

OBSTETRICS AND GYNECOLOGY

OB/GYN OSCE

History Taking

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General information

- **Name**
- **Age**
- **Gravidity**
- **Parity**
- **LMP,**
- **EDD (Naegele's rule)**
 - Is to add 9 months and 7 days to the first day of the last normal menstrual period example:
 - LMP: July 20, 2008
 - EDC: April 27, 2009
 - This is in Gregorian date but if it is in Hijri add 18 days instead of 7 days.
 - Average cycle is 28 days and it can be from 21 to 35 days.
 - If it is 21= add one day, 28= add 7 days, 35= add 14 days.
- **Gravidity** = no. Of pregnancies including current pregnancy (regardless of the outcome N or abortion)
- **Parity** = no. Of births beyond 24 weeks gestation.

Obstetric History

1. Date of delivery (or pregnancy termination)

2. Location of delivery (or pregnancy termination)

3. Duration of gestation (recorded in weeks). When correlated with birth weight, this information allows an assessment of fetal growth patterns. The gestational age of any spontaneous abortion is of importance in any subsequent pregnancy.

4. Type of delivery (or method of terminating pregnancy). This information is important for planning the method of delivery in the present pregnancy. A difficult forceps delivery or a cesarean section may require a personal review of the labor and delivery records.

5. Duration of labor (recorded in hours). This may alert the physician to the possibility of an unusually long or short labor.

6. Type of anesthesia. Any complications of anesthesia should be noted.

7. Maternal complications. Urinary tract infections, vaginal bleeding, hypertension, and postpartum complications may be repetitive; such knowledge is helpful in anticipating and preventing problems with the present pregnancy.

8. Newborn weight (in grams or pounds and ounces). This information may give indications of gestational diabetes, fetal growth problems, shoulder dystocia, or cephalopelvic disproportion

9. Newborn gender. This may provide insight into patient and family expectations and may indicate certain genetic risk factors.

10. Fetal and neonatal complications. Certain questions should be asked to elicit any problems and to determine the need to obtain further information. Inquiry should be made as to whether the baby had any problems after it was born, whether the baby breathed and cried right away, and whether the baby left the hospital with the mother.

MENSTRUAL HISTORY A good menstrual history is essential because it is the determinant for establishing the expected date of confinement (EDC). A modification of Nägele's rule for establishing the EDC is to add 9 months and 7 days to the first day of the last normal menstrual period (LMP). For example: LMP: July 20, 2008 EDC: April 27, 2009 This calculation assumes a normal 28-day cycle, and adjustments must be made for longer or shorter cycles. Any bleeding or spotting since the last normal menstrual period should be reviewed in detail and taken into account when calculating an EDC.

CONTRACEPTIVE HISTORY This information is important for risk assessment. Oral contraceptives taken during early pregnancy have been associated with birth defects, and retained intrauterine products of conception.

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CONTRACEPTIVE HISTORY This information is important for risk assessment. Oral contraceptives taken during early pregnancy have been associated with birth defects, and retained intrauterine devices (IUDs) can cause early pregnancy loss, infection, and premature delivery. **MEDICAL HISTORY** The importance of a good medical history cannot be overemphasized. In addition to common disorders, such as diabetes mellitus, hypertension, and renal disease, which are known to affect pregnancy outcome, all serious medical conditions should be recorded.

SURGICAL HISTORY Each surgical procedure should be recorded chronologically, including date, hospital, surgeon, and complications. Trauma must also be listed (e.g., a fractured pelvis may result in diminished pelvic capacity).

SOCIAL HISTORY Habits such as smoking, alcohol use, and other substance abuse are important factors that must be recorded and managed appropriately. The patient's contact or exposure to domesticated animals, particularly cats (which carry a risk for toxoplasmosis), is important. The patient's type of work and lifestyle may affect the pregnancy. Exposure to solvents (carbon tetrachloride) or insulators (polychlorobromine compounds) in the workplace may lead to teratogenesis or hepatic toxicity.

OBSTETRIC HISTORY Each pregnancy and delivery and any associated complications should be listed sequentially with relevant details and dates.

SEXUAL HISTORY The health of, and current relationship with, the husband or partner(s) may provide insight into the present complaints. Inquiry should be made regarding any pain (dyspareunia), bleeding, or dysuria associated with sexual intercourse. Sexual satisfaction should be discussed tactfully.

PAST HISTORY As in the obstetric history, any significant past medical or surgical history should be recorded, as should the patient's family history. A list of current medications is important.

SYSTEMIC REVIEW A review of all other organ systems should be undertaken. Habits (tobacco, alcohol, other substance abuse), medications, usual weight with recent changes, and loss of height (osteoporosis) are important parts of the systemic review.

Gynecologic History

Gynecologic History A full history is equally as important in evaluating the gynecologic patient as in evaluating a patient in general medicine or surgery. The history-taking must be systematic to avoid omissions, and it should be conducted with sensitivity and without haste.

PRESENT ILLNESS The patient is asked to state her main complaint and to relate her present illness, sequentially, in her own words. Pertinent negative information should be recorded, and as much as possible, questions should be reserved until after the patient has described the course of her illness. Generally, the history provides substantial clues to the diagnosis, so it is important to evaluate fully the more common symptoms encountered in gynecologic patients.

Abnormal Vaginal Bleeding Vaginal bleeding before the age of 9 years and after the age of 52 years is cause for concern and requires investigation. These are the limits of normal menstruation, and although the occasional woman may menstruate Chapter 2 Clinical Approach to the Patient 15 regularly and normally up to the age of 57 or 58 years, it is important to ensure that she is not bleeding from uterine cancer or from exogenous estrogens. Prolongation of menses beyond 7 days or bleeding between menses, except for a brief *kleine regnen* at ovulation, may connote abnormal ovarian function, uterine myomas, or endometriosis

. **Abdominal Pain** Many gynecologic problems are associated with abdominal pain. The common gynecologic causes of acute lower abdominal pain are salpingo-oophoritis with peritoneal inflammation, torsion and infarction of an ovarian cyst, endometriosis, or rupture of an ectopic pregnancy. Patterns of pain radiation should be recorded and may provide an important diagnostic clue. Chronic lower abdominal pain is generally associated with endometriosis, chronic pelvic inflammatory disease, or large pelvic tumors. It may also be the first symptom of ovarian cancer.

Amenorrhea The most common causes of amenorrhea are pregnancy and the normal menopause. It is abnormal for a young woman to reach the age of 16 years without menstruating (primary amenorrhea). Pregnancy should be suspected in a woman between 15 and 45 years of age who fails to menstruate within 35 days from the first day of her last menstruation. In a patient with amenorrhea who is not pregnant, inquiry should be made about menopausal or climacteric symptoms such as hot flashes, vaginal dryness, or mild depression.

Other pertinent symptoms of concern include dysmenorrhea, premenstrual tension, fluid retention, leukorrhea, constipation, dyschezia, dyspareunia, and abdominal distention. Lower back and sacral pain may indicate uterine prolapse, enterocele, or rectocele.

MENSTRUAL HISTORY The menstrual history should include the age at menarche (average is 12 to 13 years), interval between periods (21 to 35 days with a median of 28 days), duration of menses (average is 5 days), and character of the flow (scant, normal, heavy, usually without clots). Any intermenstrual bleeding (metrorrhagia) should be noted. The date of onset of the LMP and the date of the previous menstrual period should be recorded. Inquiry should be made regarding menstrual cramps (dysmenorrhea); if present, the age at onset, severity, and character of the cramps should be recorded, together with an estimate of the disability incurred. Midcycle pain (mittelschmerz) and a midcycle increase in vaginal secretions are indicative of ovulatory cycles.

CONTRACEPTIVE HISTORY The type and duration of each contraceptive method must be recorded, along with any attendant complications. These may include amenorrhea or thromboembolic disease with oral contraceptives; dysmenorrhea, heavy bleeding (menorrhagia), or pelvic infection with the intrauterine device; or contraceptive failure with the diaphragm, contraceptive sponge, or contraceptive cream.

#1- Abortion

Etiology:

Fetal Causes: Chromosomal abnormality

Maternal causes:

1. Immunological
2. Uterine abnormality
3. Endocrine: e.g. Uncontrolled diabetes
4. Infections
5. Environmental toxins

Threatened Abortion

Signs and symptoms:

1. A period of amenorrhea
2. Mild bleeding (spotting or heavy)
3. Mild pain.

Investigations:

- ✓ Bimanual Exam: Vulvae, Vagina and Cervix healthy.
Uterus corresponds to period of gestation, **internal cervical os is closed.**
- ✓ Ultrasound (USS): viable intra uterine fetus.

Management:

- ✓ Expectant; reassurance.
- ✓ Anti D if Rhesus negative
- ✓ Hormones; Progesterone and Rest.

Inevitable Abortion:

Signs and symptoms:

1. A period of amenorrhea
2. Heavy bleeding accompanied with clots (may lead to shock).
3. Severe lower abdominal pain no passage of tissue.

Investigations:

Bimanual Exam: Vulvae, Vagina and Cervix healthy, Uterus corresponds to period of gestation, **Internal cervical os is open** and product of conception felt in the cervical canal.

Management:

- ✓ Intravenous fluids
- ✓ Cross Match blood.
- ✓ Oxytocin; Syntocinon Intravenous infusion.
- ✓ Evacuation of the uterus
- ✓ Anti D if Rhesus negative

Missed Abortion:

Signs and symptoms:

1. Gradual disappearance of pregnancy Symptoms & Signs.
2. Brownish vaginal discharge.

Investigations:

- ✓ Pregnancy test: may be + ve for 3-4 weeks after the death of the fetus.
- ✓ USS: absent fetal heart pulsations.
- ✓ Empty Gestational sac

Complications:

1. Infection (Septic abortion)
2. DIC

Management:

Wait 4 weeks for spontaneous expulsion.

- Terminate the pregnancy if:
 - ✓ Spontaneous expulsion does not occur after 4 weeks.
 - ✓ Infection
 - ✓ Bleeding
- Manage according to size of uterus
- Uterus < 12 weeks: dilatation and suction evacuation (D&C).
- Uterus > 12 weeks: Oxytocic and cytotoxic medications.

Recurrent Abortion:

Etiology:

1. Genetic factors
2. Anatomical factors: e.g. Uterine anomalies & Cervical incompetence.
3. Endocrine problem: e.g. PCO
4. Immunological factors: e.g. antiphospholipid antibodies syndrome.
5. Maternal disease: e.g. SLE, Renal disease
6. Environmental factor: e.g. Alcohol.

Investigations:

1. Karyotyping of both partners
2. Hysteroscopy & Hysterosalpingography
3. Anticardiolipin ant. & Lupus anticoagulant

Complications:

When a woman has had 3 consecutive miscarriages, the risk of abortion for next pregnancy: 1 abortion = 15%

Ectopic Pregnancy

Etiology:

1. Mechanical factors
2. Functional factors
3. Assisted reproduction
4. Failed contraception
5. Tubal sterilization – ectopic pregnancy rate increased 9-fold
6. Following laparoscopic fulguration – highest rate of ectopic pregnancy
7. Following hysterectomy – sperm migrated from a fistulous communication in the vaginal vault

Risk factors:

1. **Prior history of PID (pelvic inflammatory disease)**
2. Tubal Surgery
3. Previous Ectopic Pregnancy
4. IUD intrauterine device
5. Tubal abnormalities

Signs and symptoms:

1. **Classic triad: amenorrhea + Abdominal and pelvic pain + vaginal bleeding.**
2. Ruptured ectopic:
 - Acute abdominal exam (Abdominal or pelvic pain so severe that patient can't even stand up).
 - Dizziness, pale complexion, sweaty, hypotension, tachycardia.

Investigations:

- ✓ Ultrasound
- ✓ β hCG.
- ✓ Laparoscopy visually confirm an ectopic pregnancy.
- ✓ Culdocentesis (A less commonly performed test).

Management:

- Medical Management: **Methotrexate**
- Surgical: salpingostomy or salpingectomy (Laparoscopy usual rout).
- Expectant (Infrequently done).

Complications:

1. Rupture ectopic pregnancy.
2. The chance of recurrent ectopic pregnancy is about 10%.

#2&3- Mullerian Agenesis

Etiology: not known

Signs and symptoms:

1. Normal 46XX female with **normal external genitalia**.
2. Patient presents with **1ry amenorrhea**.
3. 47% have associated urinary tract anomalies.

Management:

- ✓ Psychological counseling
- ✓ Surgical:
 - Vaginoplasty
 - Excision of uterine remnant (if it has functioning endometrium)
 - Vaginal dilators

Disorders of Lateral Fusion of the Mullerian Duct

Signs and symptoms:

1. Shortly after menarche -> if there is obstruction to uterine blood flow.
2. Difficulty in intercourse -> longitudinal vaginal septum.
3. Dysmenorrhea or menorrhagia
4. Complications of pregnancy (**abortion, pre-term labor**)

Investigations:

- ✓ Abnormality detected on D&C (**sometimes, incidentally discovered**)
- ✓ Ultra sound, laparoscopy or laparotomy
- ✓ HSG (**Hysterosalpingogram**) -> when investigating for infertility or recurrent fetal loss

Complications:

High Incidence of:

- Recurrent abortions
- Premature birth
- Fetal loss
- Fetal malpresentation
- Cesarean section incidentally
- Cervical incompetence (loose cervix, they will have mid trimester abortion – cervical cerclage to prevent)

Masculinized female (Female Pseudohermaphroditism) 46XX

Etiology:

1. Congenital adrenal hyperplasia (CAH) **"common"**.
2. Mother exposure to androgens.

Signs and symptoms:

1. Affected female may present at birth with **ambiguous genitalia**:
 - a. Enlargement of the clitoris.
 - b. Excessive fusion of the genital folds obscuring the vagina & urethra.
 - c. Thickening and rugosity of the labia majora resembling the scrotum.
2. A dangerous salt losing syndrome due to deficiency of aldosterone may occur in some patient (**emergency**).
3. Delayed menarche and menstrual irregularities.

Investigations:

- ✓ Karyotyping
- ✓ 17- α -hydroxiprogesterone – *will be elevated*
- ✓ 17-ketosteroids (androgens) in urine
- ✓ Electrolytes
- ✓ US

Management

- Cortisol or its synthetic derivatives (hormone replacement).
"suppress the adrenals, lower androgen production"
- Corrective surgery.
- Clitroplasty (at the neonatal period to reduce the size of it).
- Division of the fused labioscrotal folds to create the vagina (should be delayed until puberty).

#4- Gestational Diabetes

Etiology:

1. Increased insulin resistance in second trimester and progresses as pregnancy advances due to hormones (**estrogen, progesterone, cortisol, prolactin and human placental lactogen**).
2. Placental degradation of insulin.

