OSCE QUEENS

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Table of Contents:

N.B :in any examination verbalize what you're doing.

Focused Obstetrics Abdominal Exam

Instruments:

- Tape measure.

Steps:

Before starting, make sure to cover theses points:

1. Introduce yourself to the patient.Confirm your patient's ID.
2. Explain the procedure and reassure the patient.
3. Get patient's consent.
4. Wash hands.
5. Position the patient in dorsal recumbent (helps the patient to relax her muscles to enhance palpation)
6. adequate exposure: from pubis symphysis to xiphisternum.
7. thank patient and cover her up when you're done.

Inspection

- Symmetrically distended Abdomen.
- Thoraco-abdominal Respiration.
- Comment on visible fetal movement if present.
- Scars of previous surgeries (c-section, hysterectomy)
- Presence of cutaneous signs of pregnancy: linea nigra,Striae gravidarum & Dilated veins.
- Umbilicus: Site,shape (inverted,flat,everted), discharge, discoloration, swelling, nodule.
- Ask the patient to cough & check hernial orifices.

Palpation *(Ask about areas of tenderness before starting)*

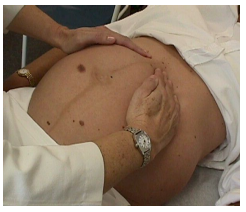
1)Fundal height:

1. to Locate the upper part of the fundus palpate using ULNAR border of left hand moving from sternum downwards till you feel a firm part
2. Locate upper border of pubic symphysis
3. measure the distance in cm from upper part of the symphysis pubis to the upper part of the fundus

[Numbar in cm = approximates to the number of weeks of gestation ± 2]

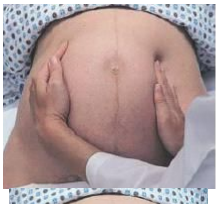
2)Leopold's maneuvers:

They are four maneuvers (4 grips)



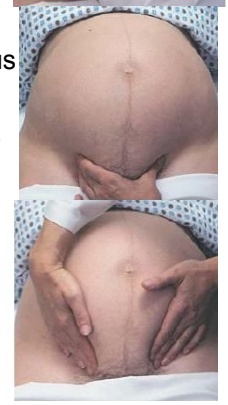
①First Maneuver Fundal Grip:

- The purpose:To Know the part of the fetus occupying the fundus.
- How to do it: By facing the mother,grasp the fundus of the uterus by the palms of the 2 hands with your fingers quite close together.Assess for shape, size, consistency and mobility.



②Second Maneuver Lateral grip:

- The purpose:to locate fetus back(to know fetal lie).
- How to do it:place both palms on the abdomen ,Hold Rt hand still and with deep but gentle pressure, use L hand to feel for the firm, smooth back, Repeat using opposite hands Confirm your findings by palpating the fetal extremities on the opposite side(small protrusions,"lumpy")



③Third Maneuver Pawlick's grip:

- The purpose:determine the presenting part of the fetus (what part of the fetus is lying above the inlet)
- How to do it:Gently grasp the lower portion of the abdomen (just above symphysis pubis) with the thumb and fingers of the R hand Confirm presenting part (opposite of what's in the fundus).

④Fourth Maneuver Pelvic grip:*only done if fetal in cephalic presentation*

- The purpose: to determines the engagement of the presenting part
- How to do it:Now you turn your face towards the patient's feet. The two hands are placed flat on both sides of the lower part of the abdomen and push there downward towards the pelvis and feel the sides of the presenting part by your fingers.

Discussion Questions:

What is the purpose of leopold maneuver?

1. Determine the position of the baby in utero
2. Determine the expected presentation during labor and delivery

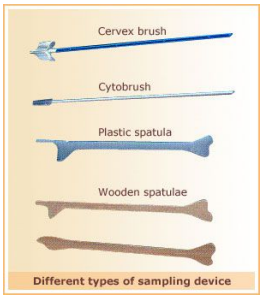
Explain what's meant by: Fetal presentation, lie, attitude, and position.

- **Fetal presentation:** Portion of the fetus overlying the pelvic inlet. The commonest is cephalic (head down)
- **Fetal lie:** the relationship of the longitudinal axis of the fetus to longitudinal axis of the mother.
  There are three lies:
  - Longitudinal: fetus and mother are in same vertical axis
  - Transverse: fetus at right angle to mother
  - Oblique: fetus at 45° angle to mother
- **Fetal Attitude:** Degree of extension-flexion of the fetal head with cephalic presentation. The most common attitude is vertex.
  1. Vertex: head is maximally flexed (this is normal)
  2. Military: head is partially flexed
  3. Brow: head is partially extended
  4. Face: head is maximally extended
- **Fetal Position:** Relationship of a definite presenting fetal part to the maternal bony pelvis. It is expressed in terms stating whether the orientation part is anterior or posterior, left or right. The most common position at delivery is occiput anterior.

Gynecological Examination(Pelvic exam)

Instruments:

- Cusco's speculum
- Cervical Brush
- Liquid Container
- Gloves



Steps:

Before starting, make sure to cover theses points:

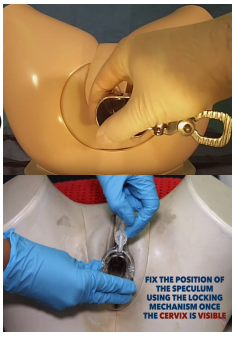
1. Introduce yourself to the patient.
2. Confirm your patient's ID.
3. Explain the procedure and reassure the patient.
4. Get patient's consent.
5. Ensure the presence of a female chaperone.
6. Wash hands,Wear gloves :)لاتنسوا القلفز من الخرشه زيي
7. The patient should be supine on a bed with their underwear removed, lower abdomen exposed and positioned in either lithotomy position (using stirrups) or modified lithotomy (flexed hip, flexed knee falling side to side and heels brought towards bottom)

Inspection the Genitalia and perianal area:

- Any lesion, such as a warty growth, a mass, an ulcer, atrophy, abnormal discharge
- The size of the clitoris and the development of labia minora and majora should be noted.
- ask the pt to cough to see if there any prolapse or incontinence

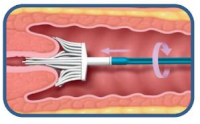
Speculum examination

①Inserting the speculum:The examiners will ask u to show them how to insert the speculum



1. **Warn the patient** you are about to insert the speculum
2. Use your left hand (index finger and thumb) to **separate** the **labia**
3. Gently **insert the speculum sideways** (blades closed, angled downwards and backwards)
4. Once inserted, **rotate the speculum** back **90 degrees** (so that the handle is facing upwards)
5. **Open the speculum** blades until an optimal view of the **cervix** is achieved
6. **Tighten** the **locking nut** to fix the position of the blades
7. Inspecting the cervix (with a light source):mention what are u looking to in the cervix(checklist)
    - **External os** (note if open or closed)
    - **Cervical erosions** (e.g. ectropion)
    - **Masses** (e.g. cervical malignancy)
    - **Ulcers** (e.g. genital herpes)
    - **Abnormal discharge** (e.g. bacterial vaginosis)

②Pap smear:



1. **Insert the cervical brush** through speculum into the **endocervical canal,** deep enough to allow the shorter bristles to fully contact the ectocervix.
2. **Rotate** the **brush 5 times**, 360 degrees, in a **clockwise** direction
3. **Remove** it ,and rinse it immediately into the liquid container by rotating the brush 10 times.

