  A. Primigravida
  B. High BP
  C. Proteinuria
- What other symptoms you would ask for when you encounter such a history? Mention 2.
  A. Headache
  B. Visual disturbances
  C. Epigastric pain
  D. Weight gain
- What investigation you would do to help you in the management of this woman? Mention 2.

  CBC, LFT, kidney function test, urine analysis
- What is the management you would do in this case?
  A. **Conservative management:** Before 37 weeks' gestation as long as mother and fetus are stable, mild preeclampsia is managed in the hospital or as outpatient, watching for possible progression to severe preeclampsia. No antihypertensive agents or MgSO4 are used.
  B. **Delivery:** At ≥37 weeks' gestation, delivery is indicated with dilute IV oxytocin induction of labor and continuous infusion of IV MgSO4 (magnesium sulfate) to prevent eclamptic seizures.
- What is the management if this case progress to have visual disturbance?
  Delivery is indicated for preeclampsia with severe features at any gestational age with evidence of maternal jeopardy or fetal jeopardy (delivery because placenta is the source of the problem)
  A. Administer IV MgSO4 to prevent convulsions. Continue IV MgSO4 for 24 hours after delivery. (monitor renal output if you give MgSO4, it is excreted mainly by urine)ما دام احتجنا نعطي مجنيزيوم سولفيت فنولدها

B. Lower BP to diastolic values 90–100 mmHg (do not lower her BP too much) with IV hydralazine and/or labetalol (avoid labetalol if in asthma or heart failure).
C. Attempt vaginal delivery with IV oxytocin infusion if mother and fetus are stable.

- **What are the risks that could happen to her baby?**

Perinatal outcome is strongly influenced by gestational age and the severity of hypertension, there are short and long-term effects:

1. **short-term effects:**
    a. Lack of oxygen and nutrients, which can impair fetal growth
    b. Preterm birth
    c. Infant death
2. **long-term effects (due to IUGR):** more likely to develop: hypertension, coronary artery disease, and diabetes in adult life.

- **What can you do or give her to prevent preeclampsia recurrence in future pregnancy?**

A. Control comorbidities (e.g.: obesity, hypertension, diabetes, autoimmune disease) and lifestyle
B. Discuss realistic goals (weight loss, glucose control, blood pressure control).
C. Maintain use of contraception while attempting to control comorbidities.
D. Discuss possible interventions to prevent preeclampsia recurrence, such as calcium supplementation and low–dose Aspirin (very important to mention those two!!)

- **What workups would you order in pre-eclampsia?**

Labs for the mother:

A. CBC (includes platelets count. Platelets may be reduced when platelets are consumed in HELLP syndrome)
B. Renal function tests (creatinine, uric acid (indicative for severe pre-eclampsia))
C. Liver function tests
D. Coagulation profile

Monitor baby:

E. Non-stress test
F. Fetal growth assessment and if below normal do U.S. doppler for baby and placenta… if increased resistance we might consider delivering the baby.

- **If the mother already presented to you with eclamptic seizure how would you manage her?**

This is an obstetric emergency, must stabilize the mother and correct hypoxia. As with any seizure condition, the initial requirement for stabilization is:

- Protect the patient from injury
- Clear the airway
- Give oxygen by face mask to relieve hypoxia
- Blood pressure and pulse oximetry should be recorded every 10 minutes
- A 16- to 18-gauge IV line should be placed for drawing blood and administering drugs and fluids.

⌑ **Treatment for seizure is magnesium sulfate & delivery of baby.**

- **Is there future risks on the mother?** Yes, bigger risk of preeclampsia re-occurrence (25-60% more) and risk of hypertension and diabetes in the future.

Thromboembolic Disease

Station 1:

- **What are the risk factors for TED?**
  personal or family history, age > 53, obesity, Operative delivery, Immobility.
- **What is the treatment of acute phase TED?**
  LMWH S.C should be started once the diagnosis is clinically suspected until excluded by objective testing.

UTI & Anemia in Pregnancy

Station 1: A 25 Years old 36 weeks' pregnant lady has an acute UTI.

- **What is the most common organisms of Acute UTI?** E-coli and group B strep.
- **would you treat this lady? Or not? and how?**
  Yes, even if she had asymptomatic bacteriuria I would treat her.
  A. ABU and cystisi → Nitrofurantoin or Amoxacillin.
  B. Pyelonephritis → (inpatient) Iv ampicillin or cephalosporin until fever subsides 24h then oral.
- **What is the consequence of not treating her?**
  Acute pyelonephritis → Sepsis , acute respiratory distress syndrome (ADRS), anemia, preterm labor, renal failure.
- **How to prevent it?**
  Prenatal screening for ABU in pregnant women, Hygiene.

Station 2: A pregnant woman present with low serum Fe and high TIBC at 20 weeks of gestation with Hg of 9.

- **what is the most likely diagnosis?** Iron deficiency anemia
- **How would you manage her?** Oral iron and folic acid
- **How does anemia effect on mother and fetus?**
  Mother & pregnancy:
  A. Increase risk of: PET, Abruptio placenta, preterm labor, PPH, CHF, UTI, sepsis
  Fetus:
  B. Abortion, preterm labor, IUGR, IUFD, low apgar scor at birth.
- **What are the indications for blood transfusion?**
  A. Severe anemia first seen after 36 weeks of pregnancy
  B. Anemia due to acute blood loss – APH, PPH
  C. Associated infection
  D. Patient not responding to oral and parenteral therapy
  E. Anemic and symptomatic pregnant women (Dyspnic, HF) irrespective of GA .

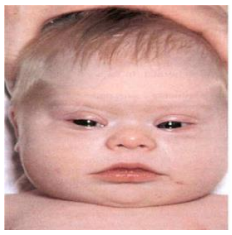
Puerperal Sepsis

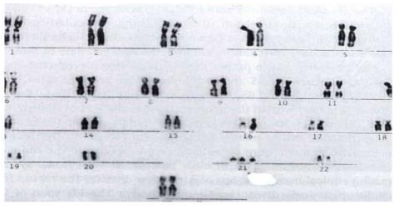
Station 1:

- **List some of the causes of post-partum fever.**
    - Atelectasis day 0
    - UTI day 1-2
    - Endometritis day 2-3
    - Wound infection day 4-5
    - Septic-pelvic thrombophlebitis day 5-6
- **What are the most common organisms that cause Puerperal sepsis?** Anaerobic (E-coli, peptostreptococcus, peptococcus).
- **list some factors could predispose to devolve puerperal infection?**
  Poor nutrition & hygiene, anemia, PROM, CS, cervical or vaginal laceration.
- **Why the rate of postpartum complications are thought to be increasing in the last decades ?**
  Secondary to the increase of CS delivery.

Congenital Anomalies

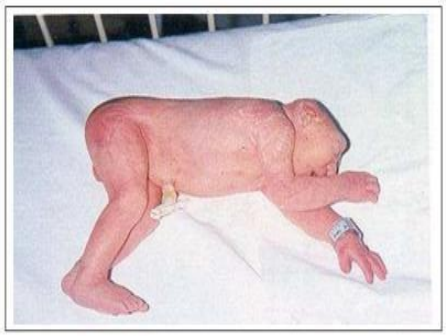
Station 1: From the picture in front of you.





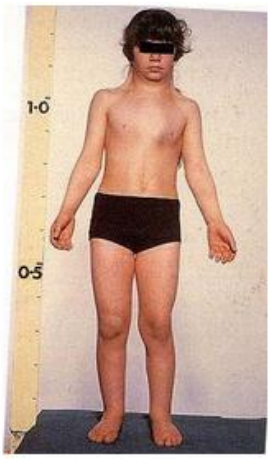
- **What is the diagnosis? What is the chromosomal abnormality?**
  Down syndrome. Trisomy 21.
- **Mention two factors increase the incidence of this abnormality.**
    A. Increased maternal age.
    B. Folic acid deficiency
- **Mention 4 features of this disease.**
    A. Low lying ear.
    B. An abnormally small chin.
    C. Round face.
    D. Congenital heart disease.
    E. Almond shaped eyes.
- **What is the most important U\S finding for this abnormality in the first trimester?** Nuchal translucency
- **Mention 2 antenatal tests you would order?**
    - Triple markers screening (↓AFP, ↓estriol, and ↑beta-hCG)
    - Amniocentesis

Station 2: From the picture in front of you.