Risk factors:

1. Obese (BMI >30 kg/m²)
2. History of GDM
3. Family history (**first relative**) of D.M
4. > 25 Y
5. Previous macrosomic baby (**≥4.5 kg**)
6. PCO
7. Twin pregnancy
8. Racial (Asians, Hispanic, African – Caribbean, **also gulf countries are high risk**).

Investigations: (2 Steps approach)

Done at 24H28 weeks:

- Step1 Screening Test:

- (1) 50 gm **oral glucose challenge** (no fasting required)
- (2) Then check serum glucose at 1 hour
- (3) If serum glucose ≥130mg/dl (7.2mmol/L) #Step 2

- Step 2 Diagnostic Test:

- (1) Patient comes fasting then we do 3 hour **GTT glucose tolerance test** (100 gm) or 75 gm GTT (2hrs).
- (2) If abnormal fasting or any two abnormal readings (greater than the following table) then diagnose DM

	75 g	100 g
Fasting	5.3	5.3
After 1 hr	10	10
After 2 hrs	8.6	8.6
After 3 hrs		7.8

Follow up GTT can be done 32-34 w (to identify late onset DM)

Management:

- Diabetic counseling
- Diet
- Blood sugar monitoring:
- GDM, DM type 2 on single insulin dose: **do fasting, one-hour post meal daily.**
- DM type 1, DM type 2 on multiple insulin: **fasting pre and post meal and bedtime.**
- Exercises.
- **If FBS < 7**: diet and exercise. If no response add Metformin.
- **If FBS More than or equal 7**: Immediate insulin +_ metformin
- **If FBS 6-6.9**: consider insulin +_ metformin (if hydramnios or macrosomia)
- **Labor induction at 39 weeks** in well controlled, uncomplicated GDM.
- **Elective C-section** if estimated fetal weight $\geq 4,500$ g.

Complications:

- ✓ Preterm labor
- ✓ Increase B.P
- ✓ Increase C-section rate
- ✓ Recurrent GDM
- ✓ Type 2 DM
- ✓ Neonatal hypoglycemia
- ✓ High bilirubin level **and jaundice**
- ✓ Later on obesity, impaired GTT **and DM**
- ✓ Intellectual
- ✓ Macrosomia
- ✓ Fetal cardiac septal hypertrophy and hypertrophic cardiomyopathy.

#5- Postpartum Haemorrhage

Etiology:

1. **Tone:** Uterine atony in 95% of cases.
2. **Trauma:** Laceration, rupture, inversion.
3. **Tissue:** Retained tissues\clots.
4. **Thrombin:** Coagulopathy

Risk factors:

• Anti partum

1. Previous PPH or manual removal of placenta
2. Abruptio/previa
3. Fetal demise
4. Gestational hypertension
5. Over distended uterus
6. Bleeding disorder

• Intra partum:

1. Operative delivery
2. Prolonged or rapid labor
3. Induction or augmentation
4. Chorioamnionitis
5. Shoulder dystocia
6. Internal podalic version
7. Coagulopathy

Factors predisposing to uterine atony:

1. Overdistention of the uterus
2. Multiple gestations
3. Polyhydramnios Fetal macrosomia
4. Prolonged labor
5. Oxytocic augmentation of labor Grand multiparity (a parity of five or more).
6. Precipitous labor (lasting <3 hr)
7. Magnesium sulfate treatment of preeclampsia.
8. Chorioamnionitis
9. Halogenated anesthetics
10. Uterine leiomyomas

Signs and symptoms:

- **>500ml after completion of the third stage in vaginal delivery.**
- **>1000ml after C/S.**

Investigations:

- ✓ Assess in the fundus
- ✓ Inspect the lower genital tract
- ✓ Explore the uterus of retained placental fragments
- ✓ Uterine rupture
- ✓ Uterine inversion
- ✓ Assess coagulation

Management:

1. First Start with ABCs:

- ✓ Large bore IV access (Crystalloid- to replace lots)
- ✓ CBC/cross-match and type
- ✓ Foley catheter, for monitoring the fluids volume and readjusting.

2. Second step is assessing the fundus:

- ✓ Bimanual massage.
- ✓ Rule out uterine inversion
- ✓ May feel lower tract injury
- ✓ Evacuate clot from vagina and/ or cervix

3. Drug therapy for PPH:

- ✓ Oxytocin.

4. Additional Uterotonics: If still no uterine contraction after oxytocin, add on of those:

- ✓ **Ergometrine** (caution in hypertension)
- ✓ **Hemabate** (asthma is a relative contraindication)
- ✓ **Cytotec** (misoprostol)

Step 2 Directed Therapy			
<p>"Tone"</p> <ul style="list-style-type: none"> - massage - compress - drugs <p>* See Table III</p>	<p>"Tissue"</p> <ul style="list-style-type: none"> - manual removal - curettage 	<p>"Trauma"</p> <ul style="list-style-type: none"> - correct inversion - repair laceration - identify rupture 	<p>"Thrombin"</p> <ul style="list-style-type: none"> - reverse - anti-coagulation - replace factors

Management in case of bleeding with firm uterus:

- ✓ Explore the lower genital tract
- ✓ Appropriate surgical repair (May temporize with packing).

Management in case of continuous uterine bleeding:

- ✓ Consider coagulopathy
- ✓ Correct coagulopathy
 - FFP, cryoprecipitate, platelets
- ✓ If coagulation is normal:
 - Consider embolization
 - Prepare for O.R.

Surgical approach:

- ✓ Uterine vessel ligation
- ✓ Internal iliac vessel ligation
- ✓ Hysterectomy

Complications: (Step up)

- ✓ Coagulopathy
- ✓ Shock
- ✓ Pituitary necrosis (Sheehan syndrome)
- ✓ Loss of fertility
- ✓ Adult respiratory distress syndrome
- ✓ Death

Consumptive Coagulopathy (DIC)

Etiology related to pregnancy:

1. Abruptio placentae **“most common cause in obstetrics”**.
2. Sever Hemorrhage (Postpartum hemorrhage)
3. Fetal Death and Delayed Delivery >2wks
4. Preeclampsia/eclampsia/HELLP syndrome (Up to date)
5. Amniotic Fluid Embolus and septicemia

Signs and symptoms: (up to date)

1. Severe bleeding (e.g., vaginal, intrauterine, intraabdominal).
2. Diffuse oozing of blood from skin (e.g., at intravenous sites) or mucosa (e.g., from a bladder catheter).
3. Some patients have signs of shock (e.g., tachycardia, hypotension, weak peripheral pulses, altered mental status, cool extremities, narrow pulse pressure [<25 mmHg]).
4. Organ dysfunction (e.g., acute renal failure, hepatic dysfunction, acute lung injury, neurologic dysfunction).

Investigations: (up to date)

1. Complete blood count with platelet count.
2. Coagulation studies including prothrombin time (PT), activated partial thromboplastin time (aPTT), fibrinogen level, and possibly D-dimer.
3. BUN and creatinine.
4. Liver function tests.
 - ✓ Urine output and blood loss should be monitored closely.
 - ✓ There'll be: Low platelet count& serum fibrinogen level + Prolonged prothrombin time & partial thromboplastin time.

Management: FFP, cryoprecipitate, platelets.

Complications:

- ✓ Bleeding.
- ✓ Circulatory obstruction→ organ hypoperfusion and ischemic tissue damage.
- ✓ Renal failure, ARDS.
- ✓ Microangiopathic hemolysis.

#6- Antepartum Haemorrhage

Etiology:

1. Placenta previa
2. Placenta abruption
3. Local causes (cervical or vaginal lesions, cancer, infections or lacerations).
4. Vasa previa
5. Uterine rupture
6. Unexplained high risk pregnancy (SGA, RROM, Preterm Labor, IUGR, C/S).

Investigations:

- ✓ No vaginal digital examination, speculum examination should be done to rule out local causes.
- ✓ U/S to diagnose placenta previa.
- ✓ CBC, RFT, LFT, Coagulation factors, blood grouping, Rh.

Management:

- ✓ ABCD
- ✓ A & B: AIRWAY and breathing oxygen 10-15 L/min
- ✓ C: Circulation two large bore cannulas. 14-gauge IV lines).
- ✓ D: Assess fetus and decide delivery
- ✓ In the hospital maternity unit with facilities for resuscitation such as:
 - Anesthetic support.
 - Blood transfusion resources.
 - Performing emergency operative delivery.
 - Multidisciplinary team including midwifery, obstetric staff, neonatal staff, anesthetic staff, hematologist, radiologist and vascular surgeon).
- ✓ Steroids can be given if pregnancy < 34 weeks for fetal lung maturity.
- ✓ 4 AntiD Ig should be given to all non sensitized RH-ve.

Complications:

- ✓ Risk of PPH: patient should receive active management of 3rd stage of labor using syntometrine (in absence of high B.P).

Placenta abruption

Etiology: Premature separation of normally implanted placenta.

Risk factors:

- Abdominal trauma
- Cocaine or other drug abuse
- Polyhydramnios
- Hypertensive disease during pregnancy
- premature rupture of membranes.
- Chorioamnionitis, IUGR
- Previous abruptio
- With increasing age, parity and smoking
- Uterine anomalies, leiomyoma
- First trimester bleeding
- Thrombophilia: inherited factor V Leiden

Signs and symptoms:

- Vaginal bleeding (could be concealed)
- Abdominal pain or back pain if posterior placenta
- High B.P.
- Tender or rigid or firm abdomen (woody feel)
- Hypertonic uterine contractions.
- DIC occurs in severe abruption and death of fetus.

Management: (step up)

1. Severe hemorrhage and/or fetal distress: delivery (likely cesarean).
2. Minimal bleeding and reassuring fetal tracing: expectant management.

Complications:

1. DIC
2. Couvelaire uterus
3. Fetal demise

Placenta Previa

Etiology: (Step up) unknown but maybe associated with abnormal vacuolization.

Risk factors:

- Previous placenta previa
- Multiple gestation and multiparity
- Advanced maternal age.
- Previous intrauterine surgical procedures including c/s.
- Maternal smoking, cocaine use
- Infertility treatment, previous abortion
- Non white race, male fetus

Signs and symptoms:

1. Painless, recurrent vaginal bleeding.
2. Uterine contractions
3. Soft abdomen, normal fetal heart, mal presentation
4. Avoid vaginal, rectal examination or sexual intercourse

Investigations:

1. Abdominal ultrasound
2. Transvaginal US: if diagnosis by abdominal US not certain).
3. MRI: High cost

Management:

1. If fetus is preterm less than 37 weeks:
 - ✓ **Expectant management:**
 - Hospitalization
 - Investigations CBC, RFT, LFT, coagulation factors, blood grouping and Rh)
 - Steroids (dexamethasone) between 24-34 weeks.
 - AntiD Ig if the mother is Rh negative
 - Cross match blood and blood products.
 - CTG
2. If fetus more than 37 weeks: **elective c/s**
3. If severe bleeding or fetal distress: **emergency c/s**

Complications:

- Placenta accreta
- Placenta increta
- Placenta percreta
- Preterm labor.
- Rupture of membrane.
- Mal presentation.
- IUGR.
- Vasa previa.
- Congenital anomalies.
- Amniotic fluid embolism.

Vasa previa

Risk factors:

1. Velamentous cord insertion.
2. Bilobed or succenturiate lobed placenta
3. Multiple pregnancy
4. Low lying placenta
5. IVF pregnancy

Signs and symptoms: (Step up)

1. Vaginal bleeding (Fetal blood) after ROM.
2. Fetal distress at onset of vaginal bleeding/rupture of membrane.
3. Sometimes detected by ultrasound in prenatal period.

Investigations: Color flow Doppler (u/s)

Management: Emergent C-section

Complications: (Step up) Fetal mortality = 60%

#7- PCOS and Hirsutism

- **Definition (Hacker and Moore's):** It is an anovulation or oligo-ovulation with clinical or laboratory evidence of hyperandrogenism and without evidence of any other underlying condition. Its onset is usually at the time of puberty.

- **Etiology (Hacker and Moore's):** Overproduction of male hormones by the ovary and often by the adrenal gland. The increased LH level promotes androgen secretion from ovarian theca cells. The peripheral conversion of androgen to estrogen results in tonic estrogen levels higher than the normal which will suppress FSH release from the anterior pituitary.

- **Risk Factors (Emedicine):** Genetic susceptibility and peripubertal obesity.

- **Investigation (Uptodate):** No single test can be used to diagnose PCOS. The diagnosis can be made based on the clinical picture, blood tests, and physical examination. Two out of three of the following are required for the diagnosis of PCOS: **irregular menstrual periods caused by anovulation or irregular ovulation, evidence of elevated androgen levels (excess hair growth, acne, male-pattern balding or high androgen levels in the blood tests), or polycystic ovaries on pelvic ultrasound.**

There must be no other cause of elevated androgen levels or irregular periods (**e.g. congenital adrenal hyperplasia, androgen-secreting tumors, or hyperprolactinemia**).

Recommended blood tests: pregnancy test, prolactin levels, TSH, and FSH.

- **Management (Uptodate):**

1. Combined oral contraceptive pills: protect the women from endometrial hyperplasia or cancer, treat hirsutism and acne and provide protection from pregnancy. **Side effects: stop having menstrual bleeding or develop irregular spotting or bleeding.**

2. Progestin: it reduces the risk of uterine cancer but it does not treat cosmetic concerns (acne and hirsutism) and does not prevent pregnancy.

3. Hair removal treatments: estrogen-progestin contraception, if sufficient improvement after six months has not been achieved, use spironolactone (antiandrogen).

4. Weight loss: one of the most effective approaches for managing insulin abnormalities, irregular periods and other symptoms of PCOS.

5. Metformin: it is usually recommended in addition to progestin if the woman does not have regular menstrual period and cannot take OCPs.

6. Treatment of infertility: the primary treatment of women with PCOS who cannot get pregnant is weight loss. Clomiphene triggers ovulation in 80% of women with PCOS.

- **Complications (JeanHailes.org.au):** Obesity, prediabetes, type 2 diabetes mellitus, cardiovascular disease, metabolic syndrome, and endometrial cancer.

#8- Preterm Labour and PROM

- **Definition:** Preterm labor is the labor that occurs **after 24 weeks** but **before 37** weeks. (Any delivery that occurs before 24 weeks & the fetal weight is less than 500g is considered abortion not preterm labor).

- Etiology and Risk Factors:

Idiopathic (the commonest), previous preterm labor, and repeated spontaneous abortions.