③Removing the speculum:

1. **Loosen** the **locking nut** on the speculum and **partially close the blades**
2. **Rotate** the **speculum 90 degrees**, back to its original insertion orientation
3. Gently **remove** the **speculum**, inspecting the walls of the vagina as you do so
4. **Re-cover** the patient
5. **Dispose** of the **speculum** and **gloves,the wash hands**

Bimanual examination

[NOTE:During this portion of the examination, the urinary bladder should be empty]

1. Lubricate fingers,separate the labias by the thumb and index finger of the left hand.
2. Place index finger first then introduce middle finger. Enter with palm facing sideways then rotate so its facing up.With 2 fingers facing upwards, move along posterior wall of vagina.
3. Palpate the VAGAINAL wall as you insert your fingers for any masses ,cyst,or tenderness
4. **palpate the cervix:** Move up over cervix and feel it (smooth, bleeds, mobility, firm "normal",internal os whether open or closed) (internal os only open in inevitable miscarriage and labour/post partum)
5. **Check for cervical motion tenderness:**Gently move the cervix from side to side(cervical excitation = PID, ectopic).
6. **To palpate the uterus:** Now place the 2 fingers under cervix and push upward while simultaneously pushing fundus down abdominally with the other hand. Asses size shape, position,MASSES,mobility, consistency and tenderness are noted. (The normal uterus is pear-shaped and about 9 cm in length. It is usually anterior antiverted and freely mobile and non-tender.)
7. **To palpate the adnexa:** the tips of the fingers are then placed into each lateral fornix to palpate the adnexa (tubes and ovaries) on each side. The fingers are pushed backwards and upwards, while at the same time pushing down in the corresponding area with the fingers of the abdominal hand. (Salpingitis, masses)
8. Remove fingers slowly and inspect for blood or discharge.
9. Give patient cotton wool swab to wipe off lubricant.

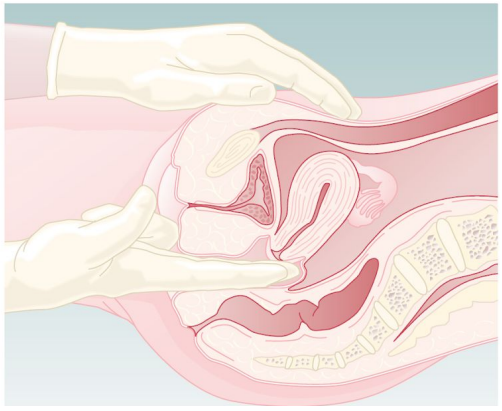


FIGURE 2-4 Bimanual evaluation of the uterus by exerting gentle pressure on the uterus with the vaginal fingers against the abdominal hand.

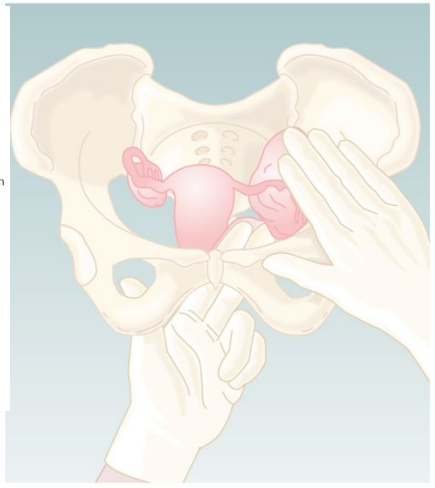
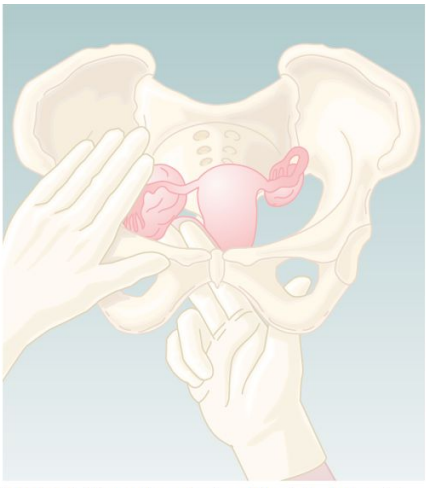


FIGURE 2-6 Bimanual examination of the left adnexa. Note that fingers of the left hand are in the vagina.



IGURE 2-5 Bimanual examination of the right adnexa. Note hat fingers of the right hand are in the vagina.

NOTES:

- ★ When a lady comes with post-coital pain,what are the most important things to do?Pap smear and cervical examination
- ★ When a lady comes to you with vaginal bleeding,do you
- ★ rectal examination Used as alternative to a vaginal examination in children and in adults who are not sexually active
- ★ **In the exam they will ask you to do BOTH Speculum exam followed by vaginal exam all in 5 min only so practice well!!**
- ★ In bimanual examination,you should know where do you place the other hand? And what do you asses in the uterus (Size, Position,MASSES, Consistency, Mobility, Tenderness) MENTION THEM ALL!
- ★ if you were asked to perform both bimanual pelvic examination and pap seamer start with the pap so you don't contaminate the cells then proceed with the pelvic exam
- ★ In our osce (435 female)they asked to take endometrial biopsy,know how to do it (video)

Placenta Delivery

Third stage of labor

IM Oxytocics will be given after delivery of the infant.

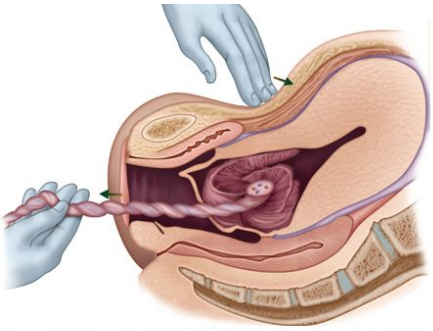
First Look for Signs of placental separation:

Separation occurs 2-30 min of the end of the second stage of the labor

1) Umbilical cord lengthens
2) Fundus of the uterus rises up and becomes firm and globular
3) Fresh show of blood from the vagina "the last sign"

* only when these signs have appeared you should attempt traction of the cord

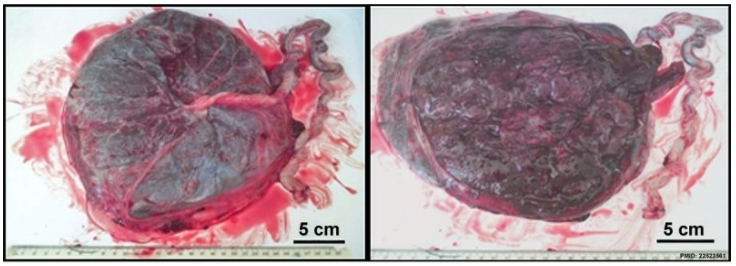
During delivery of the placenta:



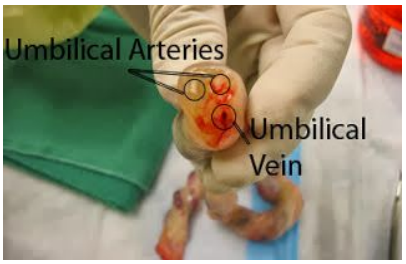
Once signs of **separation** have occurred ,you should assist the placental delivery by doing CONTROLLED CORD TRACTION technique:(the left hand is placed suprapubically holding the uterine fundus in the abdomen "keeps massaging the uterus", while the right hand is placed on the cord and gentle downward traction,while)

After delivery of the placenta:

- **Inspect the placenta ,Look at the:**
  - maternal surface check if its intact and there are no missing cotyledon
  - fetal surface,smooth composed of amniotic membrane
  - Cord insertion
  - Length of the cord
  - 2 umbilical arteries and 1 vein



Fetal side Maternal side



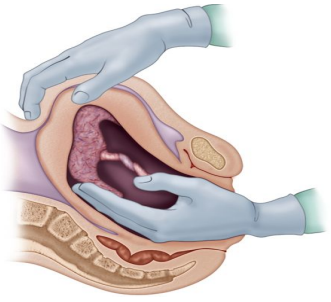
- look for any bleeding that may originated from the implantation site, uterine contraction may be induced by uterine massage and oxytocin to reduce bleeding
- Blood loss should be estimated; it is usually between 100 and 300ml
- Any tear or episiotomy should be repaired under local anaesthetic

Discussion Questions:

A) The name of this procedure? it's called controlled cord traction (there's also physiological method)

B) What are the signs of placental separation?

1) Umbilical cord lengthens
2) Fundus rises up and becomes firm and globular
3) Fresh gush of blood from the vagina



C)What will you do if the placenta was missing lobes? manual removal

Other manual removal indication: Cord avulsion (**avulsion**, or tearing of the umbilical cord from its insertion site on the placenta – makes delivery of the placenta difficult)

What's active management of the third stage? The combined effects of oxytocics and controlled cord traction are sometimes summarized by the term "active management of the third stage"

General Obstetrics history

Personal Information

Name - age - residency - occupation

Chief Complaint

What brought you here? When did you come?ER? Or clinic?