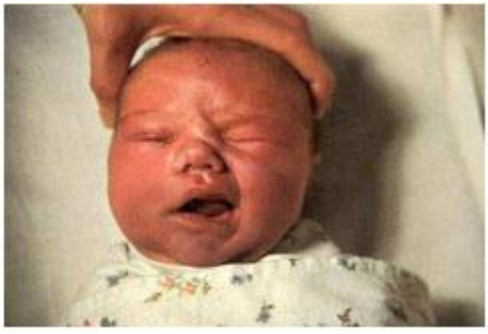
- What is this condition?
  Neural tube defect: Anencephaly.
- Mention two types of this condition?
  Types of neural tube defect:
  A. Spina bifida
  B. Anencephaly
  C. Encephalocele
- How to detect it antenatal?
  A. **By physical exam:** can't palpate the fetal head.
  B. **US:** absent brain and skull bones.
  C. **Triple marker test:** elevated alpha-fetoprotein, decreased hCG, decreased Estriol.
  D. Amniocentesis
- How would you prevent it? By folic acid supplementation in diet.

Station 3: From the picture in front of you.



- What is the diagnosis? Turner syndrome.
- What is the karyotype? 45 X0
- What are the characteristic features? Mention 4.
  A. Short stature.
  B. Webbed neck.
  C. Broad chest.
  D. No breast but there is a uterus.
- Does the incidence increase with increasing maternal age? No it doesn't.
- What treatment does the patient need? Estrogen and cyclic progesterone (for the development of secondary sexual characteristics).

Station 4: From the picture in front of you.



- What is this condition? Facial palsy.
- What could cause this condition? Instrumental delivery by forceps.
- Name 3 complications of forceps delivery.
  A. Maternal trauma (Birth canal injury, Fistulae)
  B. Facial palsy.
  C. Maternal bleeding.
  D. Fetal skull fracture.
  E. Fetal distress.

Instruments

Station 1: From the picture in front of you.

- What are these instruments?

  Laparoscopy set

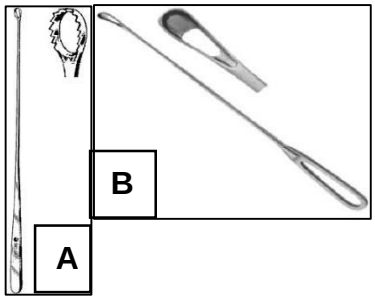
  1. Laparoscope.
  2. Trochar (sleeve and needle) & cannula.
  3. Veress needle.

- What type of gas is used for this procedure?

  CO_2 to inflate the abdomen prior to laparoscopy.

- Write 2 diagnostic and 2 operative indications?
- **Therapeutic:** Ectopic pregnancy, tubal ligation and adhenolysis.
- **Diagnostic:** PID, infertility and endometriosis.

Station 2: From the picture in front of you.



- What are these instruments?
  A. Sharp end Uterine Curette.
  B. Blunt end uterine curette
- Mention 3 uses?
  - **Diagnostic:** To take sample in case of abnormal uterine bleeding
  - **Therapeutic:** to remove retained products of conception
  - **Therapeutic:** Removal of endometrial polyps
- Mention 3 possible complications?

  Perforation, ascending infection, Sepsis, Asherman syndrome

What are the indications of dilatation & curettage? Mention 4.

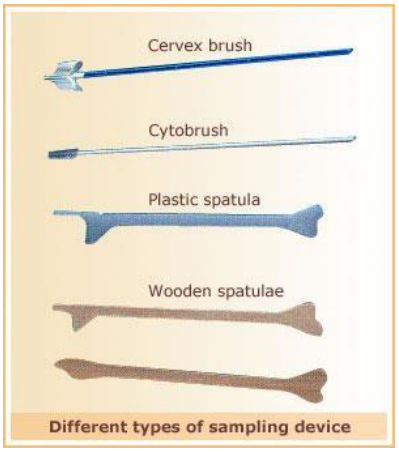
Diagnostic D&C	Therapeutic D&C
- Abnormal uterine bleeding - Irregular bleeding - Menorrhagia - Suspecting malignancy or pre-malignant condition. - Retained material	removal of remaining conceptional matter (aborted fetus)

Station 3: From the picture in front of you.

A **B**

- What are these instruments?
  A. Wooden spatula
  B. Cervical brush
- What is used for? cervical sampling (Pap smear)
- What are the risk factors for cervical cancer?

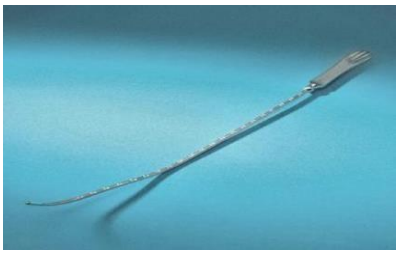
- Multiple Sexual partner
- Young age at first coitus (<20 yr.)
- Smoking
- High parity



Different types of sampling device

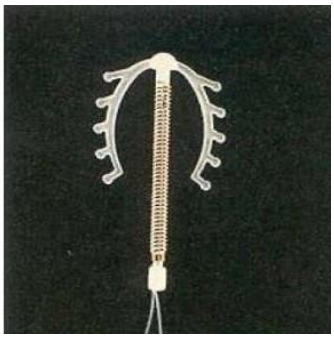
- **Name the site where the specimen is taken from.** Form the Transformation zone
- **What is the most common virus associated with Cervical cancer?** Human papilloma virus (HPV).
- **Name the most common subtypes associated with cervical cancer.** Subtypes (16,18, 31, 33, and 35).

Station 4: From the picture in front of you.

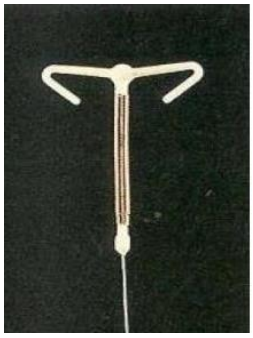


- **Identify the instrument.** Uterine sound
- **Mention one prerequisite.** Pt's bladder must be empty.
- **Mention 2 indications.**
  - To measure the uterine cavity length before certain procedures like dilatation and curettage.
  - To differentiate between uterine inversion and submucosal fibroid.
- **What information will you get from this instrument?**
  - To measure the length of uterine cavity\cervical canal
  - To assess the position and the direction of the uterus.
- **What are the Complications?** Perforation, Ascending infection

Station 5: From the picture in front of you.



A



B

C

- **What are the types of Intrauterine Contraceptives Device (IUCD) shown in this picture?**
  A. Multiload
  B. Merina withprogesterone
  C. Copper
- **What are the mechanism of action for any IUCD as contraceptive device mention Two?**
  - **Hormonal IUCD:** Thickened of the cervical mucus.

- Impairing the viability of the sperms.
- Alteration of the tubal and uterine environment.
- Preventing fertilized egg from implanting.

- **Name three contraindications to the use of IUCD?**
  - Unexplained vaginal bleeding.
  - Current pregnancy.
  - Pelvic inflammatory disease.
  - Cervical or endometrial cancer.
- **What are the risks that may occur with IUCD? Mention three.**
  - Ectopic pregnancy.
  - None hormonal IUD: Menorrhagia
  - Infection PID.

Station 6: From the picture in front of you.

- **Identify this instrument.** amniotic hook
- **What is it used for?**
  Artificial rupture of the membranes (amniotomy).
- **Mention 2 indication, 3 perquisites, 2 contraindications and complications?**

Indications	Prerequisites	Contraindications	Complications
- Used in induction of labor (to fasten baby birth due to any reason) - internal fetal heart monitoring: used to put on fetal scalp.	- Dilated cervix: if >2 cm - Engagement of the head - Check if the mother has infections - Check if the placenta is in the right place.	- placenta previa. - IF there is infections in birth canal like (herpes , hepatitis	- Bleeding. - Injury to the baby's presenting part. - Cord prolapse. - Infection.

Station 7: From the picture in front of you.

- **What is the name of this instrument?** Fetal scalp electrode.
- **What is the normal fetal heart rate?** 110 to 160 beat/minute.
- **What is the normal beat-to-beat variability?** 5 – 25 beat/minute.
- **Name 2 causes of fetal tachycardia rather than hypoxia.**
  - Maternal fever.
  - Chorioamnionitis.
- **What are the causes of decreased variability?**
  Fetal sleep, hypoxia, sedative drugs and prematurity.
- **Name 2 causes of fetal bradycardia:**
  cord compression, placental abruption

Indications	Prerequisites	Contraindications
- To Monitor fetal heart. (main) - In fetal distress. - For accurate fetal surveillance.	- Cephalic presentation. - Rupture of membranes. - the cervix must be dilated to at least 2 cm.	- Face presentation. - Maternal Active genital infection.