Obstetrics causes: multiple gestation (**the commonest**), premature rupture of membranes, genital tract infections as bacteria vaginosis and beta streptococcus infections, cervical incompetence and uterine anomalies.

Iatrogenic causes: induction of labor or cesarean section.

- **Diagnosis:** Documented uterine contraction by history, physical examination and CTG.

- **Management:** Confirm uterine activity by CTG, assess cervical status, progress of labor and presenting part, take a vaginal swap and hydrate the patient.

Tocolytic therapy:

1. Magnesium Sulfate: for fetal neuroprotection, given if labor is anticipated before 32 weeks. It acts by competing the calcium entry into the cells so it decreases the intracellular calcium levels. Side effects are warm and flushing, respiratory arrest, fetal hypotonia due to decrease calcium. **Magnesium overdose is treated by IV calcium gluconate.**

2. Beta-Adrenergic Agonists: it acts on beta-2 adrenergic myometrial receptors by converting ATP into cAMP thus decreasing free calcium ion (e.g. **Ritodrin Hydrochloride**). **Side effects** are cardiovascular (hypertension, tachycardia) from beta-1 receptor cardiovascular activity, **hyperglycemia, hyperkalemia**, and pulmonary edema. **Contraindication** are cardiac disease, diabetes, uncontrolled hyperthyroidism.

3. Prostaglandin synthase inhibitors: it decreases smooth muscle contractility by decreasing prostaglandin production (e.g. **Indomethacin**). **Side effects** are **oligohydramnios, in utero ductus arteriosus closure**, and neonatal necrotizing enterocolitis. **Contraindication** include gestational age less than 32 weeks.

4. Calcium channel blockers: decreases intracellular calcium (e.g. **Nifedipine**). **Side effects** are tachycardia, hypotension, and myocardial depression. **Contraindication** is hypotension.

5. Oxytocin antagonists: (e.g. **Atosipan**). **Side effects** are nausea, dizziness, headache, and flushing.

Contraindications to tocolytic therapy: severe abruptio placenta, ruptured membranes, chorioamnionitis, lethal anomaly, eclampsia, severe pre-eclampsia and advanced cervical dilatation.

Antenatal corticosteroids therapy: A single dose of corticosteroids is recommended for pregnant women with gestational age between 24-34 weeks of gestation who are at risk of preterm labor within 7 days. It reduces fetal mortality and **stimulate surfactant production from pneumocyte type two cells for lungs maturity.**

Preterm Rupture of Membranes (PROM)

- **Definition:** Rupture of the membrane before the onset of **labor** at any stage of gestation.

- **Causes:** No clear cause can be found in most of the cases, other causes include vaginal infections, cervical incompetence, and abnormal membrane.

- **Diagnosis:** History of fluid loss per vagina, visualization of amniotic fluid in the vagina by sterile speculum, positive Nitrazin test “will turn blue in the presence of alkaline amniotic fluid”, and positive fern test.
- **Management:** **Depends on the gestational age**; 36 weeks or more = **IOL “Induction of Labor”**, less than 37 weeks = **expectant management unless there is evidence of chorioamnionitis (maternal pyrexia, tender uterus, foul smelling vaginal discharge, or fetal tachycardia)**.
- **Complications:** Preterm labor, chorioamnionitis **“the most serious”**, fetal sepsis, or lung hypoplasia.

#9- Malignant Uterine Tumours

Endometrial Cancer

- **Etiology (Hacker and Moore’s):** increased or unopposed estrogen exposure which leads to endometrial hyperplasia then endometrial cancer.
- **Risk Factors (Hacker and Moore’s):** Obesity “peripheral conversion of androstenedione to estrone”, granulosa-theca cell tumors of the ovary, PCOS, late menopause, diabetes and hypertension, estrogen replacement without progestin, chronic tamoxifen use for breast cancer, and hereditary nonpolyposis colon cancer syndrome (HNPCC).
- **Symptoms (Hacker and Moore’s):** **abnormal vaginal bleeding.**
- **Diagnosis (Hacker and Moore’s):** transvaginal ultrasound, endometrial sampling and hysteroscopy.

- Staging (Kaplan):

Stage I: limited to the uterus (**most common stage at diagnosis**)

IA: limited to the endometrium or invasion less than half of myometrium

IB: invasion more the half of myometrium

Stage II: extension to the cervix but not outside the uterus

Stage III: spread adjacent to the uterus

IIIA: invades serosa or adnexa or positive serology

IIIB: invasion of vagina

IIIC: invasion of pelvic or para-aortic nodes

Stage IV: spread furthe from the uterus

IVA: involves bladder or rectum

IVB: distant metastasis

- Management (Kaplan):

Surgical: total abdominal hysterectomy (TAH) and bilateral salpingo-oophorectomy (BSO), pelvic and para-aortic lymphadenectomy and peritoneal washing.

Radiation: for poor prognosis patients (**patients with lymph node metastasis, > 50% myometrial invasion, positive surgical margins, or poorly differentiated histology**).

Chemotherapy: for metastatic disease, involves progestins and cytotoxic agents.

#10- Multiple Gestation

- **Definition (Hacker and Moore's):** A pregnancy in which more than one fetus is present. Occurs as the result of either splitting of an embryo (i.e., identical or monozygotic twinning) or the fertilization of two or more eggs produced in a single menstrual cycle (i.e., fraternal or dizygotic twinning). **Dizygotic twins are more common.**

Dichorionic diamniotic: two separate placentas, splitting occurred in the first 72 hours.

Monochorionic diamniotic: one chorion and two amniotic sacs, splitting occurred after 4 to 8 days.

Monochorionic monoamniotic: one chorion and one amniotic sac, splitting occurred after 8 days.

- **Risk Factors (Kaplan):** for dizygotic twins; race, geography, family history, or ovulation induction. Monozygotic twins have no identifiable risk factors.

- **Diagnosis (Hacker and Moore's):** by obstetrics sonogram. **Determents of dizygotic gestation:** discordant fetal gender, visualization of thick chorion-amnion septum, peak or inverted V at the base of the membrane septum.

- **Abnormalities of the Twinning Process (Hacker and Moore's):**

- 1. Conjoined twins:** when the division of the embryo is very late (**after 13 days**). The most common anatomic location is anterior (**thoracopagus**).
- 2. Intraplental vascular anastomosis:** *in monochorionic twins*, the most common type is **arterial-arterial**, there is risk of abortion, hydramnios, TTTS, and fetal malformation.
- 3. Twin-Twin Transfusion Syndrome (TTTS):** the result of **arterial-venous anastomosis** between the twins when one twin's circulation perfuses the other, fetal complications include (**hypovolemia, hypotension, anemia, oligohydramnios, and growth restriction in the donor twin**), (**hypervolemia, hydramnios, hyperviscosity, hypertension, and cardiomegaly in the recipient twin**). Treated by serial amniocentesis or laser photocoagulation of the anastomotic vessels.
- 4. Fetal malformations:** arterial-arterial placental anastomosis can result in fetal structural malformations.
- 5. Umbilical cord abnormalities:** more in monochorionic twins, the absence of one umbilical artery is associated with other congenital anomalies (e.g. renal agenesis).

- **Complications (Kaplan):** nutritional anemia (iron and folate), pre-eclampsia, preterm labor, malpresentation, cesarean section, postpartum hemorrhage.

- **Management (Kaplan):**

- **Antepartum:** iron and folate supplements for the mother to prevent anemia, blood pressure monitor to detect pre-eclampsia, educate the mother about preterm labor signs and symptoms, serial ultrasound examinations looking for TTTS.

- **Intrapartum:** route of delivery is based on the fetal presentation, vaginal delivery if both are cephalic, cesarean delivery if the first twin is noncephalic, if the first twin is cephalic and the second is noncephalic the route of delivery is controversial.

- **Postpartum:** watch for postpartum hemorrhage from uterine atony.

#11- IUGR and IUFD

- **Definition (Hacker and Moore's):** Intrauterine Growth Restriction "IUGR" occurs when the birth weight of a newborn is below the 10th percentile for a given gestational age. Could be symmetrical "small head and abdomen, mostly due to fetal causes" or asymmetrical "large head and small abdomen".

- **Etiology (Hacker and Moore's): Maternal:** poor nutrition, smoking, drug abuse, alcoholism, cyanotic heart disease, pulmonary insufficiency, hereditary thrombophilia, and antiphospholipid syndrome.

Placental: placental insufficiency which could be caused by essential hypertension, chronic renal disease, and pregnancy induced hypertension.

Fetal: intrauterine infection and congenital anomalies.

- **Diagnosis (Hacker and Moore's):** first, obtain the **accurate gestational age**, then screen the fetus with serial uterine fundal height assessment. *If the fundal height lags more than 3 cm of a well-established gestational age or the mother has a high-risk condition*, do **ultrasound assessment**; which includes **biparietal diameter**, **head circumference**, **abdominal circumference** "**most effective**", **head-to-abdominal circumference ratio**, **femoral length**, **femoral length to abdominal circumference ratio**, **amniotic fluid volume**, **calculated fetal weight**, **umbilical and uterine artery doppler** "Doppler-derived umbilical artery systolic to diastolic ratio".

- **Management (Hacker and Moore's):** for women with antiphospholipid syndrome, give low-dose of aspirin in early pregnancy. For women with hereditary thrombophilia, give low-dose heparin with/without low-dose aspirin. Regular fetal monitoring with twice-weekly Nonstress test and biophysical profile.

Normal fetal monitoring + normal ultrasound finding = no intervention.

Suggestive ultrasound findings of IUGR = deliver at 34 weeks or later.

Severe oligohydramnios = deliver without assessing lung maturity because of risk of asphyxia.

- **Complications (Hacker and Moore's):** asphyxia, hypoglycemia, hypothermia, meconium aspiration, mental retardation, polycythemia, and respiratory distress syndrome.

Intrauterine Fetal Demise (IUFD)

- **Definition (Hacker and Moore's):** It is fetal death after 20 weeks' gestation but before the onset of labor.
 - **Etiology (Hacker and Moore's):** **mostly unknown**, associated causes include hypertension, diabetes, umbilical cord accidents, fetal or maternal infections, fetal congenital anomalies and antiphospholipid syndrome.
 - **Diagnosis (Hacker and Moore's):** it is suspected in **the absence of fetal movements or fetal's heart rate on doppler assessment.**
 - **Management (Hacker and Moore's):** most of the patients will experience spontaneous onset of labor within 2-3 weeks, if it did not happen then induction of labor and D&E will be considered.
- Induction of labor:** using prostaglandin E2 "**Dinoprostone**", between weeks 12-28, side effects are GI disturbance, there is risk of uterine rupture and cervical laceration, contraindicated in patients with prior uterine incisions.
- "Misoprostol"**, synthetic prostaglandin E1 analogue, is effective and less expensive with little GI side effects. **After 28 weeks, if the cervix is favorable for induction, use Misoprostol with oxytocin.**
- **Complications (Hacker and Moore's):** Disseminated intravascular coagulopathy "DIC".

#12- Urinary Diseases

- **Etiology (Kaplan):** gram negative enteric bacteria "**Escherichia Coli**".
- **Perpetuating Factors (Hacker and Moore's):** **mechanical urinary obstruction** "ureteroplevic junction obstruction or urinary stricture", **functional urinary obstruction anomalies** "incomplete bladder emptying which encourage stasis of urine and bacterial growth", **or systemic factors** "diabetes, gout, cystic renal disease".

- **Asymptomatic Bacteriuria (Kaplan):** **the most common UTI in pregnancy**, mostly without significant signs and symptoms, if not treated it might progress to **acute pyelonephritis**, the diagnosis is made by urine culture, and it is treated with outpatient, single-agent oral antibiotic.

- **Acute Pyelonephritis (Kaplan):** **it is one of the most serious medical complications of pregnancy.** The patient presents with *shaking chills, anorexia, nausea, vomiting and flank pain, high fever, tachycardia, and costovertebral angle tenderness.* There is a risk of preterm labor, sepsis, anemia and pulmonary dysfunction. The diagnosis is made by urine culture. They should be admitted to the hospital; IV hydration, parenteral antibiotics like Ceftriaxone and tocolysis are needed.

- **Acute Cystitis (Kaplan):** **it is a localized UTI to the bladder without systemic findings.** The patient presents with *urgency, frequency, and burning sensation.* If not treated, it may progress to **acute pyelonephritis.** The diagnosis is made by urine culture and it is treated by single-agent, outpatient oral antibiotic.

- **Types of Recurrences (Hacker and Moore's):**

1. **Relapse:** recurrence of **the same infection within 2-3 weeks of completion of therapy**, due to *perianal colonization or inadequate treatment.*
2. **Reinfection:** **infection with a new organism within 2-12 weeks** after a previous episode of infection, *secondary to recurrent bladder bacteriuria.*
3. **Superinfection:** **the appearance of different organism while the patient is still receiving therapy.**
4. **Recurrent UTI:** **when two UTIs occur within 6 months or three or more occur during a year.**

Stress Urinary Incontinence

- **Definition (Hacker and Moore's):** involuntary leakage of urine in response to physical exertion, sneezing, or coughing.
- **Etiology (Hacker and Moore's):** urethral hypermotility due to vaginal wall relaxation, displacing the bladder neck and proximal urethra downward so the increase in intraabdominal pressure won't be transmitted equally. The other possible mechanism is intrinsic sphincter deficiency "the urethra fails to close in response to the increased intraabdominal pressure".
- **Risk Factors (Hacker and Moore's):** childbearing, urogenital surgery, pelvic radiation, and estrogen deficiency.
- **Investigation (Hacker and Moore's):** stress test, cotton swab (Q-Tib) test, and urethral pressure measurements.
- **Management (Kaplan):** medical therapy includes **Kegel exercises and estrogen replacement**. Surgical therapy consists of **urethropexy using Bruch or Marshall-Marchetti procedures**. A minimally invasive surgical procedure is the **tension-free vaginal tape procedure**.

Motor Urge (Hypertonic) Urinary Incontinence and Overactive Bladder

- **Definition (Hacker and Moore's):** **Urge urinary incontinence (UII)** is defined as the involuntary leakage of urine accompanied by or immediately preceded by urgency. **Overactive bladder (OAB)** is defined as urgency, with or without urge incontinence, usually with frequency and nocturia.
- **Etiology (Hacker and Moore's and Kaplan):** for OAB, there is involuntary raise in bladder pressure occur from idiopathic detrusor contractions that cannot be voluntary suppressed. Women with OAB describe a sudden strong urge to urinate with inability to suppress the feeling.

- **Risk Factors (Hacker and Moore's):** old age, chronic diseases, pregnancy, menopause, pelvic surgeries and obesity.