History of Presenting Illness

Depends on the complaint (will be discussed in details)

- Always ask about the constitutional symptoms:Fever- Weight loss - Night sweats- Loss of appetite

History of the present Pregnancy

- **Period of gestation:**Number of weeks- **Last menstrual period** - Estimated due date(by using naegele's rule: add one year to LMP ,subtract three months, and add 7 days)
- Dates as calculated from ultrasound
- Pregnancy detected by?Confirmed by?number of fetuses? US at 14 weeks: GA, placenta location, .
- Booked as if it's her first visit to your clinic or follow up?Numbers of antenatal visits? And if there was any complications.If booked ask for her previous ultrasounds and how was her pregnancy from the beginning
- **Blood transfusion?Rh typing**
- **Fetal movement:**detected?if yes,when was the first movement?does she notice **diminished** or changes in the movement?fetal movement can be detected in the 17-20 weeks
- Any invasive tests or procedures has been done? Cerclage?
- **Complaints during pregnancy:**bleeding / contractions/ vaginal discharge / loss of fluid / fever /
- GDM ,GHTN
- Any hospital admission

Past Obstetrics History **[Dr.Ahmed:they will ask u only to take past ob hx]**

First determine the NUMBER of her gravidity & parity + abortion:

- Gravidity → The total numbers of pregnancies regardless of how they ended.
- Parity → number of live births at any gestation or stillbirths after 20 weeks of gestation
- Number of abortion:pregnancy loss or termination before 20 week of gestation

Take details of each prior pregnancy start from first to last pregnancy:type of conception spontaneous or ivf?!

For Term pregnancies (>20 weeks):

- Date of birth,and at which gestational age delivered
- Number of children (twins?)
- type of delivery: normal vaginal delivery/CS /assisted(vacuum, forceps),Episiotomy?Was it induced?If yes why
- For babies: Newborn weight, Age, Gender, baby ICU admission?Anomaly?baby's Present health.now still alive?
- Any significant antenatal, intrapartum or postpartum complications to mother or the baby?
- Complication after birth
- Breastfeeding?
- Stillbirth? If yes Clarify the gestation of the stillbirth,and how she investigated and managed

For Other pregnancies (<20 weeks)

- miscarriage? If yes Clarify the gestation of the trimester, medical or surgical managements, the cause
- Termination of pregnancy.If yes Clarify the gestation and the method
- Molar pregnancy. If yes Clarify medical or surgical managements.
- Ectopic pregnancy If yes Clarify the site and the management.

Gyne History

See the next page in the section of gyne history(same details)

Sexual History

Regular sex? Protective sex? Pain(Dyspareunia)How many partners?

Past Medical Hx	Past Surgical Hx	Medication	Allergy	Blood Transfusion Hx

Psychosocial History

illicit drugs?Alcohol?Smoking?Family Support?domestic violence?psychiatric illness?

Family History

- Hereditary illness: DM, HTN, thalassemia, sickle cell disease, hemophilia?
- Congenital defects: neural tube defects? Down syndrome? Twins?
- Breast/ov/uterine/colon/prostate cancer

Review of systems

General Gynecology history

Personal Information

Name - age - residency - occupation- parity

Chief Complaint

What brought you here? When did you come?ER? Or clinic?

History of Presenting Illness

Depends on the complaint (will be discussed in details)

- Always ask about the constitutional symptoms:Fever- Weight loss - Night sweats- Loss of appetite

Gyne History

- **Menstrual History:**age of menarche -Regularity of cycles - Days of blood flow (duration)- Length of cycle - Volume (no. of pads & fullness. Make sure it is not for hygiene) - Menstrual cycle symptoms? Pain? discomfort? Irritability? Depression? Pelvic pain? If yes Duration? Nature? Site? Relation to period? Aggravating / relieving factors? Radiation? Associated symptoms: vomiting? Fever? Dysuria?
- **Other bleeding from other places**? Post coital bleeding? Intermenstrual bleeding?
- **Contraception hx:if used,what is the form?duration?**
- Previous infections & STDs.
- **Screening History(PAP smear- STD screening):**If she screened?Last time she screened? And what was the results? If it was abnormal what was the management?
- Pelvic pain?Relation to menstrual cycle?
- Vaginal dryness? Vaginal discharge?
- Past gynecological problems? Anomalies?Previous gynecological surgery?
- Hx of infertility?
- **If she menopause:**Age of menopause-HRT uses - any symptoms like vaginal bleeding or discharge,weight loss,back pain, pelvic pressure, bloating,bowel/bladder complaints

Sexual History

Regular sex? Protective sex? Pain(Dyspareunia)How many partners?

Past obstetric History

See the previous page in past ob history section(same details)

Past Medical Hx	Past Surgical Hx	Medication	Allergy	Blood Transfusion Hx

Psychosocial History

illicit drugs?Alcohol?Smoking?Family Support?domestic violence?psychiatric illness?

Family History

- Hereditary illness: DM, HTN, thalassemia, sickle cell disease, hemophilia?
- Congenital defects: neural tube defects? Down syndrome? Twins?
- Breast/ov/uterine/colon/prostate cancer

Review of systems

Specific Histories

Infertility:

Case: A couple came to your clinic. Complaining of infertility.

When confronted with an infertility case always pay attention to both partners' age or ask about it if not given.

Ask both partners:

- Their ages
- Age and years of marriage
- Whether either of them was married before & had children or not (is it primary or secondary infertility).
- **Smoking**? Alcohol?
- **Sexual hx:**Coital frequency (recommended is 2 or 3 / week),dyspareunia,postcoital bleeding
- **Contraception**, sterilisation.
- Hx of chemotherapy or radiotherapy.

What are you going to ask the husband in the Hx?

- Occupation (radiation or heat exposure)?
- Hx of trauma or surgery (hernia repair,torsion or vasectomy) and infections for e.g. **mumps,STD**.
- **Sexual hx:**Erectile dysfunction
- Medical hx:HTN,DM
- Taking medication (that are known to affect sperm quality)

What are you going to ask the wife in the Hx?

- BMI (>29 or < 19 will lead to difficulty conceiving)
- **Menstrual hx:**(regular, irregular),amout,dysmenorrhea
- Previous ob-gyne surgery, infections e.g. mumps & PID,
- Medical hx:PCOS ,DM,any know gyne anomalies ,Hirsutism, Dysmenorrhea, Prolactinoma & Galactorrhea,
- **DYSPAREUNIA,**postcoital bleeding
- **Vaginal discharge**
- Any medication (known to inhibit ovulation)
- Family Hx of the same problem.

Discussion Questions

What is the best investigation for ovulation?

- Progesterone level in day 21.
- Basal body temperature.
- Pre-ovulatory cervical mucous.
- Urinary LH.

What are the components of semen analysis?

- Sperm conc. >15million.
- Semen Volume 2-5 ml.
- Normal morphology 4%.
- Sperm motility > 50%.
- pH 7.2 – 7.8.
- Liquefaction time: less than 30 min.

Postmenopausal bleeding:

61 y\o Female with post-menopausal bleeding,Take a focused history regarding the complaint.

- Age,Ethnicity
- HPI:
  - Timing,Amount of bleeding – pad counts/hemorrhage/ER visits?
  - Time since menopause
  - Presence of vaginal discharge
  - Use of HRT
  - Other symptoms:weight loss,back pain, pelvic pressure, bloating,bowel/bladder complaints, leg swelling
  - Any previous work-up/investigations done
- Past Gyne Hx:
  - Age of menarche, menopause
  - Cycles – regular?
  - Use of OCP
  - Pap smear
  - Hx of:infertility, PCOS,STI's
  - Gyne surgery
- Past OBS Hx:PARITY
- Past Medical Hx:
  - Cancer – breast, colon,ovarian
  - Hypertension,Diabetes,Obesity,coagulopathy
  - Gallbladder disease
  - Screening – mammogram/colonoscopy/BMD
- Past Surgical Hx
- Meds / treatments:
  - Hormones (HRT, OCP, progestins)
  - Aspirin,heparin and any anticoagulant meds ,NSAIDs,Coumadin
  - Previous pelvic radiation
- Allergies
- Social Hx:Employment,Smoking,Drugs abuse,Exercise
- Family Hx:Breast/ov/uterine/colon/prostate ca

Discussion Questions

How to approach woman with postmenopausal bleeding?