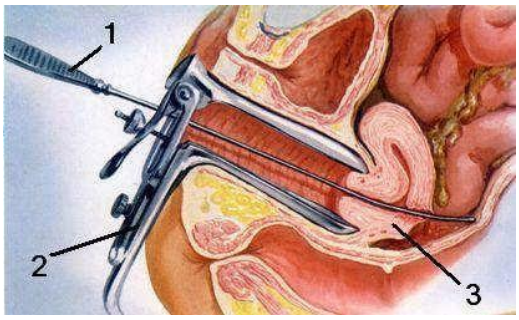
Station 8: From the picture in front of you.

- Identify this objects. Hodge Pessary OR Ring Pessary.
- What is the indication for it's use? Uterine prolapse or genital prolapse.
- What are the risk factors for the previous condition?
  - Multiparity, Old age, previous surgery
  - Chronic Increase of abdominal pressure.
  - Genetic connective tissue disease or weakness.
- What are the main structures involved in the support of the uterus?
  - Cardinal ligament.
  - Uterosacral ligament.
  - Pupocervical ligament

Station 9:

	Cusco's (bivalve) speculum	Sim's speculum	Auvard speculum
Instrument			
Uses	- To look at the cervix. - To take cervical smear or swap. - To diagnose PROM. - To exclude cord prolapse it allows the application of local instruments to the cervix,introduction of the uterine sound,and insertion of an IUCD.	- It exposes the anterior vaginal wall especially in cases of vesico-vaginal fistulas. - for the diagnosis of pelvic organ prolapse	For most operative procedures performed per vagina.
Advantages	- It's easy to introduce. - Self-retaining. - Can be adjusted to the size of the vagina.	Provides a space for operative work.	It gives good exposure of the anterior vaginal wall & the cervix during operations
Disadvantage	It hides the anterior & posterior vaginal walls	- Assistance is required especially when it's used to expose the cervix or during surgical. - procedures because it's not a self-retaining specula. - In the presence of a large cystocele, exposure of the cervix is often difficult	- It may tear, bruise or overstretch the soft tissues of the perineum & posterior vaginal wall. - it hides the post vaginal wall
Patient position	lithotomy	left lateral position (sims' position)	lithotomy

Station 10: From the picture in front of you.

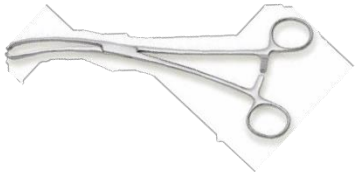
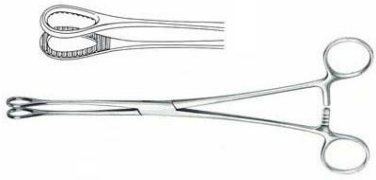


- **What is the defect in arrow 3?** Perforated uterus.
- **What is the position of this uterus?** Sharply anteflexed uterus.
- **Identify instruments in arrow (1, 2).**
    1. Sim's Uterine Sound.
    2. Cusco's Metallic vaginal speculum.

How can you prevent this condition?

- US guidance.
- Gentle & gradual insertion
- Expertise

Station 11:

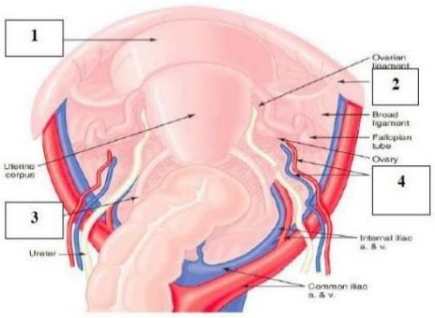
	Tenaculum - Vulsellum for holding the cervix	Ring (Sponge) forceps	Pipelle (endometrial biopsy)
Instrument			
Uses	- To grasp the anterior lip of the cervix. - During vaginal operations for e.g. D & C and repair of prolapsed.	- To grasp the soft lips of the cervix during: (insertion of folly's catheter- removal of products of conception) - Used to remove corporeal and cervical polyps - Can be used as a sponge carrier	- It's used for endometrial sampling. - It works by suctioning i.e. – ve pressure

Station 12:

	Needle holder	Suction for newborne (Bulb syringe)	Umbilical Cord scissor
Instrument			

Anatomy of Female Reproductive System

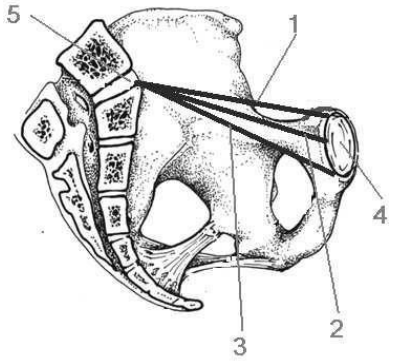
Station 1:



- **What are the anatomical landmarks pointed at by the arrow?**
  1. Bladder.
  2. Round ligament,
  3. Utero-sacral ligaments
  4. Ovarian vessels (within the suspensory ligament of the ovary or infundibulo-pelvic ligaments).
- **What are the two important supporting structures of the uterus?**
  - Cardinal ligaments.
  - Pubocervical ligaments.
  - Uterosacral ligaments
- **Where do the uterine and ovarian arteries originate from?**
  - **Uterine Artery:** Anterior branch of internal iliac artery.
  - **Ovarian Artery:** Abdominal Aorta Artery.
- **The broad ligament is formed by?**

The broad ligament is composed of peritoneum and contains the fallopian tubes, round ligament, ovarian ligament, vessels and nerves.

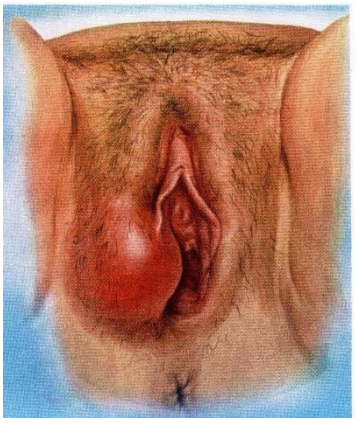
Station 2:



- **What are 1, 2 ,3 ,4, 5?**
  1. True (anatomic) diameter.
  2. Obstetric diameter.
  3. Diagonal diameter.
  4. Pubic bone (symphysis pubis).
  5. Sacral promontory.
- **Which one is the most important obstetrically and what's its length?**

  Obstetric diameter and it's about 11 cm.

Station 3:



- Give Two DDx.
  - Bartholin's abscess.
  - Bartholin's cyst

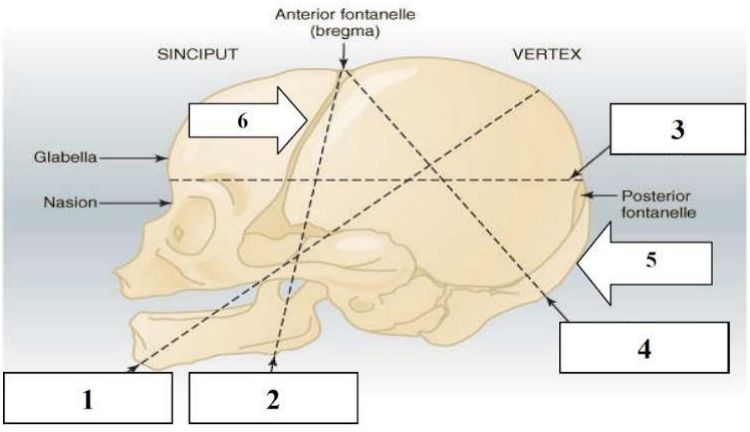
- Three symptoms of the diagnosis
  - Tender lump on either side of the vagina.
  - Dyspareunia.
  - Difficulty in walking or sitting.
  - Vaginal discharge
  - Fever.

Note bartholin's cyst if not infected is usually Asymptomatic sometimes with mild dyspareunia.