- **Investigation (Kaplan):** physical and neurological examinations are normal. Cystometric studies show involuntary detrusor contractions even with small volumes of urine.

- **Management (Hacker and Moore's and Kaplan):** anticholinergic medications (e.g., **Oxybutynin "Ditropan" and Tolterodine "Detrol"**) both improve the symptoms of urinary urgency. NSAIDs to **inhibit detrusor contractions**, tricyclic antidepressants (e.g., **Imipramine Hydrochloride**); **improves bladder compliance and counteract uninhibited detrusor contractions, increases bladder storage and bladder outlet resistance**, and calcium channel blockers.

Overflow (Hypotonic) Incontinence

- **Definition (Hacker and Moore's):** it is urinary retention and overflow incontinence may result from detrusor areflexia or a hypotonic bladder.

- **Etiology (Hacker and Moore's and Kaplan):** **lower** motor neuron disease, spinal cord injuries, autonomic neuropathy, and outflow obstruction. There is loss of urine intermittently day and night in small amounts, and there is a feeling of pelvic fullness.

- **Investigation (Kaplan):** Cystometric studies show markedly increased residual volume.

- **Management (Kaplan):** intermittent self-catheterization, cholinergic medications to stimulate bladder contractions and alpha-adrenergic blockers to relax the bladder neck.

#14- Perinatal Infections

Signs and Symptoms: General signs of infection: Fever, GI disturbance, fatigue, muscle ache etc.

- Specific signs and symptoms:

Infection	Signs and symptoms
HIV	Early: asymptomatic. Late: Skin lesions (Kaposi's sarcoma), oral thrush, signs and symptoms of other STDs.
Rubella	Rash (starts on the face), runny nose, & arthritis/arthralgia.
Measles	Rash (starts on the face), dry cough, conjunctivitis, & sore throat.
Hepatitis B	Jaundice +/- ascites. (acute VS chronic)
Herpes simplex	Fluid-filled blisters and crusts (facial with HSV-1, genital with HSV-2), inguinal lymphadenopathy, dysuria and dyspareunia.
UTI	Mostly asymptomatic. Symptoms: Frequency, urgency, nocturia, dysuria, abdominal pain, and dark or bloody urine.
Chlamydia	Mostly asymptomatic. Symptoms: Vaginal discharge, lower abdominal pain, dysuria, and dyspareunia.
Toxoplasmosis	Mostly asymptomatic.

Etiology: According to the organism (viral, bacterial, or parasitic agent).

Investigation and Management:

Infection	Investigation	Management
HIV	PCR, HIV culture or P24 Ag. (2 or more must be +ve)	Prophylaxis antiviral (AZT) for both the mother before and during delivery and for the baby.
Rubella	Acute: IgM. Chronic: IgG.	Early screening and prevention.
Measles	Acute: IgM. Chronic: IgG.	Close assessment.
Hepatitis B	HBsAg and HBeAg.	Liver function test. Vaccinate household members. Vaccinate the baby after delivery actively and passively.
Herpes	Viral culture or PCR.	Genital lesions → C/S.
UTI	Routine urine analyses and cultures.	Antibiotics. (For pyelonephritis, admit for IV Abx and hydrate)
GBS UTI	Selective blood Agar or Todd-Hewitt	penicillin during labor.
Chlamydia	Culture on cyclohexamide-treated McCoy or rapid Ag detection	Erythromycin or amoxicillin.
Toxoplasmosis	Acute: IgM. Chronic: IgG.	No fetal disease → Spiramycin Fetal disease → pyrimethamine & Sulfadiazine + folic acid

#15- Post-Term Pregnancy

Signs and Symptoms: N/A.

Pregnancy > 294 days /42 weeks from first day of LMP.

Fetal features: macrosomia, meconium staining, peeled skin, and long hair and nails.

Investigation:

Accurate LMP, early US scans (CRL), and uterine size.

Management:

- Fetal monitoring after 40 weeks: daily movement chart and weekly NST + AFI.
- Induce labor at 41+ weeks.

Induction of labor

Ways:

- Pharmacological: Oxytocin, prostaglandin E2.
- Mechanical: Foley's catheter, laminaria tent.
- Surgical: amniotomy.

Choosing the method depends on many things including bishop score:

- **Score 9-13 – favorable cervix:** Amniotomy +/- oxytocin.
- **Score is less** → cervical ripening is needed by prostaglandin.

Indications:

- Maternal: medical conditions (preexisting or gestational).
- Fetal: IUGR, abnormal baby (anencephaly), chorioamnionitis.
- Placental insufficiency.

Contraindications: Placenta previa, breech baby, transverse lie, previous classic C/S, cord prolapse.

Bishop score:

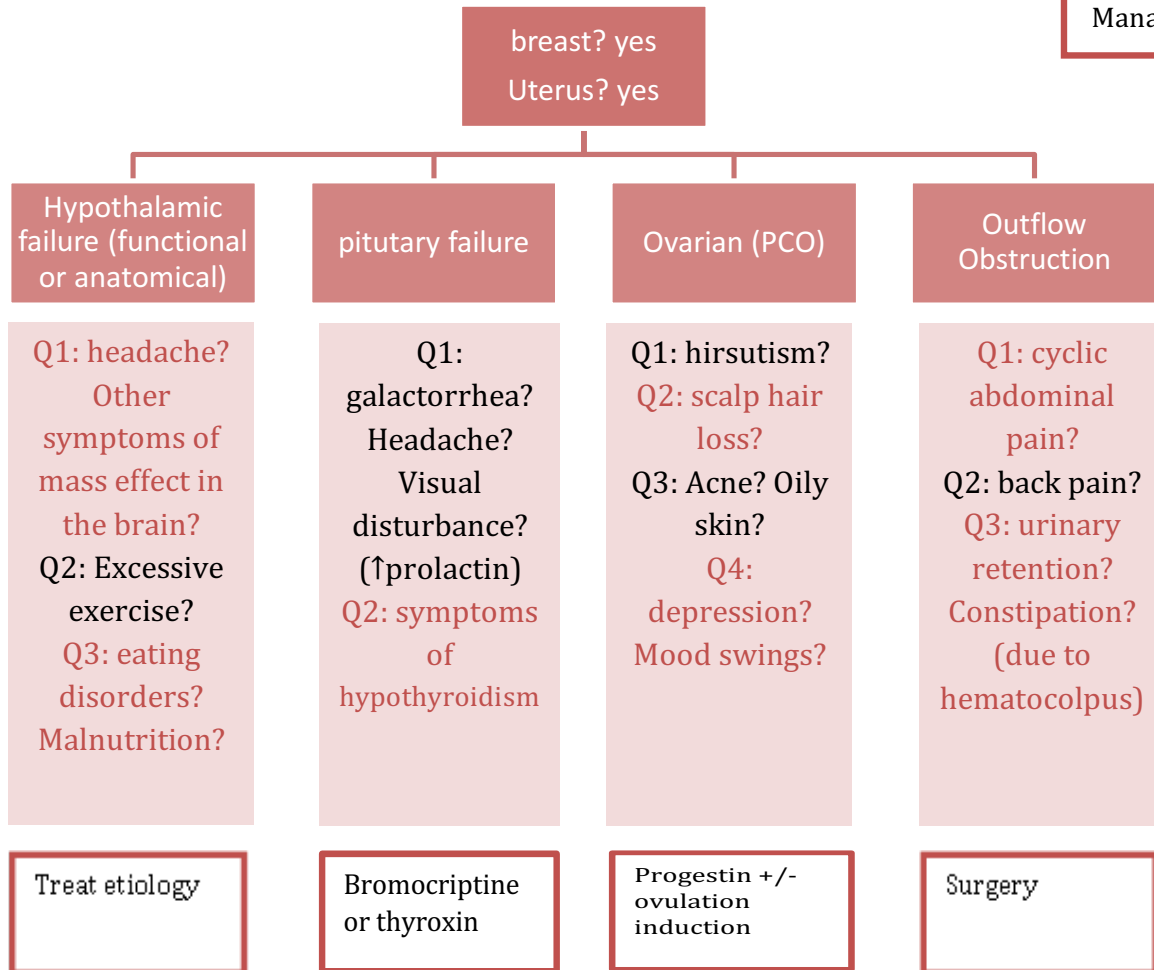
Measures the position, consistency, effacement, and dilatation of the cervix + station of the presenting part. Each is rated from 0-3.

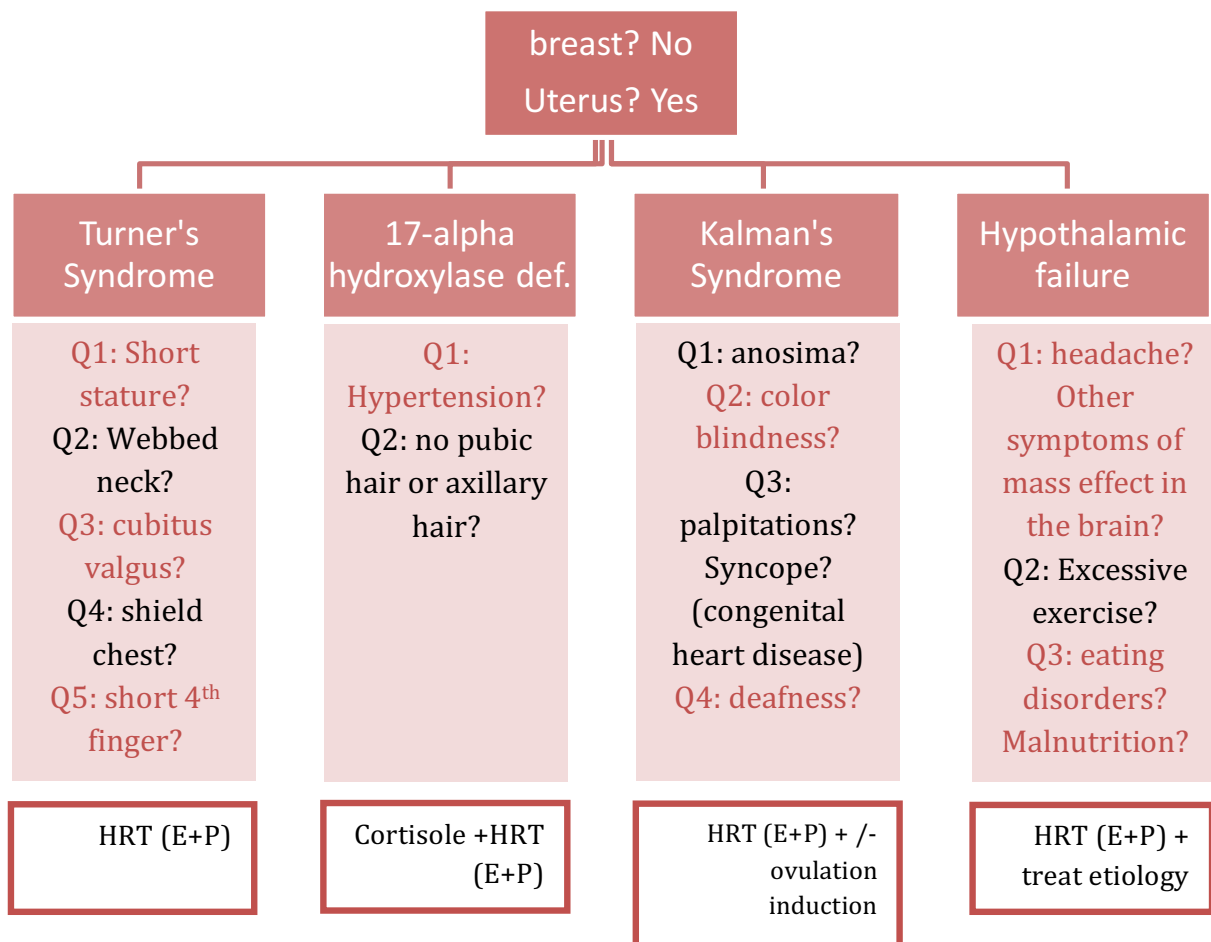
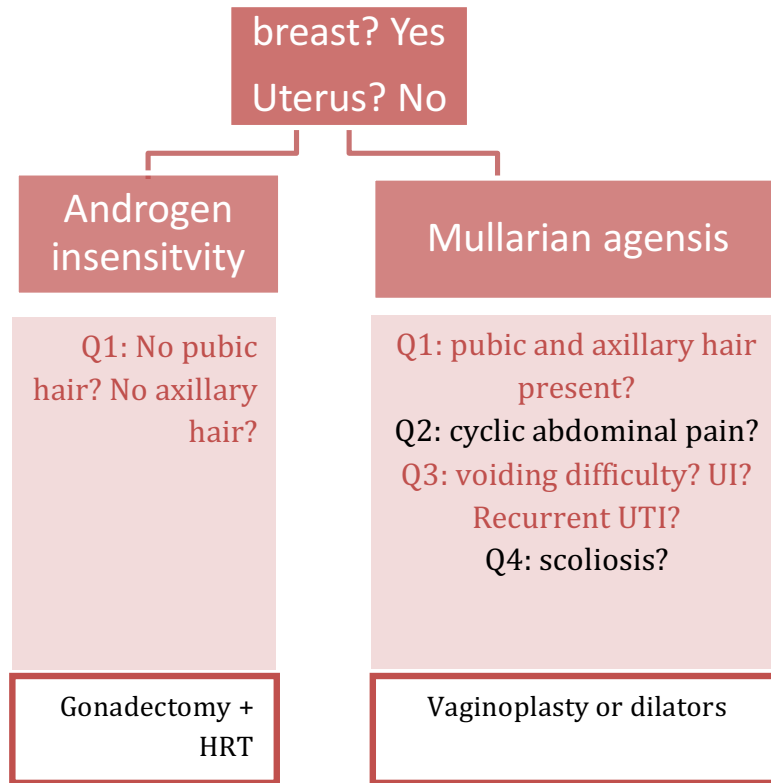
#16- Amenorrhea