1	**History**	Ask her about what mentioned above
2	**Exam**	➔ start with general exam ➔ then do focused pelvic exam:on lithotomy position,inspect the vulva rule out any vulvar lesions,then do speculum exam look at the cervix & vagina make sure there's no any masses or polyps ,check the bleeding source,then do bimanual exam to assess uterus size ➔ end up doing rectal exam:to rule out rectal cancer ,may the pt mixed up the source of bleeding
3	**investigations**	3 test u should do: ➔ 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

Differential diagnosis of postmenopausal bleeding?

- **Benign causes:**Endometrial Atrophy(most common)- Estrogen Replacement therapy-Endometrial polyps
- Endometrial hyperplasia
- **Malignant causes:**Endometrial cancer-colon cancer

What are Risk factors for uterine cancer?

Nulliparity,Obesity, late menopause, estrogen replacement treatment,hx of breast or ovarian cancer

Treatment of this condition?If the diagnosis is uterine cancer or endometrial hyperplasia with Atypia: Hysterectomy with Bilateral salpngoioophrotomy

What is the most common histological type of endometrial cancer?Adenocarcinoma

Cervical incompetence:

A 32 year old G3P1+2. She had 2 abortions. Take a focused history regarding the complaint

- **Details of the previous pregnancies:**how did she confirmed the diagnosis(Time of delivery, vaginal or c-section, spontaneous or induced, if there is any complication).
  - ★ **Including a Details of each abortion:**(Gestational age, any contraction felt, bleeding, rupture membranes, passing of tissue)
- Hx of cerclage.
- **Risk factors of cervical incompetence:** Cervical cone biopsy, D&C, congenital manifestations (short cervix or collagen disorder), trauma to the cervix, prolonged second stage of labor, uterine overdistention as with a multiple gestation pregnancy.

Discussion Questions

If She has a Hx of painless dilation of the cervix and loss of pregnancy. What is the diagnosis?Cervical incompetence.

What are you going to do for her for this pregnancy? when ?

- Cervical cerclage, performed at 13-14 wk. The stitch should be removed at 37-38 weeks pregnancy or whenever the patient goes into labor.

Mention one investigation you are going to do for her?

- US (**The three ultrasound signs** are shortening of the endocervical canal, funneling of the internal os, and sacculation or prolapse of the membranes into the cervix)
- High vaginal swab & pap smear (for infections)

Ectopic Pregnancy:

A lady presented to the ER complaining of lower abdominal pain with a Hx of amenorrhea for 6 weeks. Take a focused history regarding the complaint.

- Start with SOCRATES for pain details
- **Associated symptoms:** vomiting/nausea? Vaginal bleeding? (ectopic pregnancy)
- Ask about symptoms of UTI, IBD, appendicitis
- Sexually active? Is it possible that you might be pregnant? Did pregnancy test?
- Ask about risk factors of ectopic pregnancy: Previous ectopic pregnancy? History of pelvic inflammatory disease? gonorrhea, or chlamydia infections? previous gyn or abdominal surgery? Congenital uterine malformation? Use of IUD? Smoker?

Discussion Questions

What is your Ddx?Abortion - Ectopic pregnancy "MOST LIKELY THE DX".

How to confirm the diagnosis? By serial 48 hours beta HCG measurement - transvaginal US

What is the drug used for this case?Methotrexate.

Mention 3 prerequisites to use it.

1) She should be hemodynamically stable.
2) Unruptured sac < 3.5 cm
3) No fetal cardiac activity.
4) hCG level isn't more than 6000 mIU/ml.
5) No contraindications for Methotrexate, for e.g. anemia,thrombocytopenia, decreased WBC and immunosuppression.

Mention another option for the treatment of ectopic pregnancy.

Surgery: Do salpingectomy , Salpingostomy or Salpingiotomy.

- If she's stable laparoscopy.
- If she's unstable laparotomy

Early Pregnancy Bleeding:

30-A pregnant lady at 16 weeks of gestation presented with vaginal bleeding and abdominal pain. Take a focused history regarding the complaint.

- Start with SOCRATES for pain details
- **Assess the severity** When did the bleeding start? Is there fresh blood (red) or old (darker, brown) blood? Is bleeding daily present? Did it start acutely or gradually? Was it already present before pregnancy? Also try to estimate the amount of blood lost.
- **Provoked bleeding** Is the bleeding spontaneous or after intercourse or defecation? This could indicate a cervical origin of the problem, e.g. infections like chlamydia and malignancies or even hemorrhoids.
- **accompanying symptoms:**
    - Nausea and fainting might indicate shock due to heavy (intra-abdominal) bleeding in ectopic pregnancy.
    - Did she lose any tissue vaginally? This might point towards an incomplete abortion.
    - Fever can be a result of recent aseptic procedures or of miscarriage which has been infected. It could also be a symptom of an infection which in itself is correlated with miscarriage, e.g. malaria.
    - Dysuria? Sometimes UTI presents itself with fresh blood in the toilet or stains in her underwear
- **Assess her past medical history**:
    - Obstetric history Is this her first pregnancy? There could be a history of miscarriage or bleeding in the first trimester.
    - Are there known diseases such as diabetes, clotting disorders or HIV,Antiphospholipid syndrome,SLE? All are risk factors for miscarriage.
    - Did she use any drugs? Some drugs are known to increase the risk of miscarriage, e.g. diuretics, anti-epileptic drugs, non-steroidal antiinflammatory drugs (NSAIDs), misoprostol.miscarriage.
    - Did she have any operations in the past? An ectopic pregnancy due to PID can reoccur.
    - Previous infection STIs? PID is a risk factor for ectopic pregnancy.
    - Was there trauma?

Discussion Questions

On examination the cervix was closed,What is the most likely Dx?Threatened abortion.
How are you going to manage her?Expectant management and bed rest.

2 weeks later she presented complaining of loss of fetal movement.
What is your most likely Dx?Missed abortion.
How are you going to manage her then ?Elective D and C.

PROM:

Pregnant lady presented with gush of fluid,Take a focused history regarding the complaint

- onset.
- GA.
- The amount of fluid, spontaneous or on stress (coughing).
- Color, is it abnormal ?Smell ?Blood ?
- Is there any pain or contractions?
- Fetal movement.
- Fever.

Discussion Questions

What is your Ddx?

1. PROM.
2. vaginal discharge.
3. urinary leakage (i.e. incontinence).

Investigations to confirm the Dx?

- sterile speculum examination (pooling) - nitrazine test - ferning test - Amnisure - US for amniotic fluid assessment.

US revealed a high head. What are the 2 most likely complications can occur?

- Premature delivery, cord prolapse, intrauterine infection (chorioamnionitis)

Can you send her home?

- No because She's over 36 weeks pregnant.

How are you going to manage her?

Deliver if pt has one of the following

1. Overt infection
2. Age ≥ 34 weeks
3. Non-reassuring fetal status

If gestational age viable (23+ weeks)

admit to hospital on bedrest

- prophylactic broad spectrum antibiotics (Usually ampicillin and erythromycin, initially IV for 48 hours and then orally for 5 days to complete a 7-day course).
- Screen for infectious causes of PPROM.
- GBS culture.
- Antenatal corticosteroids to enhance fetal lung maturity.
- If < 32 weeks consider magnesium sulfate for 12 hours for neuroprotection.
- FHR monitoring
- Biophysical profile 2x/week
- Ultrasound for growth
- Deliver for infection, abruption or nonreassuring fetal status.

Previable PPROM (< 22 weeks' gestation)

the patient and family should be given informed consent about the risks of pulmonary hypoplasia and outcomes. Corticosteroids and antibiotics are not recommended at this gestational age.