	Bartholin abscess	Bartholin cyst
Causes:	It may occur due to infection (mostly caused by E. coli and anaerobic Bacteroides species, and seldom due to gonococcus).	When the orifice of the Bartholin duct becomes obstructed , mucous produced by the gland accumulates, leading to cystic dilation proximal to the obstruction. Obstruction is often caused by local or diffuse vulvar edema. Bartholin cysts are usually sterile.
Management	Incision and drainage and a Word catheter, but in case of recurrent absence may need marsupialization(cutting a slit into an abscess or cyst and suturing the edges).	First-line treatment includes sitz baths,which may promote spontaneous rupture or resolution of the cyst

Station 4: This figure shows a fetal skull and the engaging diameter of different to fetal head position.

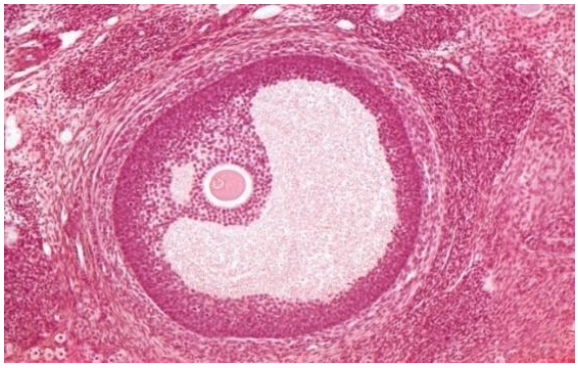
- Name the different diameter and the Normal Measurement:
  1. Supraoccipitomental diameter (13.5 cm).
  2. Submentobregmatic diameter (9.5 cm)
  3. Occipitofrontal diameter (11 cm)
  4. Suboccipitobregmatic (9.5 cm)



- Name the structure arrowed.
  5. Occipital bone.
  6. Coronal suture.

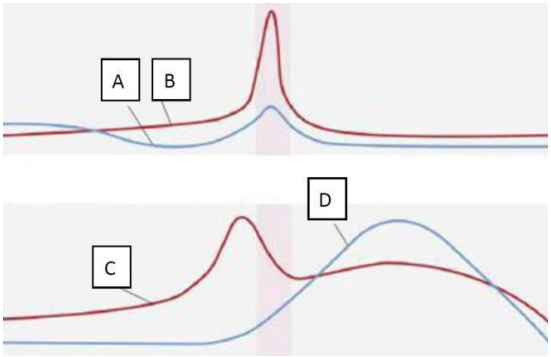
Physiology of Female Menstrual Cycle

Station 1: This microscopic pic was taken from ovary at day 12 of menstrual cycle



- **What is this structure?** Graafian follicle
- **What are the hormones involved in its development and from where they are produced? mention 4**
  - Anterior pituitary gland → FSH.
  - Anterior pituitary gland → LH.
  - Hypothalamus → GnRH.
  - estrogen→ Granulosa cells
- **What are likely to happen to this structure after 24h? mention 2**
  - ruptured and releasing the ovum in a process known as ovulation
  - corpus luteum formation
- **And if pregnancy occurs, what will maintain this structure to continue?** hCG will maintain the corpus luteum

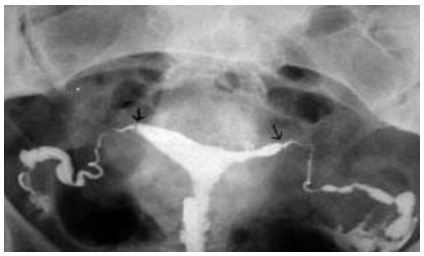
Station 2:



- **Name the 4 hormones in menstrual cycle and from where are they secreted?**
  A. **FSH:** from anterior pituitary.
  B. **LH:** from anterior pituitary.
  C. **estrogen:** from granulosa cells.
  D. **Progesterone:** from corpus luteum
- **Name the two phases and their predominant hormone.**
  - Proliferative phase (follicular phase) → by oestrogen
  - Secretary phase (luteal) → by progesterone
- **In PCOS which phase will be affected and why?**
  Proliferative phase (follicular phase), bc LH & FSH are steadily elevated throughout the cycle resulted in anovulation thus prolongation of the phase.
- **What is the effect of PCOS on cycle?**
  - Lengthening of Proliferative phase (follicular phase)
  - Anovulation,thus luteal formation won't take place

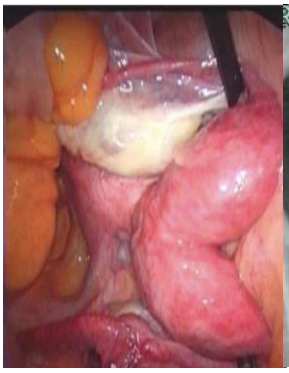
Embryology of the female genital tract

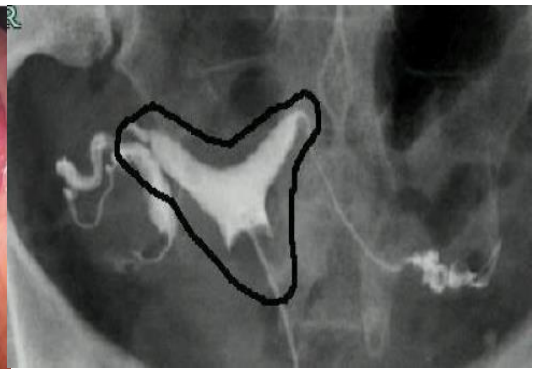
Station 1:



- **What is the name of this test?** Hysterosalpingogram
- **What are the indications for its use? Mention two?**
  In case of Infertility or Amenorrhea to check tubal patency and detecting any uterine anomalies.
- **What information you can obtain from this procedure, Mention Three?**
  - Check the tubal patency.
  - Uterine anomalies.
  - Anatomy of the uterine and fallopian tubes.
- **During which phase of the menstrual cycle this procedure should be done?**
  Proliferative phase.
  If they ask you why? The endometrium is thin during this proliferative phase, which facilitates better image interpretation and should also ensure that there is no pregnancy.
- **What complication may arise from this procedure?**
  Infection- perforation of uterus and rupture of tubes

Station 2:



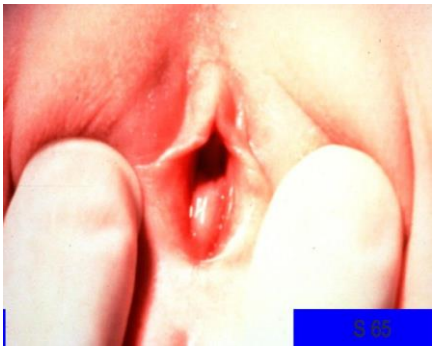


- **What is the pathology?**

Bicornuate uterus (Laparoscopic view & hysterosalpingogram)

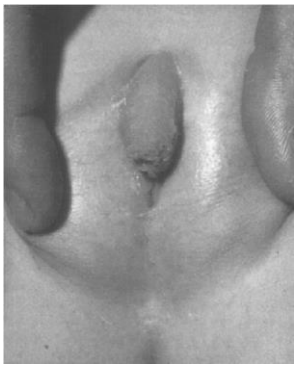
- **Mention 2 gynecological presentations?**
  - Infertility
  - Dysmenorrhea
- **Mention 2 obstetric presentations?**
  - Malpresentation
  - Abortion
  - preterm Labor.

Station 3: A young woman presents with 1ry amenorrhea with cyclic abdominal pain or hematocolpos, hematometra



- **What is the abnormality?** Imperforated Hymen
- **How would you manage it?** Through making a cruciate incision.

Station 4:

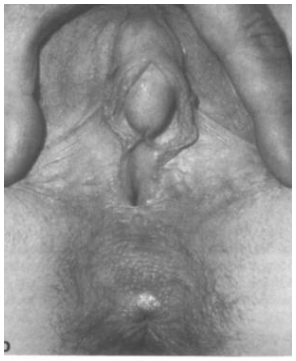


- **What is the abnormality?**

Ambiguous genitalia due to congenital adrenal hyperplasia or due to the mother's exposure to androgens.

- **How would you investigate the case?**
  - Karyotyping
  - 17-α-hydroxyprogesterone
  - 17-ketosteroids (androgens) in urine
  - Electrolytes & U/S
- **How would you manage it?**
  - Cortisol or its synthetic derivatives → suppress the adrenals → decrease androgen production
  - Corrective surgery:
    - If it's a neonate → clitroplasty
    - If it's at puberty → Division of the fused labial folds.