Primary amenorrhea: History taking

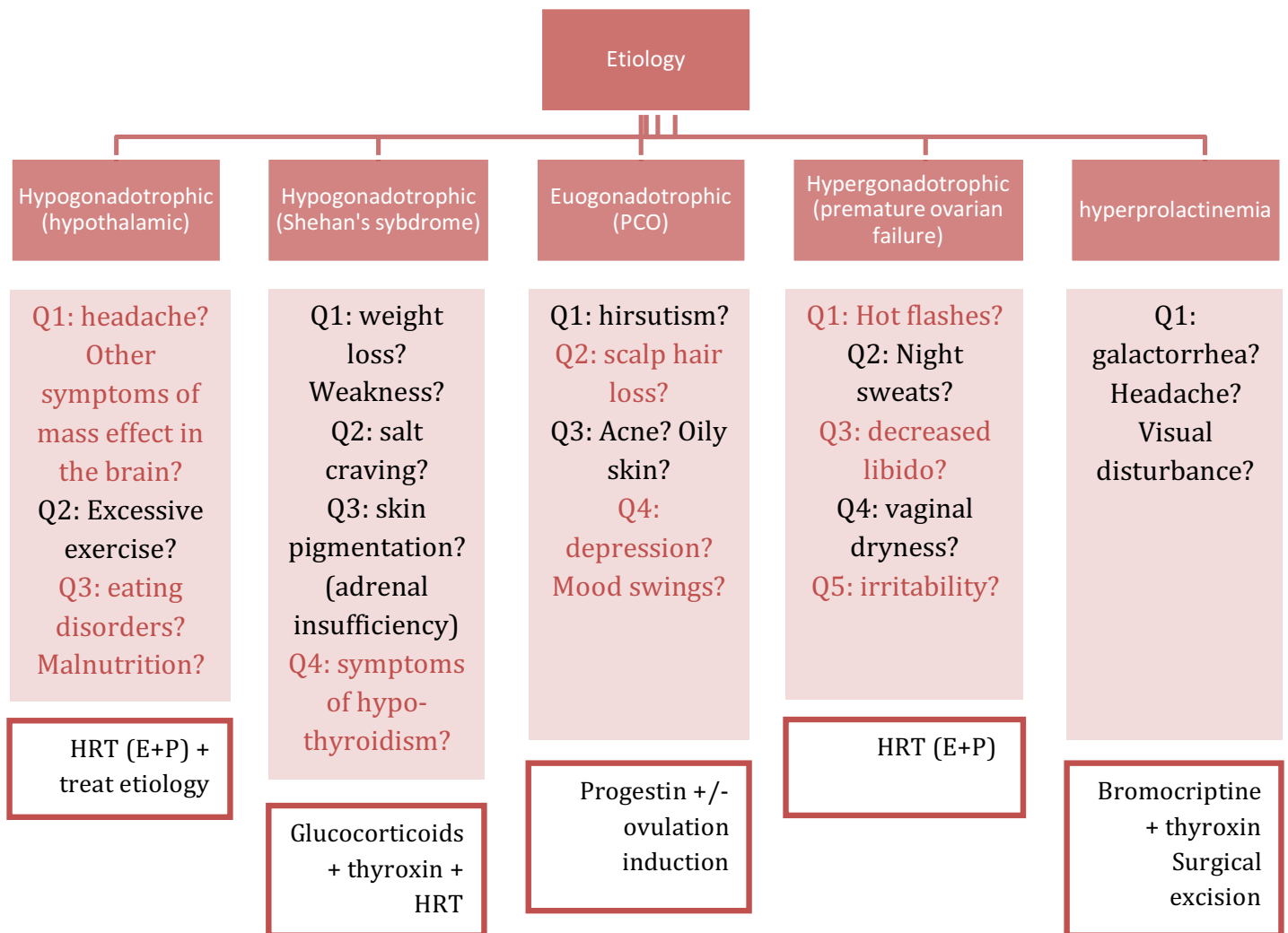
Signs and Symptoms

Management





Secondary amenorrhea: History taking



#17- Hypertensive Disease of Pregnancy

Signs and Symptoms: Pregnancy >20 weeks.

Mild preeclampsia	Sever preeclampsia	Eclampsia
Sustained HTN (>140/90 mm Hg)	Sustained HTN (>160/110 mm Hg)	Same as preeclampsia but with grand mal seizures
Proteinuria (>300 mg/24 h)	Proteinuria (>5 grams/24 h)	
+/- edema	+/- edema	
---	Severe headaches	
	Epigastric pain	
	Vision disturbance	

Etiology: Abnormal maternal response to placentation.

Investigation: BP measurements and urinalysis and 24-hour urine collection.

Management:

<p>Preeclampsia:</p> <ul style="list-style-type: none"> - Prophylactic aspirin - Anti oxidant therapy with Vit. C and E - severe hypertension >170/110 mmHg requires drug therapy: <u>methyl dopa</u> - hydralazine for acute and severe HTN during delivery. 	<p>Eclampsia:</p> <ul style="list-style-type: none"> - IV mg So_4 - Hydralazine
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#18- Contraception

Reversible

1- Hormonal (the most effective)

Work by thickening cervical mucus and by blocking the LH surge to prevent ovulation. Two types:

- A. **Combined OCP:**
Estrogen + 3rd gen. progestin
- B. **Progesterone only:**
 - Mini pills
 - Injections - DMPA
 - Implants
 - Main advantage: safe lactation

2- IUCD:

- A. Inert → leads to infection
- B. Mirena (progesterone releasing) → oligomenorrhea
- C. Copper bearing → menorrhagea

3- Barrier methods:

- A. Male condom
- B. Female condom
- C. Female diaphragm
- D. Vaginal sponges

4- Natural methods:

- A. Calendar method: abstinence 3 days before & after ovulation
- B. Ovulation method: basal body temp and cervical mucus
- C. Personal fertility monitor

Irreversible (needs serious counseling)

Female: Tubal ligation. Failure rate is 1:200.

Male: Vasectomy. Failure rate is 1:2000.
May cause sperm auto-Ab

Emergency contraception:

1. Hormonal:

-High doses of estradiol and progestin (two doses within 72h after coitus)

-Progesin only (two doses within 72h after coitus)

2. **Copper IUD** (the best method): 5 days after coitus.

#19- Genital Prolapse

Signs and Symptoms:

Anterior vaginal wall (cytocele)	Posterior lower vaginal wall (rectocele)	Posterior upper vaginal wall (enterocele)	Uterine prolapse
Pressure and heaviness in the vaginal region			
Bearing down discomfort in the lower abdomen			
Backache			
Lump/Mass protruding in the vagina (marked prolapse)			dyspareunia
Difficulty in emptying the bladder	Digitally assessed removal of stool	Symptoms relieve with lying down	Cervical ulceration → spotting
Frequency	Tenesmus	obstructed defecation	With complete procedntia → cervix protruding through the vaginal introitus
Stress UI	Constipation	--	Symptoms of cytocele or rectocele
Recurrent UI	--	--	--

Etiology:

- Overstretching of the perineal supporting tissues as a result of previous parturition.
- Muscular atony due to menopause.
- Denervation due to pelvic nerves damage during surgery.

Investigation:

- Urinalysis to r/o infection.
- US of the uterus +/- MRI.

Management:

- Conservative therapy: Kegel's exercise, bladder training.
- Medical therapy: only for UI if present.
- Surgical repair: colporrhaphy (vaginal repair), hysterectomy for uterine prolapsed.

#20- Infertility

Signs and Symptoms: N/A. Inability to conceive despite regular unprotected sexual intercourse over 12 months.

Etiology:

Ovulatory factors	Tubal factors (adhesions)	Uterine factors	Male factors
Hypergonadotrophic hypogonadism: premature ovarian failure	PID	Submucous fibroid – occludes tubes	Oligo-spermia
Hypogonadotrophic hypogonadism: hypothalamic or pituitary dysfunction. (e.g. shehan's syndrome)	Pelvic surgery	Congenital uterine abnormalities.	Azoo-spermia
Ovarian dysfunction: PCO	endometriosis	Asherman's syndrome	Endocrine disorders
Endocrine disorders: Hyperprolactinemia Hypothyroidism	---	----	---

Investigation:

Female partner	Male partner
Ovulation assessment: -Serum progesterone 8 days after LH surge. -Endometrial histology. -Cervical mucus.	Semen analysis: -Volume: 2 – 6ml -Density: 20-250 million/ml -Motility > 50% progressive movement
Tubal patency testing: -HSG (for tubes & uterus) -Laparoscopy and dye test -Falloscopy	Chromosome karyotype
Uterus assessment: -Hysteroscopy -Hystroscopy -Postcoital test (for mucus)	Hormonal assessment: Testosterone and FSH

Management:

- Ovarian failure → Oocyte donation.
- Underweight or obese → normalize body weight.
- Medical problem → treat accordingly.
- Hypogonadotrophic infertility → ovulation induction. (Clomiphene therapy or Gonadotrophin)
- Tubal factors → tubal surgery, IVF-ET or selection salpingography.
- Uterine factors → myomectomy for fibroids.
- Male factors → ART: intrauterine insemination, zygote intrafallopian transfer, IVF, intracytoplasmic sperm injection.
- Unexplained infertility → Ovulation induction, intrauterine insemination, IVF-ET.

Important questions:

- Occupation: exposure to hazards.
- Smoking and drinking.
- Menstrual Hx.
- OB Hx.
- Symptoms of hyperprolactinemia or hypothyroidism.
- Contraception: specially the use of IUD in nulliparus pt.
- Sexual Hx: frequency and technique of intercourse.

#21- Lower Genital Tract Infections

Lactobacilli → → the most common normal flora of the vagina. It's responsible for the naturally acidic environment of the vagina (pH < 4.5) because it's an H₂O₂ producing organism.

. **The 3 most common organisms that cause abnormal vaginal discharge:**

- 1) Bacterial vaginosis
- 2) Vaginal candidiasis
- 3) Trichomoniasis

Bacterial Vaginosis (BV)

▪ Most common cause of vaginosis in **premenopausal women**.

Cause: Triggered by changes in the pH of the vagina (antiseptic wash and douches) → → causing ↑ pH → → overgrowth of normal flora. (disturbance of the balance)

-50% asymptomatic, and it's **Not a STD**.

Diagnosis:

- fishy odor
- +ve whiff test
- **pH >4.5**
- presence of clue cells
- grey vaginal secretions

Complications: (Mayo clinic)

- Preterm birth
- Sexually transmitted infection
- Infections risk after gynecologic surgery
- PID

Treatment: with Flagyl. If no response, then use Clindamycin.

Candidiasis

25% will have it by the age of 25 and rare before menarche. **Not a STD.**

Cause: 90% due to **Candida Albicans.**

The recurrence of candidiasis is higher in immunocompromised patients.

Diagnosis:

- itching and burning
- **cottage cheese discharge**
- splash dysuria
- **normal pH**

Treatment: with topical azole drugs.

-Chronic infections need long-term tx (6 months) with fluconazole.

Trichomoniasis

Causative organism: Parasite.

Sexually transmitted disease and patient should be tested for other STDs.

Diagnosis:

- purulent foul smelling discharge. **Affects the vagina as well as the cervix** (unlike BV).
- In severe infections → → patchy vaginal edema and strawberry cervix.
- **pH > 5**
- Wet mount → → trichomonas seen.

Treatment: with flagyl.

#22- Pelvic Inflammatory Disease (PID)

It is an ascending infection, goes up to the peritoneal cavity.

Organisms that cause PID:

- Chlamydia
- N Gonorrhoea.

Diagnosis: Clinical triad: pelvic pain (90%), cervical motion tenderness & adnexal tenderness.

Complications:

- Ectopic pregnancy
- Infertility
- Chronic pelvic pain
- Fitz-Hugh-Curtis syndrome: perihepatic inflammation & adhesions. Signs and symptoms; RUQ pain, pleuritic pain, tenderness at RUQ on palpation of the liver.
- End stage of PID --> Tubo-ovarian abscess. (Documented by UD)

Treatment:

- Empirical antibiotics cover wide range of bacteria.
- Starts as soon as culture and diagnosis are confirmed.

Genital warts

Cause: secondary to HPV infection (usually type 6 & 11)

-STD (need to treat partner)

-Recurrence.

Treatment: (check the original lecture for more details)

Cryotherapy, Podophyllin, Laser, Cautery.

#23- Ovarian Cancer

Cause: Not clear, genetic mutation turns the normal cell to an abnormal one.

Types:

- Epithelial tumors (90%, most common)
- Stromal tumors (7%)
- Germ cell tumors (rare, tends to occur in younger women)

Risk factors:

- Age. (Mostly 50 to 60 years)
- Inherited gene mutation. (BRCA1) & (BRCA2).
- Estrogen hormone replacement therapy (long term, high doses)
- Age when menstruation started and ended and smoking.
- Never being pregnant and fertility treatment.
- Use of an intrauterine device.
- Polycystic ovary syndrome.

Symptoms:

- Abdominal bloating or swelling
- Quickly feeling full when eating
- Weight loss
- Discomfort in the pelvis area
- Changes in bowel habits, such as constipation
- A frequent need to urinate

Diagnoses:

- Pelvic exam
- Imaging tests (transvaginal US, CT)
- Blood test (protein CA 125)
- Surgery (to remove sample)

Treatment:

- Surgery
- Chemotherapy (after surgery, or as initial therapy for advanced OC)

#24- Rh Isoimmunisation

Main points:

- Rh Isoimmunization is an immunological disorder that occurs in a pregnant Rh-ve mother carrying a Rh+ve fetus.
- Rh isoimmunization can only take place if fetal red cells cross the placental barrier into the maternal circulation .
- Rhesus antibodies are humoral antibodies or free antibody:
- IgM – large, unable to cross the placenta.
- IgG – small, able to cross the placenta and attach itself to Rh positive red cells leading to haemolytic anaemia.
- FMH does occur during pregnancy but is much less common than following delivery.

Immune Responses Are:

- **Primary** – first response to an antigen appears after several weeks and is IgM.
- **Secondary** – when exposed for the 2nd time a primed, antibody will appear within a few days and its IgG.

Prevention of RHD: D-positive FMH's can be neutralized by passively administered anti-D antibody (Rh immunoglobulin) .

When to give it?

- At 28 weeks
- Post delivery
- After abortion
- $\geq \div$
- External version
- Amniocentesis

Failure rate: 1%

Cont. Management of Isoimmunization:

- Maternal blood group and antibody quantification
- Paternal blood group genotyping
- Fetal blood group genotyping
- Ultrasound assessment
- Amniotic fluid spectrophotometry
- Fetal blood sampling
- Fetal blood transfusion

Ultrasound Assessment:

- The severely anemic fetus on scan will have: skin edema, ascites, pleural or pericardial effusions, cardiomegaly and an edematous placenta (Hydrops).
- Middle cerebral artery blood flow is increased
- CTG

Complications after intrauterine transfusion:

- Premature labor
- Pre-labor ruptured membrane
- Fetal hemorrhage
- Fetal bradycardia
- Failure to obtain a sample
- Increase in maternal isoimmunization by inducing feto-maternal hemorrhage

#25- Cervical Intraepithelial Lesion

HPV:

- Oncogenic (or called high risk group): (16, 18)
- Non-oncogenic (low risk group): (6, 11)

Infection with oncogenic (or high-risk) HPV usually is a necessary but not sufficient factor for the development of squamous cervical neoplasia.