Some practitioners will use tocolytic agents with PPROM to delay delivery for 48 hours, allowing the corticosteroids to have its effect. Others argue that preterm labor likely indicates subclinical infection and tocolysis causes harm. There is no clear consensus on this issue. Progesterone may be proven to be useful in women who have had PPROM in a prior pregnancy or who currently have PPROM

Postpartum Hemorrhage:

video

A 37 year old diabetic lady. She delivered a 4.5 kg baby. She developed heavy bleeding after delivery.
Take a focused history regarding the complaint

- Onset (primary (1st 24 hours) or secondary (after 24 h))
- Baby birth weight, EDD
- Characteristic of bleeding: amount, contenus, color and consistency
- Maternal risk factors: diabetes? HTN, History of postpartum hemorrhage, Grand multiparity ,Overdistention of the uterus, Prolonged labor, Chorioamnionitis,retained product of placenta ...
- Associated symptoms: fever-malas- vagial discharge

Discussion Questions

What is the Dx? Postpartum hemorrhage.

What is the cause in this case?uterine atony

From the Hx Mention 2 risk factors in this case?

Overdistention of the uterus-Multiple gestations-Polyhydramnios fetal macrosomia-prolonged labor -multiparity

Mention some investigations you are going to request for her?

Assess coagulation (in DIC: ↓ plt and ↓ fibrinogen, ↑ D-dimer, ↑ PT and ↑ PTT)

How to approach this patient?

★ Its imp to say before doing anything I would do Vaginal EX to exclude genital tract laceration ,.... etc then you should follow the management plan step by step for PH

1. First Start with ABCs:
- Large bore IV access (fluid replacement)
- CBC/crossmatch and typing

2. Second step is assessing the fundus:
- Bimanual uterine **massage**.
- Rule out uterine inversion,retained placental fragments
- May feel lower tract injury
- Evacuate clot from vagina and/ or cervix

3. Drug therapy for PPH:
- Oxytocin.

4. Additional Uterotonics: Add If still no uterine contraction after oxytocin
- Ergometrine (caution in hypertension)
- Hemabate (asthma is a relative contraindication)
- prostaglandin analogue(misoprostol)

Mention 4 complications of postpartum hemorrhage:

1. Acute blood loss may result in shock and death
2. Chronic blood loss may result in iron deficiency anemia
3. In the long run she may develop Sheehan's syndrome
4. Blood transfusion complications
5. If we could not control the blood loss we may do hysterectomy

NOTES IN CASE THEY ASKED:

Definition of PPH: blood loss > 500 mL in vaginal delivery or > 1000 mL following cesarean delivery.

Classification: Primary: Occurs in the **1st 24 hrs**.
- UTERINE ATONY. 80%
- Retained placenta.
- Placenta accreta.
- Defect in coagulation.
- Uterine inversion.
- Laceration

Secondary: Occurs **after 24 hrs** up to 6-12 weeks.
- Retained products of conception.
- Infection.
- Coagulopathy.
- Subinvolution of the placenta site.

NOTE:PPH came in our osce (435 female)as a discussion station, no history taking was required

Vaginal discharge:

This 30 year old women presented with vaginal discharge.take a focused history from her.

- HPI :
  - Onset and duration of vaginal discharge,frequency ,Amount,Color,consistency,presence of blood,Odour.
  - Relation with menstrual cycle,intercourse,contraception
  - Associated symptoms:Vaginal dryness ,Itching,burning,dyspareunia,Fever,Pelvic pain, dysmenorrhea, bleeding,pruritus,Pain on defecation
    - ★ RED FLAGS:PID(bleeding,lower abd pain,dyspareunia ,sexual hx)
- Risk factors:
  - Use of soaps,douching,sexual hx, immunocompromised
- Gyne Hx:
  - result of last pap smear
  - Menstrual hx(Age of menarche, menopause,Cycles – regular?)
  - sexual hx:sexually active,number of partners,condom use,STD hx, partner with STD
    Hx of:infertility, PCOS,STI's , sexual partners,Dyspareunia, Last Pap smear and result
  - Gyne surgery,past abdominal surgery
- Past OBS Hx:PARITY
- Past Medical & medication Hx:previous similar episode,DM, use of immunosuppressant,antibiotics
- Social hx: alcohol,smoking
- Allergies

Discussion Questions

Differential diagnosis of Vaginal discharge?

- Infectious causes: bv, candidiasis,trichomonas,cervicitis
- Post-menopausal: Atrophic vaginitis
- Chemical irritant
- Hormone deficiency-atrophic vaginitis
- Physiological-normal discharge
- Non vaginal-abscess, urethral discharge

Comparison between different causes of vaginal discharge:

Cause	Bacterial vaginosis	Trichomonas	Candidiasis
Discharge	fishy odor,thin grayish	green frothy	white curdy
PH	↑ 4.5	↑ 4.5	↓ 4.5
S&S	[no inflammation]	[Inflammation] Vulvar Erythema, "strawberry" cervix, dysuria, itch	[inflammation] vulvar erythema, dysuria, itch, superficial dyspareunia
Wet Mount	saline:clue cells	saline: motile trichomonads	KOH: hyphae
Rx	metronidazole,clindamycin	metronidazole	Azole cream,fluconazole

Dysmenorrhea:

A 35 years old female complains of pain 2 days before and 3 days after her period .Take a focused history regarding the complaint

- Start with SOCRATES for pain details
  - site(is it unilateral,bilateral) , onset of pain (new pain or started from menarche)(the relationship of the pain with her period),characteristic,relieving factors(is it responsive to meds like NSAID?),SEVERITY,...etc
- Ask about the course of pain (does it worsen with age)
- Associated symptoms(Abnormal bleeding, Dyspareunia, Infertility,fever)
- Risk factors (Nulliparity, family Hx of endometriosis)
- Previous Gyne surgery
- Take the Menstrual hx(regulatory,severity,amounts,intermenstrual bleeding..etc)
- Any previous work-up/investigations done

Discussion Questions

What is this condition called?

Secondary dysmenorrhea

What is your DDx?

- Endometriosis
- Pelvic Inflammatory Diseases
- Adenomyosis
- Leiomyoma
- cervical stenosis
- Pelvic congestion syndrome
- Ovarian cysts

Name 2 investigations to do in this case?

Ultrasound and the diagnosis is confirmed by laparoscopy

What are the most likely complications can occur? Assuming she has endometriosis

About one-third to one-half of women with endometriosis have trouble getting pregnant

How to differentiate between primary and secondary dysmenorrhea

Types	Primary	Secondary
Onset	Within 2 years of menarche Prior or at menses,lasting for 48-72 hours	20-30 years of age May extend pre- or post-menstrually
Description	Cramping in lower abdomen, radiating to lower back and thighs	Dull, aching often
Associated symptoms	Nausea and vomiting Fatigue Diarrhea Headache	Dyspareunia Infertility Abnormal bleeding
Pelvic examination	Normal	Variable, depending on the cause

How are you going to manage her?

Depend on the cause

Endometriosis: Medical (continuous progestins, OCP, danazol, GnRH agonist) Surgical (conservative surgery and radical surgery)

Adenomyosis: NSAID, progesterone cream, Hysterectomy

Pelvic inflammatory disease: medical treatment with antibiotics (Cephalosporins + Doxycycline) if failed > surgical treatment

Cervical stenosis: cervical dilation under anesthesia

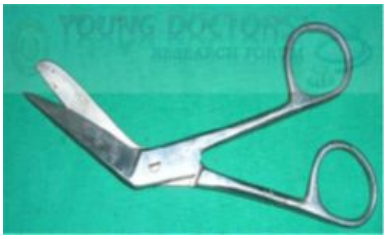
Pelvic congestion syndrome: Stress reduction and counseling

Discussion Stations

Episiotomy:

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.**

Incision done by using Episiotomy scissor → see the pic لازم تعرفون تميزون شكله



Advantages

- 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

Indications:

- Shoulder dystocia
- Non-reassuring fetal monitor tracing
- Delayed second stage of labour
- Foetal 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

Contraindications:

- patient's refusal for the procedure (most important contraindication)
- Women with bleeding abnormalities
- Women with HIV infection (this is relative contraindication and not absolute, hence may be done in some cases)
- Rhesus negative mother with a rhesus positive child (this is also relative contraindication as Rhogam anti D immunoglobulin may be given after delivery)
- Relative contraindications: include abnormalities of the perineum. Inflammatory bowel disease, lymphogranuloma venereum, severe perineal scarring, and perineal malformation are some to consider.