Station 5:



- **Describe what you see?** Ambiguous genitalia showing both ovarian & testicular tissues.
- **What is this anomaly called?** True hermaphrodite
- **What can the karyotyping of this case be?**
  - 46XX → most common
  - 46XX/XY
  - 46XY
  - 46XY/47XXY

Puberty Disorders

Station 1: Six year old girl brought by her mother to your clinic because she noticed breast budding and pubic hair developing in her daughter.

- **If this is a case of precocious puberty what may cause it?**

Gonadotropin dependent:

- idiopathic (75%) of cases
- CNS pathology (as hypothalamic hamartoma...)

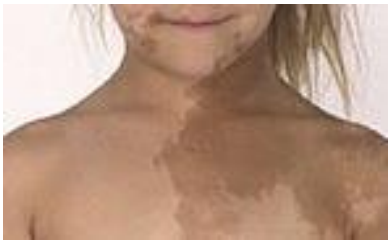
Gonadotropin independent:

- Granulosa cell tumor
- McCune-Albright syndrome

- **You figured out it was idiopathic central precautious puberty. What is the treatment of choice to help preserve skeletal growth?**

GnRH Analogue (GnRH agonists) to stop whole process. GH May be added

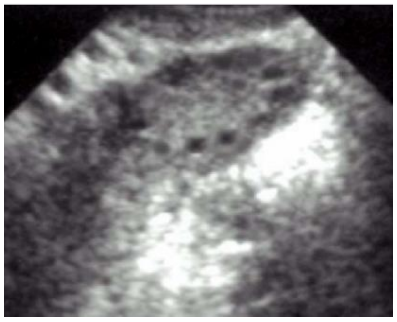
Station 2: Seven years old girl brought by her mother to your clinic because she had signs of precocious puberty. History includes hyperthyroidism, history of easily fractured bones and signs of Cushing disease. Upon examination you noticed the following:



- **What are these spots called?** Cafe au lait spots
- **In what syndrome can you find these spots along with precocious puberty?** McCune-Albright syndrome
- **what is the treatment of choice?** Testolactone to inhibit aromatase activity → decreased estrogen synthesis.
- **You called the pediatrician for consultation and he asked you which stage are the breast and pubic hair according to Tanners staging?** Both stage 5

Polycystic ovarian syndromes

Station 1:



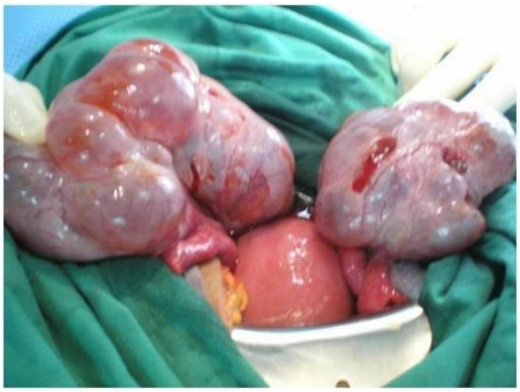
- What is the Dx? PCOS
- What is the patient risk for have? endometrial hyperplasia or cancer
- If the patient doesn't want to conceive, what is your treatment? OCP
- What are the Symptoms the pt may have? Acne, Hirsutism, Irregular menses
- Mention 2 Obstetric complications?
  - Gestational diabetes
  - Preeclampsia
  - Spontanous abortion

Station 2:

- What is the diagnosis? Hirsutism
- Mention 2 drugs can cause this condition. Danazol, Risperidone (antipsychotic)
- Mention 2 ovarian causes for this condition.
- PCOS, Ovarian Sertoli cell tumors, Ovarian hyperthecosis
- Mention 2 adrenal causes for this condition
  Congenital adrenal hyperplasia, Cushing disease (adrenal tumor)
- Mention 3 treatments for this condition
  OCP, spironolactone (antiandrogen), metformin, eflornithine.

Infertility

Station 1: The following picture is of a patient who went through ovulation induction and has developed bilateral large ovaries.



- **What is the name of this complication?**
  Ovarian Hyperstimulation syndrome(OHSS)
- **What are the types of this presentation?**
  Can be classified either: Mild, moderate, severe, critical Or: early and late.
  - early: within 10 days of administering HCG
  - late: present 10 days or more after administering HCG
- **What are the risks to the patient from this condition?**
  - Renal, respiratory and liver failure
  - Thrombosis
  - Ascites
  - Ovarian enlargement creates risk of torsion and cyst rupture.

  The pathophysiology of OHSS, although not fully understood, is characterised by increased capillary permeability, leading to a leakage of fluid from the vascular compartment with third space fluid accumulation and intravascular dehydration decreased renal perfusion and oliguria, ascites, pleural/pericardial effusions.
- **List two (2) main lines of management of the complication above**.
  The natural history is one of gradual resolution over 10-14 days, Management of OHSS is supportive and admission to hospital is reserved for cases of severe.
  Supportive management includes:
  - IV Hydration
  - prophylactic anticoagulant
  - Drainage of ascites
  - pain relief Analgesia use of paracetamol or codeine avoiding NSAIDS as these may affect renal function.
- **List three (3) indications for in vitro fertilization (IVF)?**
  Idiopathic infertility, unrepaired tubular damage, severe abnormality with semen analysis(immotility, Severely low sperm count

Family Planning

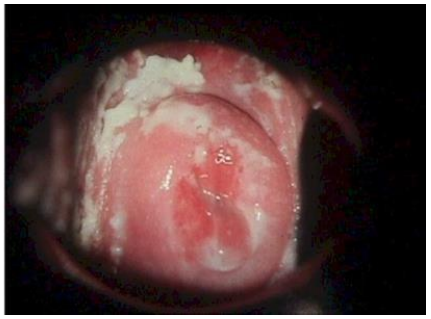
Station 1: A 25 year old P2 +0, delivered 6 weeks ago came to your clinic asking for contraception.

- **What methods of contraception are currently available? Mention 4**
  - Combined OCP
  - Progestin-only pills
  - IUCD
  - Tubal ligation
- **What types of oral contraceptive pills do you know and what are the components of these pills?**
  - **Combination OCPs:** contain both an estrogen and a progestin.
  - **Progestin Only OCPs:** contain only progestins and are sometimes called the minipill.

- **Which is more effective?** Combination OCPs
- **How would you instruct a woman on how to take the oral contraceptive pills for the first time?**
  - **Combination OCPs:** They are administered most commonly in one of two ways: daily with 21 days on and 7 days off or daily 24 days on and 4 days off. When off the hormones, withdrawal bleeding will occur.
  - **Progestin-Only OCPs:** They need to be taken daily and continuously.
- **How would you instruct the woman who has forgotten to take her pill?**
  She should take it whenever she remembers and take her regular pill as well. But if she forgot the pills and had unprotective intercourse then she needs to take (Plan B pills) one pill 1.5 mg levenorgestel within 27 hours of unprotective intercourse.
- **What is your advice to the woman who has vomiting, diarrhea after taking her pill?**
  - If the vomiting, diarrhea within 2 hours of taking the pill she should take another pill as soon as possible.
  - And if she continues to be sick, she should continue the pill but add another barrier method like condoms. She can stop using condoms once she is well and 7 days after the last episode of diarrhea or vomiting
- **What is the effect if the woman forgets to take a tablet or has vomiting, diarrhea?**
  vomiting / diarrhea within 2 hours of taking the pill interfere with absorption of the pills,with unprotected intercourse she may get pregnant.
- **What is the antibiotic that interferes with the effectiveness of the combined oral pills?** Rifampin
- **What are the absolute contraindications for COCP? mention 4**
  - History of breastcancer
  - Migraine with aura
  - History of vascular disease (DVT or thromboembolism)
  - Liver disease
- **Mentions two non-contraceptive uses of OCP?**
  - Treatment of polycystic ovarian syndrome
  - Treatment of endometriosis
  - Dysmenorrhea
  - **Progestin Only OCPs:** contain only progestins and are sometimes called the minipill.

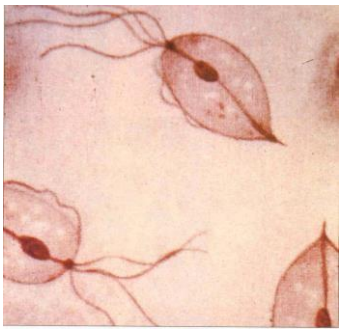
Lower Genital Tract Infection

Station 1: A 32 y/o diabetic Patient presented to the Gyn clinic with itching and dyspareunia. She is newly married using OCP for contraception and regularly using feminine hygiene sprays. On speculum examination, you found what shown in the picture.