- 16: Highest carcinogenic risk, 18: next most carcinogenic.

Diagnoses and tests for HPV:

Usually by visible warts, if not visible you need to do:

- ✓ Vinegar (acetic acid) solution test.
- ✓ Pap test
- ✓ DNA test for HPV

Risk factors for cervical cancer:

- Herpes simplex virus **"most common"**
- Oral contraceptives (long term use), Intrauterine device use
- Smoking
- Immunosuppression (HIV, AIDS)
- Chlamydia infection (other STD's)
- Early sexual activity

Signs & Symptoms:

- Early stage → no signs or symptoms
- Abnormal vaginal bleeding → after sexual intercourse, between periods, or after menopause
- Unusual discharge from the vagina (watery, bloody)
- Pelvic pain or pain during sexual intercourse

Screening **(v. imp)**:

- Should begin at age 21 years
- Above 65, no need for screening
- Screening is done by: Pap test, and HPV DNA test.

Diagnosis:

- By colposcopy (biopsy)
- Or can use electrical wire loop or cone biopsy (if the previous was worrisome)

Management:

Depends on (stage, other health problems, and the patient's preference "like if she still wants to have children"):

- ✓ Surgery: by Simple hysterectomy or Radical hysterectomy.
- ✓ Radiation
- ✓ Chemotherapy
- ✓ Follow up after completing treatment

#26- Abnormal Uterine Bleeding

Definitions:

- **Menorrhagia:** heavy or prolonged, but regular bleeding
- **Metrorrhagia:** irregular bleeding, intermenstrual bleeding, spotting, or breakthrough bleeding
- **Menometrorrhagia:** prolonged bleeding at irregular intervals
- **Polymenorrhea:** menstrual interval <21 days
- **Oligomenorrhea:** menstrual interval >35 days
- **Dysfunctional Uterine Bleeding:** excessive uterine bleeding with no demonstrable organic cause; most often endocrinologic in origin

Symptoms:

- Heavy bleeding (Indicated by):
 - ✓ (# pads, maxi size, 2 together)
 - ✓ Presence of clots, soaking clothes or bed
 - ✓ Symptoms of anemia
- Bleeding pattern (not regular, post coital bleeding, intermenstrual bleeding)
- Dysmenorrhea
- Chronic abdominal pain
- Symptoms of hyperandrogenism, hyperprolactenemia, and hypothyroidism.

Investigations:

- CBC
- Beta HCG
- TSH
- Prolactin
- Coagulation studies (women with systemic disease)
- Von Willebrand's disease (adolescent girls)
- U/S (uterine size, endometrial thickness, fibroids, polyps)
- Day 21, progesterone
- Daily basal temp
- Premenstrual sampling of the endometrium (biopsy, D&C)
- Hysteroscopy

Causes:

- Disorders of blood coagulation: Von Willebrand's disease (adolescence), Prothrombin deficiency, Carriers of hemophilia, Factor XI deficiency, Platelet deficiency (leukemia, severe sepsis, ITP, hypersplenism).
- Hypothyroidism, rarely hyper
- Renal failure
- Cirrhosis (hypoprothrombinemia, decreased clotting factors)
- Anatomic uterine abnormalities (like endometrial polyps)
- Adenomyosis
- Premalignant lesions: endometrial hyperplasia
- Malignancies
- Infections of upper genital tract (endometritis)
- Cervical lesions (erosions, polyps, ...)
- Trauma (vagina)
- Vaginal infection (severe)
- Foreign bodies
- Oral and injectable steroids
- Other drugs with estrogenic activity (digoxin, marijuana, ginseng)

Treatment of DUB:

Always remember to stabilize the patient first, get IV access, Blood grouping and match, and treat anemia

- **Medical treatment:**
 - ✓ Hormonal Estrogens, Progestins, combined OC's
 - ✓ NSAIDs
 - ✓ Antifibrinolytic agents
 - ✓ Low-dose Danazol
 - ✓ GnRH agonists
- **Surgical:**
 - ✓ D & C
 - ✓ Endometrial ablation
 - ✓ Hysterectomy

Treatment of uterine fibroid → medically same as DUB.

Neonatal resuscitation:

- Only 1% need major resuscitative measures (intubation, chest compressions, and/or medications “last resort”)
- Transition period: happens after delivery, where the lungs replace the function of the placenta.
- **Transition abnormalities:**
 - A baby may encounter difficulty before labor, during labor, or after birth.
 - Baby may not breathe sufficiently to force fluids from alveoli, or presence of foreign body such as meconium → prevents air.
 - Excessive blood loss, or inadequate cardiac contractility or bradycardia from hypoxia and ischemia.
 - Lack of ventilation of the lungs → sustained contractions of pulmonary arterioles.
 - Prolonged lack of adequate perfusion and oxygenation to the baby's organs can lead to damage to many organs especially the brain, or death.

Signs of the perinatal compromise:

- Poor muscle tone
- Depressed respiratory drive
- Bradycardia
- Low blood pressure
- Tachypnea
- Cyanosis

Apnea:

- Primary → fetus/newborn 1st becomes deprived of oxygen (**improved with tactile stimulation**).
- Secondary → if the oxygen deprivation continues (**assisted ventilation**).

ABCs:

- ✓ A – Airways
- ✓ B – Breathing
- ✓ C – Circulation
- ✓ D – Drugs (epinephrine)

A & B:

- Position the baby is by putting him in sniffing position (extended neck).
- Clear the airways by suction (suction the mouth before the nose) if necessary. Severe suction can cause bradycardia or respiratory suppression.
- Two accepted ways to stimulate the baby: 1- Flicking the sole of the foot 2-rubbing the back
- Checking the heart always during resuscitation.
- Starting from 2010, calculating the heart rate with stethoscope. For 6 seconds then multiply by 10, or by holding the cord and counting the pulses for 6 seconds and multiplying by 10. If the pulse is weak it won't be felt. Better to use stethoscope.

C:

- If heart rate <60 bpm despite adequate ventilation for 30 seconds:
 - Provide chest compressions as you continue assisted ventilation(PPV).
 - Consider intubation of the trachea at this point
 - Evaluate again if heart rate <60 bpm proceed to the next step (go to drugs epinephrine).

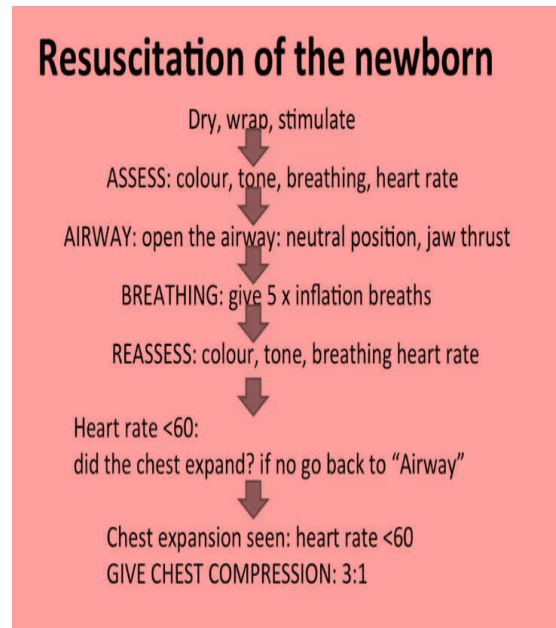
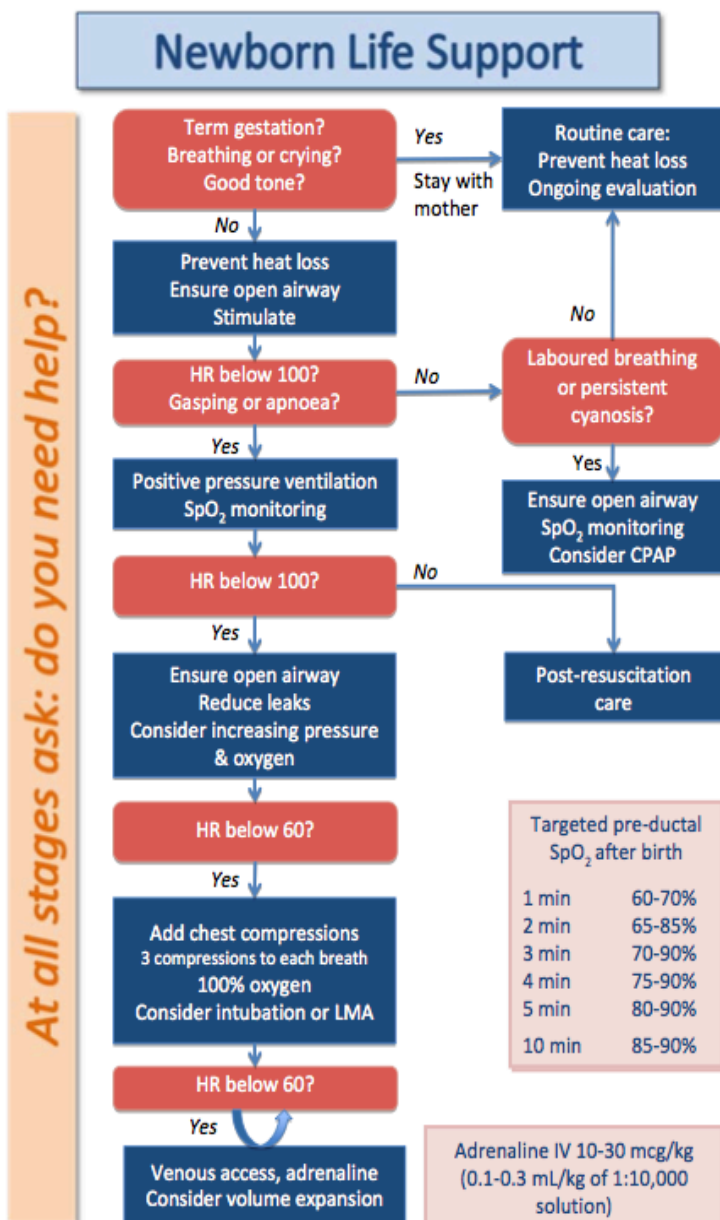
D:

- If heart rate <60 bpm despite adequate ventilation and chest compressions:
 - Administer **epinephrine** as you continue assisted ventilation and chest compressions
 - Consider intubation of the trachea at this point if not intubated yet

Initial Steps

- Provide warmth
- Position; clear airway (as necessary)
- Dry, stimulate, reposition

- **The most important and effective action in neonatal resuscitation is to ventilate the lungs.**
- Effective PPV in secondary apnea usually results in rapid improvement of heart rate
- If heart rate does not increase, ventilation may be inadequate and/or chest compressions and epinephrine may be necessary
- **HR <60 bpm** → **Additional steps needed (chest compression and/or drugs).**
- **HR >60 bpm** → **Chest compressions can be stopped**
- **HR >100 bpm and breathing** → **PPV can be stopped**
- Always proceed to the next step if no improvement after 30 seconds.



#28- Uterine Fibroids

Risk factors:

1. **Race** greater in **black women**.
2. **Menstrual history and parity:** (Any reason that make the woman expose more to estrogen) **Early menarche**, prenatal exposure to **diethylstilbestrol**, **nullparity** and **late age of first birth**.
3. **Hormonal contraception:** **not contraindicated** in women with fibroids Long acting progestin-only contraceptives (decrease the risk).
4. **Heredity**
5. **Ovulation induction agent**
6. **Obesity**
7. **Diet:** Beef and other reds meats (increased), green vegetables and fruit (decreased).
8. **Caffeine (no effect), alcohol (increased), and smoking (decreased).**

Clinical manifestations:

- **Heavy or prolonged menstrual bleeding (Most common fibroid symptom) depend on LOCATION.**

Ask the patient **FOCATES**:

F: Frequency of the bleed

O: onset and duration

C: character (color? smell? clot? streak? Fresh?)

course (intermeddled or continuous?)

progression: worse or better with time

A: association: ask about other OB-GYNE SYMPTOMS

Amount

T: time of the heavy bleed

E: elevating and relieving factor

S: severity (ask about symptom of anemia)

- **Pelvic pressure and pain:** Bulk-related symptoms (Urinary frequency, difficulty emptying the bladder, urinary, constipation, back pain, very large uteri compress the vena cava and lead to increase in thromboembolic risk).

ALARMING SYMPTOM: patient report that she's can't pass stool unless she put her finger to pass = severe constipation.

- Dysmenorrhea
- Dyspareunia
- Leiomyoma degeneration or torsion **"ACUTE PAIN"**.
- Reproductive dysfunction **increased risk of miscarriage**
- **Adverse pregnancy outcomes** (placental abruption, fetal growth restriction, malpresentation, and preterm labor and birth).

Diagnosis:

- **Pelvic exam** **enlarged AND asymmetrical non tender non pregnant uterus**, mobile uterus with an irregular contour Infrequently, on speculum exam, a prolapsed submucosal fibroid may be visible at the external cervical os.
- **Ultrasound:** initially, **most widely used modality** (intramural, subserosa).
- **Saline infusion sonography (sonohysterography)** for **submucous myomas**.
- **Diagnostic hysteroscopy** diagnose **submucous myoma** and extend of protrusion to endometrial cavity.
- **MRI "best modality"**
- **HSG** for contour of the endometrial cavity.

Definite: histological examination of tissue

Management:

Remember it's depend on the severity of symptoms, age, location, size and reproductive plan of the patient!! I think it's imp point to remember!

عاجني

Relief of symptoms is the major goal in management

A. Expectant: they shrink substantially during the postpartum period.

Initial US, annual **pelvic exams, complete blood count** (anemia or severe bleeding).

Rule out other causes of menorrhagia like hypothyroidism or bleeding disorders.

B. Medical therapy

- **Gonadotropin-releasing hormone agonists (pseudo menopause) given to old patients, patients with sever bleeding and anemia, before surgery to control bleeding, and not for young patients.**
 - ✓ Most effective medical therapy for uterine myomas.
 - ✓ **Most women will develop amenorrhea, improvement in anemia.**
 - ✓ Used as preoperative therapy.
- **Gonadotropin-releasing hormone antagonists**

C. Interventional radiology: A patient does not want to go for surgery and she did not respond to medical treatment and she is still suffering use interventional radiology.