Complications:

- Tear and extension
- Excessive blood loss
- Hematoma
- Infection
- Incontinence
- Wound dehiscence
- Dyspareunia

Types	Midline	Mediolateral
Advantages	• Less perineal pain. • Less bleeding. • Easier to repair.	• Lower risk of extension into rectum.
Disadvantages	• Higher risk of extension into rectum 10%.	• More perineal pain. • More bleeding. • Harder to repair.

NOTE:episiotomy came in the exam(435 female)as written sation (SAQ)

Menopause:

Definition: Menopause is a retrospective diagnosis and is defined as 12 months of amenorrhea.

****Before the onset of menopause:**Menses typically become anovulatory and decrease during a period of 3–5 years known as perimenopause.

The mean age of menopause: 51 years

Laboratory findings:

- elevation of gonadotropins (FSH and LH),lack of the active form of estrogen(estradiol),

The predominant form of estrogen in menopause:

- estrone,due to peripheral conversion of androgens to estrone in peripheral adipose tissues

Clinical Findings:

1. Amenorrhea: The most common symptom is secondary amenorrhea.
2. Hot flashes
3. Atrophic vaginitis
4. Pelvic organ prolapse
5. Urinary tract:Low estrogen leads to increased urgency, frequency, nocturia, and urge incontinence.
6. Psychic:Low estrogen leads to mood alteration, emotional lability, sleep disorders,and depression.
7. Cardiovascular disease:This is the most common cause of mortality (50%) in postmenopausal women
8. Osteoporosis:first bone affected by osteoporosis is the vertebrae

Management:

- First-line treatment for the menopause should begin with lifestyle changes such as diet and exercise to control mild to moderate symptoms, reserving hormonal therapy for those women who have significant problems.
- Any patient on systemic hormonal therapy:
  - If she has a uterus we give estrogen + progesterone; bc Estrogen alone will increase the risk of endometrial cancer.
  - If she has no uterus we give estrogen only.
- Atrophic vaginitis treated by topical estrogen
- SSRI antidepressants can be used as an alternative in women who are not candidates for HT.the examiner asked me if the woman told you i don't want to take hormone what u will give her.

Table II-12-4. Osteoporosis

Lifestyle	Ca^{2+} and vitamin D intake
	Weight-bearing exercise
	Stop cigarettes and alcohol
Medical	Historic gold standard for comparing therapies: estrogen replacement
	Inhibit osteoclastics: bisphosphonates (alendronate, risedronate)
	Increase bone density: SERMs (raloxifene)

Definition of abbreviations: SERMS, selective estrogen receptor modulators.

- Discuss with her about the screening tests recommendations:(i.e. colonoscopy at age 50, bone density at age 65,mammogram,cervical cytology screening)

Cervical cancer:

- **Risk factors associated with cervical cancer?** Early age of coitis, STDs, early childbearing, low socioeconomic status, HPV, HIV infection, smoking, multiple sexual partner.

- **Clinical features:** early stages (None, irregular\prolonged vaginal bleeding\pink discharge, postcoital bleeding). Middle stages: (Postvoid bleeding, dysuria\hematuria). Advanced stage (Weight loss, loss of appetite. Pelvic or back pain).

- **Clinical staging:**
  - Physical exam: bimanual, speculum, and rectovaginal exam to palpate tumor. Palpation of groin and supraclavicular lymph node.
  - 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. (CT is used in some centers)

- **Diagnostic tests:**
  - **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.

- **Management of Cervical cancer:**
  - **Stage Ia1**: 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.

Ovarian cancer:

- **Etiology:** Cause of ovarian cancer is unknown.
- **Risk factors associated with epithelial ovarian cancer?** White \ Caucasian race, Excess estrogen: Nulliparity, early menarche\late menopause, Advanced age, Family history of breast, colon, endometrial, ovarian cancers, BRCA1 & 2 genes.
- **Protective factors associated with epithelial ovarian cancer?** OCP, Pregnancy \ breastfeeding, tubal ligation, Salpingectomy, Bilateral salpingo-oophorectomy.
- **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

- **Clinical features:** 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).
- **Differential diagnosis:** Ovarian malignancy, ovarian benign neoplasms, and functional cysts of the ovaries must be differentiated.
- **Staging:** Surgical staging.
  - **I:** tumor limited to ovaries
  - **II:** Pelvic spread.
  - **III:** Abdominal cavity spread. (IIIA: Positive abdominal peritoneal washings) (IIIB: <2 cm on abdominal peritoneal surface.) **(IIIC: >2 cm on abdominal peritoneal surface).the most common stage pt present with is stage 3, peritoneal metastasis**
  - **IV:** distant metastasis. (IVA: Involves bladder or rectum)(IVB:Distant metastasis)

- **Investigations:**
  - A women with suspected ovarian cancer based on hx, P\E, or investigations should be referred to a gynecologic oncologist: bimanual examination (solid \ irregular \ fixed pelvic mass), and risk of malignancy index (RMI).
  - 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 mets).
  - 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: USO is sufficient (if pt is not a good surgical candidate, or wants to maintain her uterus and contralateral ovary), TAH & BSO (if she's a good candidate).
    - Malignant histology: Debulking procedure+Postoperative chemotherapy.they will ask u what do u mean by debulking?TAH + BSO + omentectomy +\- Bowel resection(remove as much visible cancer as possible)
  - Follow up by CA-125.

Antenatal surveillance:

- **What is the EDD?**
  - Estimated day of delivery (Naegele's rule = LMP - 3 months + 7 days)

- **Why we use US?**
  - e.g to know the gestational age (earlier sonograms are more accurate than later ones), if one or twins, earlier sonograms are more accurate than later ones. .. etc

- **What are the booking investigations at The first prenatal visit ?**
  - Glucose screen.
  - CBC, Hb, WBC & Platelets.
  - Blood group, Rh factor & Red cell antibody.
  - Hepatitis B. Rubella, syphilis.
  - US to determine the gestational age & EDD.
  - Urine test (for asymptomatic Bacteriuria):mid stream urine
  - Pap smear.

  To sum up: CBC & blood type, TORCH screening, urinalysis (MSU)

- **Mention 3 tests in antenatal visit?**

Diagnostic work-up during antenatal care

Diagnostic procedure	Gestational age
Hemoglobin/hematocrit determination	Initial visit; repeat at 28-32 weeks
ABO and RH typing	Initial visit
VDRL	Initial visit; repeat at 28 weeks if negative
Urinalysis	At each visit to detect proteinuria
Urine culture and sensitivity	Initial visit to detect asymptomatic bacteriuria
Indirect Coomb's test	Initial visit
Serum alpha-fetoprotein test	16-18 weeks
Routine ultrasonography	16-18 weeks
Screening test for gestational diabetes	24-28 weeks
Pap smear	Initial visit
Cervical smear gram stain and culture	Initial visit
HBsAg; HIV tests	Initial visit

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- **Timing of the visits?**
  - every 4 wk until 28 wk , then every 2 wk until 36 wk , then weekly until delivery !

Preterm labor:

What is the definition of preterm labor?

The Three criteria of preterm labor that need to be met:

- Gestational age: pregnancy duration >20 weeks, but <37 weeks.
- Uterine contractions: at least 3 contractions in 30 min.
- Cervical change: serial examinations show a change in dilation or effacement, OR a single examination shows cervical dilation of >2 cm.

What are the clinical presentation of preterm labor?

- Symptoms:Lower abdominal pain or pressure, lower back pain, increased vaginal discharge, or bloody show.

What are the risk factors of preterm labor?

- prior preterm birth, short transvaginal cervical length (<25 mm)[1], PROM, multiple gestation, uterine anomaly. Less common risk factors: low maternal pre-pregnancy weight, smoking, substance abuse, and short inter-pregnancy interval (<18 months)

Name 2 maternal & 2 fetal Complication?

- Maternal:Increase risk of infection,Risk of CS because of very small birth weight baby.
- Fetal: risk of prematurity, necrotizing enterocolitis, respiratory distress syndrome, interventricular hemorrhage, retinopathy of prematurity.

What are the Management of preterm labor?