- **What is the diagnosis?**
  fungal infection of vagina (Vulvovaginal candidiasis)
- **What is the most likely organism causing this condition?** Candida albicans
- **Which in the patient history increase the risk of having this problem?**
  Diabetes mellitus, regularly using of hygiene sprays.
- **How to confirm the diagnosis?**
  wet mount test (blastopores or psoudohyphea) and positive yeast culture
- **What is the best line treatment? mention drug or group of medications.**
  Azole (anti-fungal), (fluconazole, itraconazole, or posaconazole)

Station 2: a 30 year old women G4 P2+1.she is 21 week presented with vaginal discharge. The vaginal discharge microscopy had revealed the organism shown in the picture.



- What is the organism seen on the slide? Trichomonas vaginalis (a flagellated protozoan).
- What are the features of this vaginal discharge? mention2 Yellow – green, malodorous diffuse vaginal discharge.
- How would it present clinically?
    - **Symptoms:** The most common patient complaint is vaginal discharge associated with itching, burning, and pain with intercourse.
    - **Speculum Examination:** Vaginal discharge is typically frothy and green. The vaginal epithelium is frequently edematous and inflamed. The erythematous cervix may demonstrate the characteristic "strawberry" appearance. Vaginal pH is elevated >4.5.
- What the drug of choice? Metronidazole.
- What are the pregnancy related complications? mention 2 PROM, Low birth weight baby.
- Should the husband be treated? Give your reason? Yes, It's a sexually transmitted infectious disease.

Station 3: Fatima is a 20 year-old nurse. She comes to your clinic complaining of unusual vaginal discharge. She is asking for your expert opinion.

- What three questions that may help you to make the diagnosis?
    - **HPI:** Onset and duration of vaginal discharge , Appearance, odor ,color.
    - **Associated symptoms:** Itching, dysuria, Dyspareunia, Fever, vaginal bleeding or dryness
    - Last Pap smear and result
    - **Current and past sexual history:** including partners, method of intercourse, and contraception
    - Personal history of sexually transmitted
    - Using of hygiene sprays
- On examination you find a gray mucous discharge which has slightly fish odor. What is the likely diagnosis?

  Bacterial vagionsis
- What treatment would you give for the above condition?

  The treatment of choice is metronidazole or clindamycin administered either orally or vaginally. Metronidazole is safe to use during pregnancy, including the first trimester.
- Give two other common infectious causes of vaginal discharge and the appropriate treatment in each case?
    1. **Cause\treatment:** trichomonas vaginitis, The treatment of choice is oral metronidazole for both the patient and her sexual partner.
    2. **Cause\treatment:** Candida (Yeast) Vaginitis, The treatment of choice is either a single oral dose of fluconazole or vaginal (azole). creams. An asymptomatic sexual partner does not need to be treated.

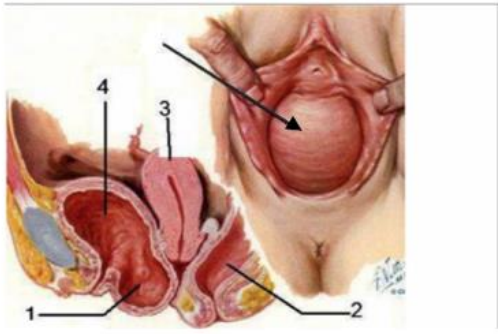
Pelvic Floor Disorders

Station 1:

- **What is your diagnosis?** Uterine prolapse
- **Mention two risk factors.**
  - Multiparity,Old age, previous surgery
  - Chronic Increase of abdominal pressure.
  - Genetic connective tissue disease or weakness.
- **Mention two symptoms the patient might present with.**

  Heaviness down there, bulging mass, uncomfortable sensation while coughing or with anything increases Intraabdominal pressure, Dyspareunia, leaking of urine with intercourse.
- **Mention two management options:** Pessaries, or surgery
- **Mention three anatomical structures support the uterus**
  - Cardinal ligament.
  - Uterosacral ligament.
  - Pubocervical

Station 2:



Identify the defect in arrow. Cystocele (anterior prolapse)

Identify the anatomic structure 1,2,3,4.

1. Posterior urinary bladder bulged into anterior vaginal wall.
2. Rectum.
3. Uterus.
4. Anterior urinary bladder.

Mention 2 symptoms the patient will have?

Symptoms secondary to recurrent (UTI): urgency, frequency, incomplete emptying,uncomfortable sensation heavy mass,Dyspareunia,leaking of urine with intercourse.

- **Mention two methods of treatment and example for each of them.**
  - **Conservative:** Pessaries (donut or hodge pessary)
  - **Invasive:** Cystocele repair surgery.

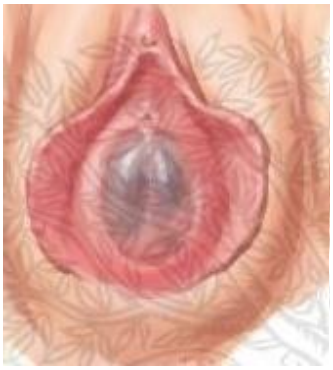
Station 3:

- **Identify the defect in arrow.** Enterocele
- **Mention 2 risk factors.**

  One or viganal delivery, genetic predepostion, menopause, increase intraabdominal pressure.
- **Mention two management options:** Pessaries, or surgery
- **Mention three anatomical structures support the uterus**
  - Cardinal ligament.
  - Uterosacral ligament.
  - Pubocervical

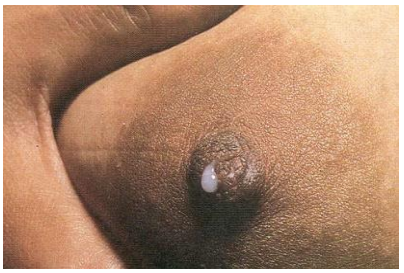
Amenorrhea

Station 1: A16 year old female presented with primary amenorrhea and normal secondary sexual characteristics.



- **What is the diagnosis?** Imperforated hymen
- **What is the karyotype of this patient with such diagnosis?** 46XX
- **Mention the investigation you need.**
  Ultrasound, to confirm the presence of a normal uterus & ovaries.
- **Mention three symptoms the patient might present with other than amenorrhea**
  - Cyclic (intermittent) pelvic pain.
  - Vaginal bulge.
  - Urine retention.
  - Dyspareunia.
- **What is the management?**
  Incise the membrane, Hymenectomy or Cruciate incision.

Station 2:



- **What is this condition?** Galactorrhea.
- **Caused by what hormone?** High levels of Prolactin.
- **What could cause its elevation?**
  - Physiological (lactating breast-feeding mother)
  - Pituitary adenoma
  - Drug-induced (any dopamine antagonist e.g. benperidol, domperidone)
  - Other prolactin-secretory tumors.
  - Idiopathic elevation.
- **What other possible symptoms could it present with?**
  - Infertility
  - Amenorrhea
- **How would you treat it?**
  - **Medically:** Bromocriptine (for decreasing prolactin secretion and reducing adenomas size)
  - Clomid (to restore fertility)
  - **Surgical:** remove the tumor

Abnormal uterine bleeding (Menorrhagia)

Station 1: 40 years old presented with heavy bleeding within her regular cycle. US showed no pelvic pathology

- **What is this condition called?** Menorrhagia
- **Mention some investigations you are going to do for her.**
  - Blood hormone levels (gonadotropins, estrogen and progesterone).
  - Endometrial biopsy or D and C.
  - LFT and coagulation profile (PT and PTT) and CBC (platelets)
- **Mention 4 options for medical treatment.**
  - Combined estrogen and progesterone.
  - Progesterone only (pills or merina IUCD).
  - Danazol.
  - GnRH analogues (leprolide).

Dysmenorrhea

Station 1: Basma is a 37 year-old women, presents to your clinic complaining of recurrent onset of painful periods. The periods have been gradually getting worse over the last few years. She is otherwise healthy and she is not in medications.