A. Uterine artery embolization: **minimally invasive option** for management

- It is an effective option for women **who wish to preserve their uterus** and are not interested in optimizing future fertility.
- **UFE results in shrinkage of myomas of approximately 30 to 46 percent.**

D. Surgical therapy

- **Myomectomy** it's an **option for women who have not completed childbearing or otherwise wish to retain their uterus.**

• Disadvantage of this procedure is the risk that more leiomyomas will develop from new clones of abnormal myocytes

Hysteroscopic myomectomy is the procedure of choice for removing **intracavitary myomas (submucous fibroid specifically).**

- **Hysterectomy definitive end to symptomatology.**

• Women who have **completed childbearing** and have **significant symptoms**, multiple leiomyomas, and a desire for a **definitive end to symptomatology.**

Complications:

- Severe pain or very heavy bleeding that needs emergency surgery.
- Torsion and red generation
- Anemia from heavy bleeding
- Urinary tract infections
- Abortions

#29- Gestational Trophoblastic Disease

Definition: heterogeneous group of lesions that represent an **aberrant fertilization**.

Classification:

- **Benign:** partial and complete mole
- **Malignant:**
 - Persistent / Invasive GTD
 - Choriocarcinoma
 - Placental site trophoblastic tumors

Risk factors:

- Women <15 years or >40 years of age getting pregnant **extreme age**.
- Patients with **previous** history of molar pregnancy.
- Other factors: deficiency of animal fat, **vitamin A** and carotene, professional occupation, history of prior spontaneous abortion and **folate deficiency**.

Signs and symptoms:

- **Vaginal bleeding (1st trimester) is the most common symptom.**
- complete mole: first trimester pre-eclampsia, hyperthyroidism, hyperemesis, increased uterine size and theca-lutein cysts.
- partial moles are diagnosed clinically as missed or incomplete abortion.
- **exaggerated nausea and vomiting because of very high Beta-HCG level. Increase in thyroxin and follicular hormones.**
- **Most common sign:** fundus is larger than dates, absent of fetal heart tones and bilateral cystic enlargement of the ovary known as theca lutein cell.
- Symptoms of hyperthyroidism.

Diagnosis:

- **Vesicular tissue**
- **A quantitative pregnancy test** of greater than 100,000 IU/L, an **enlarged uterus**, and **vaginal bleeding** suggest a diagnosis of a **hydatidiform mole**.

Ultrasound (test of choice) will show **multiple echoes (snow storm)**.

Remains a gold-standard: The competitive RIA using a polyclonal antibody recognizing all forms of **β-hCG**.

The **amount** of hCG produced **corresponds** with tumor **volume**.

Management:

- ✓ **Evacuation curettage**: the method of evacuation and contraceptive for 6-12 month.
- ✓ **Base line β -hCG titers** and chest x-ray to rule out lung metastasis.
- ✓ **RH –ve** patients should **receive Rhogam**.
- ✓ **IV oxytocin** should be administered **after** a moderate amount of the tissue has been removed.
- ✓ **Hysterectomy** may be selected as a method of evacuation in patients **who desire sterilization**.
- ✓ Most common distant metastases: to the lungs.

- Dilatation and Curettage “D&C” are used for diagnosis, if hCG levels start to increase after the procedure start investigating with basic blood tests “CBC, β -hCG, LFTs, and KFTs”, US and CXR, if the were negative then the patient is low risk, if one is positive start looking for metastasis by doing CT of the brain, chest and abdomen. Start with Methotrexate for low risk patients and EMACO therapy for high risk patients.

Future childbearing:

- After treatment molar pregnancies occur in only about 1-2% of subsequent pregnancies.
- These patients should be evaluated with a **first trimester ultrasonography**.

Complications:

- Persistent gestational trophoblastic disease (GTD).
- Choriocarcinoma develops and spreads to other organs.

Functional/Physiological Cysts

Etiology: benign and related to the process of ovulation and most common enlargement of ovary in reproductive age.

Risk factor: patients with fertility problems on ovulation induction.

Clinical features: **Asymptomatic**, may cause pelvic pain, a dull sensation, or heaviness in the pelvis. Delayed menses and torsion or rupture.

Diagnosis: 5 to 8 cm cystic adnexal mass on examination; **lesion regresses**. In general, a functional cyst is mobile, unilateral, and not associated with ascites.

Management:

- Reproductive-aged patient + asymptomatic /mild symptoms presents with an adnexal cyst, = **pelvic ultrasound +serum CA-125 titer + RMI (Risk for malignancy index) determined**.
- **US: clear outlines + water content**.
- If the RMI is low = functional > **re-examine the patient after her next menses. (Every six months)**.
- Low-dose contraceptive (prevent future cyst).
- Corpus luteum, Follicular and Theca-lutein cysts.

Ovarian neoplasm

Etiology: Tumors could arise from the **stroma, germ cells or surface epithelium** **"most common"** unrelated to menstrual cycle. **80% benign**

Risk factor: age, obesity and family history.

Clinical features: **asymptomatic** unless they have subject to rupture or torsion ,**pressure symptoms** ,They can be cystic or solid tumors.

Diagnosis: **history and physical examination** (**malignant will be fixed and more solid** **US: thick septate, benign tumors usually cystic and freely mobile US: clear content and soft**), CA 125 and non-malignant gynecologic diseases (mainly for response of treatment).

Test of choice to know type of Cyst: US

Benign neoplasms:

The most common benign cystic neoplasms of the ovary are **serous and mucinous cystadenomas and cystic teratomas (dermoids)**.

Meigs' syndrome: uncommon benign ovarian fibroma is seen with **ascites and hydrothorax (plural effusion)**, these will disappear after resection.

A. Epithelium Ovarian Neoplasms:

1_Serous Cystadenomas: **"MOST COMMON"** 70% Benign, 20 % malignant depend on age, 10% are bilateral. **Small in size** while mucinous very large, usually they are **unilocular**.

2- Mucinous Cystadenomas: Less common, **very large**, rarely malignant, **multilocular** (many small cysts) filling the entire pelvis and abdomen, rarely bilateral – 5-20%, tall columnar and apical mucin.

****IMP: Pseudomyxoma peritonei:** Ovarian mass with large amount of mucin ascites (**gelatinous ascites do appendectomy**) **it is always appendicular in origin**. The treatment is surgical, but recurrence is usual.

Management of serous and mucinous: Do cystectomy by laparoscope if the patient is young on her 20s, do oophorectomy if the patient is old or on her 40s.

3- Brenner's Epithelial Tumor: Usually benign can be malignant.

- May coexist mucinous cystadenomas. Can be associated with endometrial cancer.

4- Borderline Malignant Epithelial Ovarian Neoplasms

- Account for 15% of all epithelial ovarian cancers, intermediate position between the benign cystadenomas and the frankly malignant cystadenocarcinomas.

Outcomes: The 10-year survival rate for stage I is over 95%. Late recurrence may occur as many as 20 years after initial diagnosis (**follow up every 6months with US**).

Management: **surgical** (**doesn't respond to chemo**).

B. Germ Cell tumors (usually malignant except teratomas)

- **Dermoid Cyst** (Benign Cystic Teratomas): rarely large, 15% are bilateral.
- They are the most common neoplasms **in the reproductive age**.
- They contain tissues from: ectoderm, endoderm, and mesoderm.
- **Treated by cystectomy.**

#31- Menopause

Definition: It is a retrospective diagnosis after 12 months of amenorrhea.

Etiology: Lack of estrogen

Clinical manifestation:

- **Hot flushes** “cutaneous vasodilation”.
- **2ndry amenorrhea.**
- **Urinary Symptoms:** Urgency, frequency, and nocturia.
- **Psychological changes** Depression - Irritability - Anxiety - Insomnia Loss of concentration
- **Atrophic Changes:** vaginitis, decrease size of cervix, mucus and uterus, shrinking of myoma & adenomyosis, decrease size of ovaries, prolapse, loss of urethral tone, hypertonic Bladder, decrease size of breast and benign cysts (like Fibroadenoma).
- **Skin Collagen**
- **Reversal of premenstrual syndrome.**
- **Osteoporosis**
- **Cardiovascular disease.**

Diagnosis and investigation:

The Triad of: hot flushes, amenorrhea **for 12 months**, increase FSH > 15 IU/L

Before starting treatment, you should perform:

- ✓ Breast self examination -mammogram -pelvic exam (Pap smear).
- ✓ Weight and blood pressure.

No indication to perform:

- Bone density (hx multiple fractures, Family hx).
- Endometrial Biopsy (hx of cancer).

Any bleeding should be investigated before starting any treatment.

Management:

- **HRT:** Estrogen will **relief the symptoms of menopause (hot flashes)**. For women with uterus add progestin at last 10 days.
- **Sequential Regimens** used in patient **close to menopause**.
- **Combined continuous** therapy **who has Progesterone everyday** patient don't want have vaginal bleeding.

Benefits of HRT: ↑ vaginal thickness of epithelium → ↓ dyspareunia & vaginitis.
Enhances normal bladder function, ↓ Osteoporosis, ↓ CVD, ↓ Colon Cancer.

Confirmed Risk: Endometrial CA, gall bladder disease, breast cancer

Contraindication to HRT: (same as OCP)

1. Undiagnosed vaginal bleeding
2. Acute liver disease and chronic impaired liver functions.
3. Acute vascular thrombosis
4. Breast Cancer

Osteoporosis:

Diagnosis: DEXA Scan

Risk factors: Female gender, family history in thin white female, steroid use, low Ca, and smoking.

Prevention: improve lifestyle, regular exercise, eliminate smoking and alcohol.

Management of Osteoporosis:

- Life style: Calcium Supplement & Vitamin D, stop smoking and alcohol and weight bearing exercises.
- ERT (Estrogen Replacement Therapy only for sever hot flash one-year maximum.
- Bisphosphonate (Fosamax) that inhibit osteoclastic activity & minimal S/E
- **Raloxifene** (Evista) is selective estrogen receptors moderator [SERMs]
- Calcitonin inhibit osteoclastic activity + analgesic effect.

Complications of menopause:

- Osteoporosis
- Cardiovascular Diseases
- Urogenital Symptom: recurrent UTI, vaginitis and dyspareunia.
- Alzheimer's Disease

Post menopause bleeding

Definition: Vaginal bleeding occurs after 12 months of Amenorrhea in middle age women who are not receiving replacement therapy.

Causes:

1. Upper Reproductive Tract Causes:

- Atrophic Endometritis
- Endometrial Polyp (degenerated submucous fibroid).
- Endometrial Hyperplasia (especially obese and PCO patients).
- Endometrial Cancer.
- Ovarian (granulosa cell tumor) or tubal Cancer (bleeding with watery discharge).

2. Lower reproductive tract: vaginitis vaginal or vulvar tumors, varicose veins, cervical polyp or tumors.

3. GIT causes: hemorrhoids, anal fissures or colorectal CA.

#32- Prenatal Testing

First Trimester Testing:



Maternal benefit	Fetal benefit	Immunization
CBC (Anemia?)	Atypical antibody test	Rebulla
Cervical culture (gonorrhea chlamydia STD)		HBsAg (HBV)
Urine screen (asymptomatic Bactra)	VDRL screen for syphilis	Type RH mother BY direct comp test
PAP smear	HIV	
	Gest. DM	

DNA Probes	screening	Chlamydia/ gonorrhea
HBsAg	screening	Hepatitis B
MHA/FTA definitive	VDRL/RPR screen for syphilis	syphilis
Westren blot definitive	ELISA for screening	HIV

Second Trimester Testing

A. Maternal serum alpha-fetoprotein:

Normal AFP Changes	Fetal serum	Peaks at 12 weeks
	Amniotic fluid	Peaks at 12 weeks
	Maternal serum	Peaks at 30 week

	 serum Maternal AFP	 serum Maternal AFP
Commonest CAUSE	Dating error recalculate and confirm date	
Next step	OB SONO if abnormal confirm, if us normal or unexplained AFP Amniocentesis or karyotype	
Causes	NTD , ventricle wall defect , twins, placenta bleed , sacrocoygeal terataoma	Trisomy 21
values	> 2.5 MoM	<0.85
Management	Amniocentesis (AFP) + acetylcholinesterase + karyotype	Amniocentesis + karyotype

B. Quadruple marker screen

- A. Alpha-fetoprotein (AFP).
- B. Unconjugated Estriol (UE).
- C. Human Chorionic Gonadotropin (hCG).
- D. Inhibin -A

Trisomy 21 (down syndrome):

Common Finding: low MS AFP and estriol, high β -hCG, and Inhibin.

Next step: OB SONO

Management: Amniocenteses for confirming karyotype.

Trisomy 18 Edward: ALL 4 markers are decreased.

Third Trimester Testing

- One-hour 50g oral glucose tolerance test.
- CBC (check for anemia and platelet count).
- Atypical antibody test.
- At 36 weeks, check for group B streptococci vaginal culture.

Obstetrics

Thyroid disorders in pregnancy

1. Hyperthyroidism:

› **Signs and symptoms:** palpitation, tachycardia, nervousness, tremors, flushing, excessive sweating, insomnia, frequent bowel movement, heat intolerance, **weight loss and failure to gain weight**. (Graves': goiter, exophthalmos, pretibial myxedema).

› **Causes:** Graves' disease most common.

› **Investigations:** **high serum free T₄, low TSH** (free t3 to diagnose thyrotoxicosis)

› **Management:**

- Medical: **Propylthiouracil** (PTU) and **methimazole** (tapazole)
- Surgical: in the 2nd trimester if the medical treatment fails.

› **Complications:**

• Of the disease itself:

◦ Maternal: superimposed PET, (specific to Graves: remission and exacerbation during postpartum period)

◦ Fetal: IUGR, stillbirth, neonatal morbidity and mortality

• Of the medication (fetal): fetal goiter or hypothyroidism, methimazole → fetal gastrointestinal defects

2. Hypothyroidism:

› **Signs and symptoms:** fatigue, constipation, cold intolerance, dryness, hair loss, muscle cramps, weight gain, myxedema and carpal tunnel syndrome.

› **Causes:** hasimoto's disease (most common)

› **Investigations:** **low serum free T₄, high TSH**

› **Management:** **Levo-thyroxine**

› **Complications:**

- Maternal: PET, abortion, preterm delivery, placental abruption, PPH
- Fetal: mental retardation, IUGR

Cardiac diseases in pregnancy

› **Signs and symptoms:** fatigue, dyspnea, orthopnea, palpitation, edema, systolic murmur, 3rd heart sound, chest pain and syncope.