1. Initiate IV hydration with isotonic fluids.
2. Confirm labor using the 3 criteria listed earlier.
    a. Once the diagnosis of preterm labor has been made, **the following laboratory tests should be obtained:** cbc, random blood glucose level, serum electrolyte levels, urinalysis, and urine culture and sensitivity.
    b. An **ultrasonic examination** of the fetus should be performed to assess fetal **weight**, document **presentation**, assess **cervical length**, and **rule out** the presence of any accompanying congenital malformation. Also, it can detect an underlying etiologic factor, **such as** twins or a uterine anomaly.
3. Rule out contraindications to tocolysis using criteria listed Below.
4. if gestational age is between 23-34 weeks: Administer maternal IM **betamethasone**. And parenteral tocolytic for no longer than 48 hours to allow for antenatal steroid effect.
5. At least 4 hours before anticipated birth (if <32 weeks):Start IV **MgSo4** for fetal neuroprotection .

Mention 2 benefits for the use of corticosteroids.

- To enhance the lung maturity.
- It lower the severity, frequency, or both of respiratory distress syndrome, intracranial hemorrhage, necrotizing enterocolitis and death.

Mention the benefits of tocolytics use:

- Parenteral agents may prolong pregnancy but for no more than 72 h.
- This does provide a window of time for **(1)** administration of maternal IM betamethasone to enhance fetal pulmonary surfactant and **(2)** transportation of mother and fetus in utero to a facility with neonatal intensive care.

[1] When we do it? prior to 24 weeks of pregnancy.

Tocolytic Therapy		
Agents	**Magnesium sulfate**	**Side effects:** muscle weakness, respiratory depression, and pulmonary edema. **Contraindications:** myasthenia gravis**.** **Antidote:**IV calcium gluconate.
	Beta 2-Adrenergic agonists include terbutaline	**Side effects:**Hyperglycemia,Hypokalemia,hypertension,tachycardia. **Contraindications:** DM, uncontrolled hyperthyroidism, cardiac disease.
	Calcium-channel blockers e.g., nifedipine	**Side effects:** tachycardia, hypotension, and **myocardial depression**. **Contraindications:** hypotension.
	Prostaglandin synthetase inhibitors e.g., indomethacin	**Side effects**: **oligohydramnios**, **in utero ductus arteriosus closure**, and neonatal necrotizing enterocolitis. **Contraindications:** gestational age **>32 weeks**.

Tocolytic Contraindications

- ★ **Obstetric conditions:** severe abruptio placenta, ruptured membranes, chorioamnionitis.
- ★ **Fetal conditions:** lethal anomaly (anencephaly, renal agenesis), fetal demise or jeopardy (repetitive late decelerations).
- ★ **Maternal conditions:** eclampsia, severe preeclampsia, advanced cervical dilation.

Counseling Stations

In general in any counseling station you may have to take brief history, explain to her the nature of the disease, prognosis , reassure the patient, give advice, answer questions and know the exact management and possible risks to both the mother and the fetus.

Dysfunctional uterine bleeding Counseling:

A 45 lady come to you diagnosed with DUB, Answer her questions .
Explain to her the nature of her problem?

- DUB is a common disorder of excessive uterine bleeding affecting pre-menopausal women that is **not** due to pregnancy or any recognisable uterine or systemic diseases.
- The underlying pathophysiology is believed to be due to ovarian hormonal dysfunction that cause **ANOVULATION**

What is the cause of her problem?

- usually due to anovulation that's unrelated to another illness.Dysfunctional uterine bleeding can occur with declining estrogen levels at the end of a woman's reproductive life.
-

Prognosis:

- The effects of unopposed estrogen on the uterine lining have been directly linked to endometrial hyperplasia and cancer.

Explain to her the management options with the benefits and risks of each options:

After she has received a diagnosis, she'll need treatment to stop the bleeding, restore a normal menstrual cycle, and maintain hemodynamic stability.

Progestin management:to decrease the menstrual flow and prevent endometrial hyperplasia,**but won't cause ovulation:**

- Cyclic Medroxyprogesterone acetate
- Oral contraceptive pills
- Progestin intrauterine system.delivers the progestin directly to the endometrium. This treatment can significantly decreasing menstrual blood loss.

Other managements, If progestin management is not successful in controlling blood loss, the following generic methods have been successful:

- **NSAIDs:** can decrease dysmenorrheal, improve clotting and reduce menstrual blood loss.
- **Tranexamic acid:** works by inhibiting fibrinolysis by plasmin. It is contraindicated with history of DVT, PE or CVA, and not recommended with E+P steroids.
- **Endometrial ablation**:procedure destroys the endometrium by heat, cold or microwavesIt leads to a iatrogenic Asherman syndrome and minimal or no menstrual blood loss. Fertility will be affected.
- **Hysterectomy (removal of the uterus):** is a last resort and performed only after all other therapies have been unsuccessful.

OCP counseling for first time:

A lady wants to take OCPs for the 1st time,counsel her.

Take a brief Hx [Ask about the risk factors to exclude any contraindications]

- Age
- PMHx: liver diseases,breast cancer,vascular diseases,VTE,coagulation disorders, HTN,DM,migraine with or without aura
- Menstrual history (dysmenorrhoea/menorrhagia, cycle length, regular)
- SHx: smoking (above 35 is contraindication to COCP)
- DHx and allergies
- FHx: breast/cervical cancer, VTE history, migraine with aura
- Relationship (regular partner/multiple partners)
- Recent pregnancy/breastfeeding
- Previous contraception

What type of contraceptive pills do you know and what are the components of these pills?

- Combined oral contraceptive pills (estrogen and progesterone)
- Mini-pills (progesterone only)

What type of estrogen is in OCP? Estradiol

How would you instruct a woman on how to take the OCP for the 1st time?

- She should start In the 1st day of the cycle (period) then After 21 days she should stop for 7 days.

How would you instruct a woman who has forgotten to take her pill?

- Take the pill as soon as you remember it and take your regular pill as well.

Can I have a rest with no desire to conceive? No.

What is their failure rate? 0.1 (not sure plz recheck)

**0.1% for combined 8% for progestin only

Does it cause acne? And why?

- No, Due to the decrease in androgen by the increase in the serum binding proteins that binds to testosterone and decreases the free testosterone level.

Is it contraindicated after 35 years of age? Only in heavy smokers otherwise if she's healthy with no contraindications, she can take it. (>35 HTN, Migraine, smoker)

What are the absolute contraindications to combined OCPs?

- History of breast cancer
- Migraine with aura
- History of vascular disease (DVT or thromboembolism)
- Liver disease

What are the non-contraceptive uses of OCPs?

- Treatment of polycystic ovarian syndrome
- Treatment of endometriosis
- Dysmenorrhea
- Ovarian cysts

Would you prescribe COCP in the postpartum period and give your justification?

- No, because the pregnancy and the puerperium period are a state of hypercoagulable state, this would increase the risk of DVT/PE.

Great table comparison between two types of OCPS,check it to review your information.

q: يحبون يسألون عن الكونتراندیكیشنز,سألونا كثیير عنها بكل مكان لين طلعت من خشمي

OCP counseling with breast feeding:

A woman is breast-feeding and wants oral contraceptives,counsel her.

Does breastfeeding consider contraceptive?

- In order to breastfeeding to be contraceptive, the effectiveness is dependent on the frequency (at least every 4-6 hours day & night) and intensity (infant suckling rather than pumping) of milk removal.

If she wants oral pills,what will you choose for her?

- Progestin steroids (e.g., mini-pill, Depo-Provera, Nexplanon) do not diminish milk production so can safely be used during lactation. They can be begun immediately after delivery.

What is the mechanism of action?

- ↑ cervical mucus
- Thins endothelium

She'll stop breastfeeding soon and wants a more effective oral contraceptive pills:

- ➔ **what will you give her?** Oral combined contraceptive pills.but not before 2-3 wk of pp to avoid the risk of thromboembolism
- ➔ **What are the components of it?**Ethinyl estradiol and progestin
- ➔ **What type of estrogen is in OCP?** Estradiol
- ➔ **What is the mechanism of action?**
  - COCP have negative feedback on the hypothalamus (estrogen effect of diminishing milk production)
  - INHIBITING OVULATION
  - ↑ cervical mucus
  - Thins endothelium
- ➔ **What things will you ask her before you prescribe it?**
  - Age
  - Relationship (regular partner/multiple partners)
  - Menstrual history (dysmenorrhoea/menorrhagia, cycle length, regular)
  - Previous contraception
  - PMHx: current, past, STIs, liver disease, HTN
  - DHx and allergies
  - SHx: smoking
  - FHx: breast/cervical cancer, VTE history, migraine with aura

What are the other options for contraception:

- **Diaphragm:**Fitting for a vaginal diaphragm should be performed after involution of pregnancy changes, usually at the 6-week postpartum visit.
- **Intrauterine Device (IUD):** Higher IUD retention rates, and decreased expulsions, are seen if IUD placement takes place at 6 weeks postpartum.