- **What is this condition called?** Secondary Dysmenorrhea
- **Give two possible differential diagnoses.**
  Endometriosis, adenomyosis, PID
- **Name two investigations that may be useful to help you make the diagnosis.**
  Ultrasound and the diagnosis is confirmed by laparoscopy
- **Give four possible medical treatments.**
  - NSAID
  - Combined estrogen and progesterone.
  - Progesterone only (pills or merina IUCD).
  - Danazol.
  - GnRH analogues (leprolide).
- **If she completed her family. Mention 2 options of treatment you are going to offer her.**
  - Endometrial ablasion.
  - Hysterectomy.
- **Her 16 year old daughter Maha is having a similar problem.**
  - **What is the most probable diagnosis?**
    Primary dysmenorrhea
  - **Name tow drugs that Maha may find useful.**
    NSAID if fail OCP

Menopause

Station 1:

- **What is the most common cause of Abnormal uterine bleeding in postmenopausal women?** Genital atrophy
- **What is the most dangerous cause of Abnormal uterine bleeding in postmenopausal women?** Endometrium Cancer
- **What should we do for any postmenopausal women presenting with AUB?** Perform endometrial biopsy to rule out malignancies.
- **How we diagnose the menopause?**
  It is clinically diagnosed, by the clinical picture and symptoms of menopause, no need for lab investigation to diagnose it
- **Which cancer associated with hormonal replacement thereby?** Increase risk for breast cancer
- **Hormonal replacement thereby has protective effect against what?** Osteoporosis, cardiovascular problems and colon cancer.
- **Give an example for treatment-induced menopause?** surgical removal of both ovaries chemotherapy radiation therapy to the pelvis hormonal therapy such as GnRH agonist.

Cervical Cancer

Station 1:

- **What are the risk factors associated with cervical cancer?**
  1. Smoking.
  2. Young age at first intercourse, Young age at first pregnancy.
  3. High parity.
  4. Sexual transmitted diseases, HPV, HIV infections.
  5. Low socioeconomic status.
- **What are the clinical features associated with cervical cancer?**
  - **Early stages:**
    - Abnormal vaginal bleeding (postcoital bleeding, intermenstrual, postmenopausal) In patients who are not sexually active, bleeding from cervical cancer usually does not occur until the disease is quite advanced.
  - **Middle stages:**
    - Postvoid bleeding, dysuria, hematuria.
  - **Advanced stage:**
    - Persistent watery vaginal discharge, weight loss, loss of appetite, Pelvic or back pain, leg swelling.
- **What are the diagnostic tests for cervical cancer?**
  - **Cervical biopsy:** The initial diagnostic test should be a cervical biopsy.
  - **Metastatic workup:** That includes pelvic examination, chest x-ray, intravenous pyelogram, cystoscopy and sigmoidoscopy.

Invasive cervical cancer is the only gynecologic cancer that is staged clinically; an abdominal pelvic CT scan or MRI cannot be used for clinical staging.

- **Clinical staging:**
  - **Physical exam:** complete pelvic exam (speculum and bimanual) to palpate tumor. Palpation of groin and supraclavicular lymph node. The cervix may be ulcerative or exophytic.
  - Colposcopy, ECG, cervical biopsy, cervical conization.
  - **Endoscopic exam:** Hysteroscopy to evaluate the uterine lining, proctoscopy to evaluate rectal involvement, cystoscopy to evaluate bladder involvement.
  - **Imaging studies:** Chest x-ray, intravenous pyelogram (IVP) to evaluate for urinary tract obstruction.

- **Staging for Cervical Cancer:**

Stage 0:	Carcinoma in-situ (CIS). The basement membrane is intact.
Stage I:	Spread limited to the cervix. This is the most common stage at diagnosis.
IA1	▪ Invasion is ≤3 mm deep (minimally invasive)
IA2	▪ Invasion is >3 but ≤5 mm deep (microinvasion)
IB	▪ Invasion is >5 mm deep (frank invasion)
Stage II:	Spread adjacent to the cervix Involves
IIA	o upper two thirds of vagina
IIB	o Invasion of the parametria
Stage III:	Spread further from the cervix
IIIA	o Involves lower one third of vagina
IIIB	o Extends to pelvic side wall or hydronephrosis
Stage IV:	Spread furthest from the cervix
IVA	- Involves bladder or rectum or beyond true pelvis
IVB	- Distant metastasis

- **Management of cervical cancer:**
  - **Stage Ial:** Total simple hysterectomy, either vaginal or abdominal.
  - **Stage Ia2:** Modified radical hysterectomy.
  - **Stage IB or IIA:** Either radical hysterectomy with pelvic and paraaortic lymphadenectomy (if premenopausal) and peritoneal washings or pelvic radiation (if postmenopausal). In patients who can tolerate surgery, a radical hysterectomy is preferred; however, studies have demonstrated equal cure rates with radiation or surgical treatment.
  - **Stage IIB,III, or IV:** Radiation therapy and chemotherapy for all ages.

Station 1:

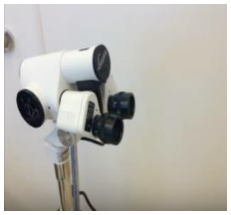
- **How to screen for cervical cancer and when?**
  - By Pap smear: we start screen the patient at the age of > 21 years old, every 3 years.
  - HPV test: It is the other way for screening. we start screen the patient at the age of >30 years old, every 5 years.

- **Which strain of HPV associated with cervical cancer Vaccine:**
  There are different oncogene strains of HPV, such as 16 & 18 & 31 & 33 & 45 & 52 & 58 which cause 95% of cervical cancer. While 6 & 11 are benign strain which cause warts.

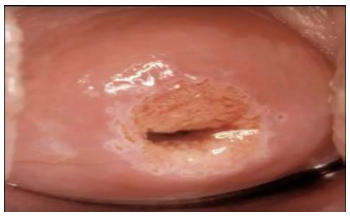
- **What we will do next in case of abnormal finding in pap smear?**
  We will go for colposcopy to visualize the cervix If shows a lesion you can take intralesional biopsy. If not, take a random biopsy.

- **When can we say it is cancer?**
  The cancer is defined as invasion of basement membrane. While In precancerous lesion or dysplasia, it may involve the whole thickness, but it never invades the basement membrane. Once it starts invade the basement membrane it is now invasive cervical cancer.

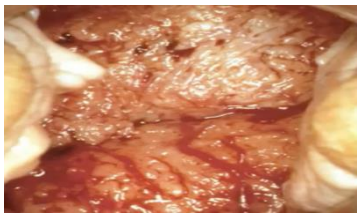
- **What is the most common histopathological cervical cancer?**
  Squamous cell carcinoma (70%) or Adenocarcinoma (25%) lymphoma, sarcoma and metastasis (5%).
- **What is the most common gynecological cancer in developing country?** It is cervical cancer.
- **What is the most common gynecological cancer in developed country?** It is Endometrial Cancer.
- **What is the most common gynecological cancer in Saudi Arabia country?** It is Ovarian cancer.
- **a lady was diagnosed with invasive squamous cell carcinoma of cervix. she was complaining of lower limb swelling due to lymphedema or sciatic pain and foot drop, or with investigation she had hydronephrosis, we can diagnose her clinically in which stage?** stage 3B.
- **lady was diagnosed with invasive squamous cell carcinoma of cervix. Her Pelvic examination revealed thickening of the right parametrium but not out to the lateral Sidewall. we can diagnose her clinically at which stage?** stage 2B.
- **a lady was diagnosed with invasive squamous cell carcinoma of cervix. she was complaining of passing stool through vaginal opening. we can diagnose her clinically at which stage?** stage 4A.



Colposcopy



Cervix on colposcopy after acetic acid

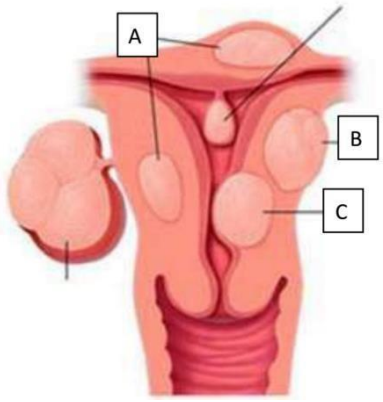


Cervical cancer

LEEP procedure

Fibroids & Uterine Cancer

Station 1:



- **Identify.**
  A. Intramural fibroid
  B. Subserosal fibroid
  C. Submucous fibroid
- **What could be the presentation in the non-pregnant woman? Mention 4**
  - MOST OF THEM ASYMPTOMATIC
  - Menorrhagia
  - Dysmenorrhea
  - Pelvic pressure or pain
  - Difficulty emptying the bladder
  - Constipation
- **What is the complication?**

- **In pregnancy:** Obstructed labor, malpresentation
- **In non-pregnant:** infertility, anemia due to menorrhagia.