Important things:You have to know the mechanism of action for each type. All the risk factors and contraindications

Pregnant NOT immune to Rubella:

Scenario: 29 years old, first pregnancy at 8 weeks, she is NOT immune to Rubella,Counsel the patient.

First, introduce yourself (I am … 4th year medical student…).
Put in your mind that you have to <u>respect</u> and <u>listen</u> to the patient.

Advice her During pregnancy:

- **Expectant management,** There is **no treatment for rubella infection**.
- To avoid contact with children who have URTI because the infection is transmitted via respiratory droplets, she should take more precautions in early pregnancy. you'll just need to be careful to avoid anyone with a rash or virus as well as anyone who's recently been exposed to rubella and hasn't had it before.

Which time period is the most dangerous time period to the baby?what can happen to the fetus?

- during the **<u>first 20 weeks of pregnancy.</u>**
- Many mothers who contract rubella within the first critical trimester either have a miscarriage or a stillborn baby.
- If the fetus survives will develop: **<u>Congenital Rubella Syndrome:</u>**which is characterized by congenital deafness (most common sequelae), congenital heart disease, cataracts, mental retardation, hepatosplenomegaly, thrombocytopenia, and "blueberry muffin" rash.

After delivery:

- ➔ What is your next step?She should receive Rubella vaccine
- ➔ What is the vaccine?Live attenuated virus
- ➔ What is the amount?0.5 ml
- ➔ What is the route?Subcutaneously
- ➔ What would you tell here next? She should avoid pregnancy
- ➔ For how long?For at least 3 months because of the risk of the virus
- ➔ What precautionary measures should be taken to avoid pregnancy?Is to use some form of contraception
- ➔ What form of contraception she should have ?This should be individualized
- ➔ Would you prescribe COCP in the post partum period and give your justification?No, because the pregnancy and the puerperium period are a state of hypercoagulatblestate, this would increase the risk of DVT/PE

Recurrent Abortion Counseling:

The simulated patient had 3 abortions is here to ask some questions.

She asked you why is she having abortion?

- **Take a brief Past OB history:**ask about the previous abortions,her age and the timing of each abortion according to the gestational age and mention all the maternal and fetal reasons
- **Ask about risk factors of recurrent abortions :**
    - Medical Hx: DM, thyroid, PCOS, Antiphospholipid syndrome,
    - Hx of surgeries, cerclage, D&C,cone biopsy
    - SHx: smoking , alcohol
    - Congenital abnormality or hereditary disease in the family.

What tests/investigations will you order to find out the cause?

- Vaginal swabs
- Pelvic ultrasound
- Hysteroscopy or hysterography should be performed to evaluate the uterine cavity.
- Thyroid Function Tests and Thyroid antibody
- Elevated LH=pcos
- Oral glucose tolerance test - Fasting plasma glucose
- Antiphospholipid antibodies (lupus anticoagulant or anticardiolipin antibodies)
- Rh Factor
- Paternal and maternal chromosomes should be evaluated
- Karyotyping
- Mycoplasma, Listeria, or Toxoplasma

What can you do to prevent or decrease the chance of abortion in her next pregnancy?

- In the presence of a cause treatment is directed to control the cause .
- Advice : about general health, weight, diet, smoking & alcohol.

Diabetes and pregnancy Counseling:

Pregnant lady came at your clinic for follow up, she had diabetes (uncontrolled Glucose level).

First Take a history from her (to know the predisposing factors and determine whether it's GDM or overt diabetes).

Then what are you going to say to your pt:

1)Risk factors of diabetes:

- BMI above 30.
- Previous GDM
- Previous baby weighing 4.5 kg or above.
- Family hx.

2)Tests to diagnose diabetes in pregnancy:

- OGTT (diagnostic if any value of the following is abnormal)

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

3)Management To control blood glucose:

- If newly diagnosed:Put her on diet x 3 days
- Then Do BSS:
  - if controlled ⟶ continue with monitoring.
  - if not ⟶ start oral hypoglycemic (Metformin/Glucophage)
  - If oral hypoglycemic fails to control blood sugar ⟶ Insulin

3)To monitor fetus:

- Frequent U/S scanning to assess growth + A.F.V. as well as fetal well being and to look for anomalies in cases of overt diabetes. (It is to be noted that congenital anomalies and abortion are not a risks with gestational diabetes)

4)When To deliver baby:

- Induction, at 38 weeks if on medication.
- Induction, at 40 weeks (term) if controlled with diet.
- C/S for obstetric indications(macrosomic baby ...etc)

5)Complications of diabetes:

- Maternal: Pre-eclampsia / eclampsia- Injury to the birth canal secondary to macrosomia- Maternal Mortality
- Fetal:risk of congenital anomalies- abortion- preterm labor- neonatal morbidity (e.g. birth injury – shoulder dystocia- Brachial plexus injury- RDS)

PCOS "Stein Leventhal Syndrome" Counseling:

Scenario: There was a Hx of young infertile female with obesity and hurtisim.

What is your most likely diagnosis? Polycystic ovarian syndrome
Counseling mention 2*?

1. Explain to patient the **nature of the disease and the prognosis** by using simple words.
2. Tell the patient about the **management options and discuss it with her**.

*** When we asked the Dr what is the answer, he said as the above but still in doubt.**

Nature of the disease and the prognosis:
Normally sex hormones (E&P) have fluctuation state (up & down) but in PCOS the ovaries are bilaterally enlarged with multiple peripheral cysts. **Why?** This is due to **high circulating androgens** and **high circulating insulin levels** causing **arrest** of follicular development in various stages and the hormones will have steady state. **This will lead to:** anovulation and infertility. **How? No** ovulation → **No** corpus luteum formation → **No** Progesterone. So there will be **Estrogen effect ONLY** which will cause: Irregular bleeding and Endometrial hyperplasia (thickening). **How hurtisim developed?**The combined effect of increased total testosterone and decreased SHBG leads to mildly elevated levels of free testosterone. This results in hirsutism. **Insulin Resistance can cause:** Hyperandrogenism & Acanthosis Nigrican**.**
Management Option:
Treatment is directed toward the primary problem and the patient's desires, for Example: ➔ **Irregular bleeding: OCPs.** ➔ **Hirsutism:** Excess male-pattern hair growth can be suppressed 2 ways: **OCPs** and **Spironolactone.** ➔ **Infertility: Clomiphene Citrate** or **Human Menopausal Gonadotropin** (HMG; Pergonal) or **Metformin.**

How to confirm the Diagnosis:

- **Suspected:** Infertility, obesity, hirsutism, irregular bleeding.
- **Conformed:** LH/FSH ratio 3:1 (Normal 1.5:1).
- **Rotterdam criteria**: which requires 2 of the following 3 findings:
    - Oligomenorrhea or menstrual dysfunction.
    - Hyperandrogenism, clinically or biochemically.
    - Polycystic ovaries on TV sonogram (≥12 peripheral cysts).

How does these medications work ?

1. **Metformin:** can decrease insulin resistance and lower testosterone levels. Metformin enhance ovulation both with and without clomiphene.
2. **OCP:** The treatment of choice!
    a. They will lower free testosterone levels in 2 ways:
        i. OCPs will lower testosterone production by suppressing LH stimulation of the ovarian follicle theca cells.
        ii. OCPs will also increase SHBG, thus decreasing free testosterone level.
    b. Will normalize her bleeding and the progestin component will prevent endometrial hyperplasia.
3. **Spironolactone:** suppresses hair follicle 5-α reductase enzyme conversion of androstenedione and testosterone to the more potent dihydrotestosterone.
4. **Infertility medications:** if infertility is a problem, clomiphene citrate. Clomiphene induce ovulation