- What other pregnancy-related complication could happen, and what is the management?
  - Severe localized abdominal pain can occur if a fibroid undergoes "red degeneration"
  - The symptom can usually be controlled by conservative treatment.

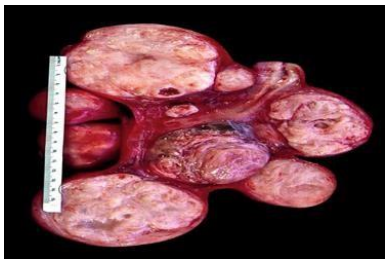
- What is the treatment (mention 4)?

Conservative if asymptomatic.

If symptomatic:

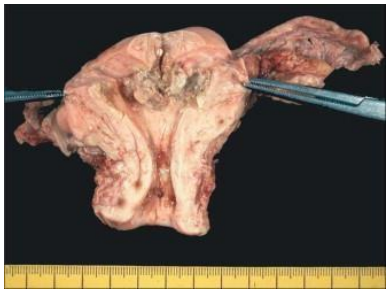
- OCP
- GnRH agonist
- surgery (myomectomy, Uterine artery embolization)

Station 2:



- What is the abnormality in the picture (on the right)? Subserosal fibroid
- Is this common in the reproductive age group? why? Yes, they are highly responsive to estrogen and progesterone, and after menopause they regress so yes.

Station 3: Picture of endometrial cancer, old women



- What is the most common presenting symptom? Postmenopausal bleeding
- What is the most common histology? Adenocarcinoma
- What are Risk factors for uterine cancer?
- Nulliparity, Obesity, estrogen replacement treatment, history of breast or ovarian cancer
- How to treat early stage? hysterectomy with Bilateral salpngoioophrotomy
- Mention Initial investigations?

pap smear: to rule out cervical cancer.
U\S: look for the uterine thickness (if more than 4 MM) not always mean cancer but mean suspicion of cancer you have to do further investigations.
Endometrial Biopsy: to rule out endometrial cancer

Benign and Malignant ovarian mass

Station 1:

- **What are the etiology of ovarian cancer?** Cause of ovarian cancer is unknown.
- **What are the risk factors & protective factors associated with epithelial ovarian cancer?**

Risk factors	protective factors
○ Excess estrogen: Nulliparity, early menarche, late menopause. ○ Advanced age. ○ Endometriosis ○ Family history of breast, colon, endometrial, ovarian cancers. ○ Inherited mutations (BRCA and HNPCC) ○ White, Caucasian race.	○ OCP. ○ Pregnancy & breastfeeding. ○ Tubal ligation. ○ Hysterectomy

- **Ovarian tumors classification and markers**

Epithelial cells:	Serous (55%)	CA-125
	Mucinous	
	Clear cell	
Stromal:	Granulosa cell	Inhibin
	Sertoli-Leydig	Androgens
Germ cell:	Dysgerminoma (most common)	LDH
	Yolk sac	AFB
	Choriocarcinoma	Beta-hCG
	Immature teratoma	none

- **What are the clinical features associated with ovarian cancer?** Most of the patients present with advanced stage disease. When present, symptoms may include:
  - **Abdominal symptoms:** Nausea, bloating, dyspepsia, anorexia, early satiety.
  - **Symptoms of mass effect:** Increase abdominal girth (from ascites or tumor itself), urinary frequency, constipation.
  - Postmenopausal bleeding, irregular menses if premenopausal (rare).
- **What is your differential diagnosis?**
  Ovarian malignancy, ovarian benign neoplasms, and functional cysts of the ovaries must be differentiated.
- **Staging for ovarian cancer:** Surgical staging

Stage I: **IA** **IB** **IC**	Tumor limited to ovaries - Limited to one ovary, capsule intact, negative cytology. - Limited to both ovaries, capsule intact, negative cytology. - One or both ovaries raptured capsule, positive cytology.
Stage II: **IIA**	Extension to the pelvis. - Extension to the uterus or tubes.

IIB IIC	- Extension to other pelvic structures. - Extension to pelvis with positive cytology.
Stage III: IIIA IIIB IIIC	Peritoneal metastases or positive nodes. - Microscopic peritoneal metastases. - Macroscopic peritoneal metastases ≤ 2. - Macroscopic peritoneal metastases ≥ 2.
Stage IV: IVA IVB	Distant metastasis. - Involves bladder or rectum. - Distant metastasis.

- **Investigations:**
  - A women with suspected ovarian cancer based on history, physical examinations or investigations should be referred to a **gynecologic oncologist** to do → bimanual examination (solid, irregular, fixed pelvic mass), and risk of malignancy index (RMI).
  - Radiological imaging pelvic ultrasound is the best first line test.
  - **Blood work:** CA-125 for baseline, CBC, liver function tests, electrolytes, creatinine.
  - **Radiology:** Transvaginal ultrasound → to visualize ovaries, CT scan abdomen and pelvic → to look for metastases.
  - **Try to rule out primary sources:** colorectal, upper GI, endometrium (endometrial biopsy, abnormal vaginal bleeding), breast (lesions on examination, mammogram).

- **Management:**
  - Preoperative studies & medical evaluation.
  - **Surgical exploration:** Laparoscopic unilateral salpingo-oophorectomy (USO) and send it for frozen plasma.
  - **Benign Histology:**
    - If patient is not a good surgical candidate, or wants to maintain her uterus and contralateral ovary→ unilateral salpingo-oophorectomy is sufficient.
    - if she's a good candidate → Total abdominal hysterectomy & bilateral salpingo-oophorectomy.
  - **Malignant histology:**
    - Debulking procedure + Postoperative chemotherapy. they will ask u what do you mean by debulking? Total abdominal hysterectomy + bilateral salpingo-oophorectomy + omentectomy +\- Bowel resection (remove as much visible cancer as possible).
  - **Follow up:**
    - Benign: followed up in the office on a yearly basis for regular examination. If the pathology report is defined.
    - carcinoma: followed up every 3 months for the first 2 years and then every 6 months for the next 2 years with follow-up of the CA-125 tumor marker.

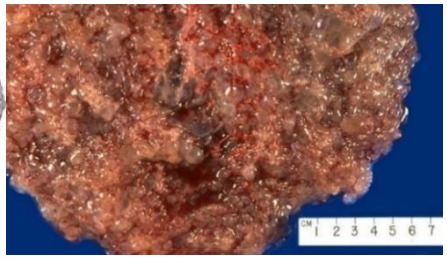
Station 2: A 58 years old female referred to the clinic with a finding of pelvic mass suggestive of ovarian origin discovered by US. She is previously healthy.

- **What are the types of epithelial ovarian tumors?** serous, mucinous, clear cell, endometroid
- **What are the risk factors of ovarian malignancies?** nullipariy, primary infertility, endometriosis, genetic (BRCA and HNPCC)
- **What are the tumor markers of ovarian mass?** CA 125, CEA, alpha fetoprotein, LDH
- **How would patient with established ovarian cancer present?** mostly with gastrointestinal symptoms: abdominal bloating, abdominal distension, abdominal pain, early satiety and pelvic pain.
- **What is the most common stage patient present with?** stage 3, peritoneal metastasis

- **What are the treatment options?** Debulking + post operative chemotherapy.
- **What does debulking mean?** total abdominal hysterectomy with Bilateral salpingo-oophorectomy + Lymph node removal + omentectomy + any visible disease

Gestational Trophoblastic diseases

Station 1:



- **What is the diagnosis?** molar pregnancy.
- **Name the two types of this condition and its genetic components?**
  - complete mole: 46XX
  - incomplete mole: 69 XXY
- **Mention 2 predisposing factors?** Asian people, maternal age <15 or >45, history of Gestational trophoblastic diseases
- **Mention 2 symptoms associated with it?** vaginal bleeding, hyperemesis gravidarum, large uterus
- **Mention 2 treatment options?** suction dilation and curettage+ infuse with oxytocin.
- **Mention two investigations to confirm your diagnosis?**
  - Ultra Sound: complete has snowstorm appearance
  - Quantitative Beta hCG level
- **Give the name of this pathology when it becomes malignant? Mention two.**
  - Choriocarcinoma
  - Invasive mole

Don’t forget to check Manned file

اللهم إني استودعتك ما حفظت وما قرأت وما فهمت، فردّه لي عند حاجتي إليه إنك على كل شيء قدير

الله ينوّر عليكم ويسهل أمركم ❤