› **Investigations:** ECG, chest radiogram

› **Management:** cardiac assessment, termination of pregnancy, follow up

› **Complications:** maternal morbidity and mortality, preterm delivery,

Specific conditions:

a. Cardiomyopathy

b. Peripartum CMP

- Risk factors: previous Hx of PET, Hx of HTN
- Complications: CHF, thromboembolism, arrhythmia.

c. Septal defects:

- Complications: atrial flutter Lt to Rt shunt, pulmonary HTN and CHF

d. Patent ductus arteriosus

e. Mitral regurgitation

f. Mitral prolapse

g. Aortic regurgitation:

- If sever, Rx: surgical repair before pregnancy

h. Aortic stenosis:

- Deterioration in the 2nd and 3rd trimester
- Management:

In pregnancy: balloon valvuloplasty

In labor: monitoring, **no epidural**, instrumental delivery

Postpartum: resuscitation in case of postpartum blood loss

- Complications: maternal mortality

i. Mitral stenosis:

- Deterioration in the 3rd trimester or labor
- Management:

In labor: monitoring (swan ganz catheter), pain reliever, instrumental delivery

Postpartum: diuresis to avoid pulmonary edema

- Complications: A-Fib, cardiac failure

j. Arrhythmias:

- Supraventricular tachycardia is the most common
- Management: digoxin and β blocker
- Complications: A-Fib

k. Ischemic heart disease:

- Management: termination if MI occurs <24 wks
- Complications: high mortality if delivery occurs within 2 wks of MI

l. Congenital lesions:

- › Teratology of fallot (Rt to Lt shunt & cyanosis)
- › Management: invasive monitoring in labor
- Complications: heart failure, abortion, preterm labor, IUGR
- › Eisenmenger's syndrome
- They have pulmonary HTN
- Management:
 - In pregnancy: limitation of physical activity, oxygen, pulmonary vasodilators, termination (last choice)
 - In labor: central hemodynamic monitoring and instrumental delivery
- Complications: maternal and fetal mortality, preterm labor, IUGR
- › Coarctation of the Aorta:
 - If dissection occurs in pregnancy → surgical correction
- › Marfan's syndrome:
 - Management: aortic valve replacement before pregnancy
 - Complications: aortic dissection / rupture
- › Idiopathic hypertrophic subaortic stenosis
 - Deterioration in the late 2nd - 3rd trimester
 - Complications: Lt ventricular failure, arrhythmias
- › Ebsteins anomaly
 - Management: surgical correction before pregnancy

CVD drugs in pregnancy:

Class C	Class D
Antiplatelet medications Antiarrhythmic Diuretics Lipid lowering Antihypertensive (hydralazine, nifedipine, labetalol)	Anticoagulants Antihypertensive (Ace inhibitors) Diuretics (spironolactone)

Renal diseases in pregnancy

- › **Signs and symptoms:** pitting edema
- › **Investigations:** low serum free T₄, high TSH
- › **Management:** Levo-thyroxine
- › **Complications:**
 - Maternal: UTI, Hydronephrosis,
 - Fetal: mental retardation, IUGR

a. Chronic renal disease

- **Investigation:** high creatinine in the urine
- **Complications:** permanent deterioration of renal function, PET, abortions, preterm labor, IUGR, perinatal mortality

b. Acute renal failure

- **Risk factors:** Hx of fluid loss (hemorrhage), pre-existing renal disease, hypercoagulable state, Hx of stones
- **Investigations:** low urine output (oliguria: urine < 25 ml/h), high urine osmolality (> 500 mOsm/L), Foley catheter, renal sonogram, cardiac monitoring to exclude cardiac causes
- **Management:**
 - Prerenal: restore intravascular volume
 - Renal: some conditions are irreversible (require high attention to prevent worsening), diuretic therapy, lower fluid intake, hemodialysis (last choice)
 - Postrenal: turn the patient on the left side, Foley catheter, and surgical intervention is required in some cases

c. Nephrotic syndrome

- PET is the most common cause
- **Investigation:** proteinuria <3.5 gm / 24h

d. Renal failure

- Reduce fertility
- **Complications:** abortion, IUGR, IUFD, preterm labor

e. Renal transplant patients

- Continuous immunosuppressive treatment
- **Complications:** PET, abortion, IUGR, IUFD, preterm labor

Anemia

- › **Signs and symptoms:** fatigue, stress, decrease in work capacity
- › **Causes:** malnutrition, malabsorption, excessive bleeding, high demand
- › **Investigations:**
 - 1st trimester: Hb < 11 g/dl
 - 2nd & 3rd: Hb < 10.5 g/dl
 - postpartum: Hb < 10 g/dl
- › **Management:** prophylactic Iron supplements to all pregnant ladies
- › **Complications:** Maternal and fetal morbidity and mortality
- › **Types:**

1. IDA:

- Most common
- **Investigations:** low Hb, **MCV**, MCH and MCHC (CBC) low serum ferritin, high TIBC
- **Management:**
 - Nutrition
 - **Iron therapy:**
 - a. Oral: (ferrous fumarate or sulphate) + folic acid
 - b. Injectable: not preferable

2. Folic acid deficiency anemia:

- **Causes:** dietary, high RBC turnover, medications like phenytoin
- **Management:** folic acid supplements

3. Hemoglobinopathies:

Sickle cell disease (sickle cell anemia, sickle cell β thalassemia, HB SC disease)

- **Signs and symptoms:** bad Ob Hx, jaundice, anemia symptoms
- **Causes:** inherited autosomal recessive

- Risk factors: family Hx of haemoglobinopathies, race (African, southeast Asian, Mediterranean)
- **Investigations:** screening by sickling test (HbC), diagnostic by Hb electrophoresis (HbD,G)
- **Management:** fetal monitoring (US scan and biometry), genetic counseling, epidural analgesia, blood transfusion, medications (folate, aspirin, heparin) avoid dehydration and fever
- **Complications:**
 - Maternal: pregnancy induced HTN, heart failure, embolism, dehydration, infections, renal dysfunction, retinal disease, painful crises, folate deficiency, miscarriage, and pelvic deformity is an indication of CS
 - Fetal: IUGR, preterm labor, low weight.

Thromboembolism (mainly VTE: venous thromboembolism)

1. VTE:

• **Common for both DVT and PE**

› **Risk factors:** previous Hx of thrombosis, thrombophilia, heart disease, sickle cell, lupus, obesity, anemia, diabetes, HTN, smoking, multiple gestation, hyperemesis, electrolytes imbalance, APH, CS, postpartum infection, PPH, transfusion

› **Management:**

- Prophylactic heparin/LMWH for the high-risk group,
- Curative: initially IV heparin/LMWH (enoxaparin), then subcutaneously till 6 wks postpartum

› **Complications:** maternal mortality

• **Specific:**

a. DVT:

› **Signs and symptoms:** pain and swellings in an extremity

› **Investigations:** compression US with Doppler, MRV

b. PE:

› **Signs and symptoms:** pleuritic chest pain, dyspnea, palpitations, hemoptysis, syncope, tachycardia, tachypnea, rales, fever, pleural friction rub

› **Investigations:** ECG (sinus tachycardia), ABG (oxygen <80 mmHg), ventilation perfusion scan, (contraindicated: COPD & asthma) spiral CT

2. DIC:

- › **Causes:** placenta abruption, PPH, fetal death and delayed delivery, amniotic fluid embolus, septicemia, acute fatty liver syndrome
- › **Management:** treat the underlying cause, correct coagulopathy (FFP, cryoprecipitate, platelets)
- › **Complications:** bleeding, ischemic tissue damage, renal failure, microangiopathic hemolysis

3. Amniotic fluid embolus (*bad prognosis-clinically diagnosed*):

- › **Signs and symptoms:** sudden dyspnea, pulmonary edema, hypotension, cardiovascular collapse, DIC, neurological problems (anxiety, seizures)
- › **Risk factors:** advanced maternal age, placental, PET, induced labor, CS, polyhydramnios - (extra source)
- › **Management:** supportive
- › **Complications:** maternal death, profound neurological impairment, poor fetal outcome

4. Sepsis:

- › **Causes:** antepartum pyelonephritis, septic abortion, puerperal infection

Puerperium and puerperal sepsis

1. Abnormal puerperium

a) Hemorrhage:

- › **Investigations:** CBC (PT/aPTT) to exclude coagulopathies
- › **Management:** oxygen delivery, bimanual massage, emptying the bladder, removal of retained clots, Oxytocin infusion.
- › **Types:**
 - i. Primary (1st 24h):
 - Sever fresh bleeding,
 - Causes: uterine atony, trauma, vaginal or cervical lacerations, labial tears, coagulation disorders

- ii. Secondary (24h-6wks):
 - Old and altered blood
 - Causes: RPC, endometritis

b) Infections:

i. Puerperal pyrexia:

- **Causes:** infections (UTI, genital tract, intrauterine, breast, respiratory) DVT, CS
- **Investigations:** blood culture, MSU, cervical and HV swab
- **Management:** antibiotics

ii. Mastitis:

- Acute inflammatory mastitis:
 - **Causes:** failure of milk withdrawal
 - **Management:** breast feeding, antibiotics
- Infective mastitis:
 - **Management:** antibiotics
- Breast abscess formation:
 - **Management:** surgical drainage, antibiotics

c) Psychiatric disorders:

i. Postnatal blues:

- Transient, self-limiting
- Sadness, crying, anxiety, irritation, restlessness, mood liability, headache, confusion, forgetfulness, insomnia

ii. Postpartum depression:

- Insomnia, lethargy, loss of libido, diminished appetite, pessimism, incapacity for familial love, feelings of inadequacy

iii. Puerperal psychosis:

- Schizophrenic, manic depression, associated with preexisting mental illness
- **Management:** observe, discuss, sedatives, transfer to psychiatric ward

d) Bowel and bladder problems:

- i. Urinary retention or voiding difficulties
 - **Causes:** painful episiotomy, epidurals in labor
 - **Management:** catheter
- ii. Incontinence: improved after pelvic wall exercises
- iii. Hemorrhoids: prevented by bearing down during labor

2. Puerperal sepsis

- **Signs and symptoms:** fever, uterine tenderness, persistent spiking fever (characteristic for pelvic thrombophlebitis)
- **Causes:** physiological alteration in vaginal pH, after delivery, pathogens (streptococcus, peptostreptococcus, peptococcus)
- **Risk factors:** Poor nutrition and hygiene, anemia, PROM, prolong rupture of membrane, prolonged labor, frequent vaginal examination during labor, CS, instrumental delivery, cervical or vaginal lacerations, manual removal of placenta, RPC
- **Investigations:** abdominal CT and ultrasound, Blood, endocervix, uterine, and a catheterized urine specimen obtained for culture
- **Management:**
 - Mild cases: Broad-spectrum antibiotics, such as ampicillin and the cephalosporin
 - Sever cases: penicillin-aminoglycoside combination
 - Pelvic thrombophlebitis: heparin

Gynecology

Thromboembolism²

OCP: high risk for VTE especially those who have a previous Hx, smokers, >35 y.o,

Congenital fetal anomalies

› **Etiology:** unknown, multifactorial, hereditary, infections, **DM** (associated with: **cardiac**, CNS, renal, pulmonary and GI anomalies), seizures, thyroid abnormalities, **drugs**, radiations

› **Risk factors** (used in screening): **family Hx, Maternal age above 35**, using alcohol or tobacco

› **Investigations:** (1st and 2nd trimester)

- Ultrasound, amniocentesis, fetal ECG, radiography (≥ 10 wks, skeletal anomalies), embryo/fetoscopy, Chorionic villus sampling, Percutaneous umbilical blood sampling, biopsies, **MSAFP**

› **Management:**

- Prevention: control medications, control maternal diseases, genetic counseling, dietary (e.g., folic acid), pre/peri-conception screening

- Treatment: most of them cannot be completely cured

› **Complications:** oligohydramnios, polyhydramnios, neonatal mortality

Special conditions:

- Neonatal Tube Defect: (e.g., anencephaly, spina bifida)

- Risk factors: Family Hx, maternal DM, maternal exposure to drugs (valproic acid).

- Investigations: elevated MSAFP, ultrasonography

- **Down syndrome screening: low MSAFP, low maternal unconjugated steroid, high β -HCG, high inhibin**, chromosomal analysis of the fetal cells.

Dysmenorrhea

› **Cramping lower abdominal pain radiating to the back and legs, GI & neurological symptoms, general malaise.**

a. Primary (*Young population-physiological*)

- Pain usually begins a few hours prior to or just after the onset of period & may last as long as 48-72 hrs, Nausea, vomiting, diarrhea with rarely syncope episodes.

- **Causes:** other than physiological

contractions, Fibroid uterus, Endometriosis, Pregnancy complications like abortion & ectopic, PID, UTI

- **Management:**

- Medical: prostaglandin synthesis inhibitors, NSAID, Combined oral contraceptive (second choice or when associated with menorrhagia)

◦ Non-medical: transcutaneous electrical nerve stimulation, laparoscopic uterine nerve ablation

b. Secondary (*Old population-pathological*)

- Pain begins 3-5 days prior to period & relieved with onset of period, sometimes continue for several days
- **Causes:** endometriosis/adenomyosis, fibroids, congenital uterine anomalies, cervical stenosis, PID, IUCD
- **Investigations:** US, laparoscopy, hysteroscopy, hysterosalpingogram
- **Management:** treat the underlying cause, analgesic

c. PMS:

- **Signs and symptoms:**
 - Physical: bloating, weight gain, breast pain/tenderness, hot flushes, headache, pelvic pain, changes in bowel habit, joint/muscle pain, edema
 - Emotional: irritability, aggression, tension, anxiety, depression, decreased interest in usual activities, lethargy, sleep disturbances, change in appetite, crying, change in libido, thirst, loss of concentration, poor coordination, clumsiness
- **Causes:** unknown, hormonal alterations, Vit 6 deficiency
- **Management:** supportive, treat the symptoms

d. Endometriosis:

- **Signs and symptoms:** infertility, chronic pelvic pain, deep dyspareunia, pelvic mass, tenesmus, hematuria, hemoptysis
- **Investigations:** **laparoscopy** (looks brown, black clear), laparotomy, CA-125, biopsy
- **Management:**
 - Pain management: non-hormonal (prostaglandin inhibitors for mild cases), hormonal (OCP, Danazol, Gestrinone, GnRH analogue)
 - Preservation of fertility:
 - Surgical excision

c. Adenomyosis:

- **Signs and symptoms:** no typical presentation
- **Investigation:** US, MRI, histological examination after hysterectomy
- **Management:** analgesics for dysmenorrhea, (antiprostaglandin), D&C, GnRH analogue, **hysterectomy**.

Gynaecological History:

Menstrual cycle: Duration: / Reg / Irreg Flow: mild/average/heavy LMP: / /
 Contraception: Menopause: HRT:
 Gyne Surgery: Pelvic Radiotherapy:
 OBH: P +
 Mode of Delivery: Vaginal Instrument C.S. Last delivery:
 PSH: 1. 2. 3.
 PMH: 1. 2. 3.
 Medications:
 Allergies:
 S. H:
 F.H:

PHYSICAL EXAMINATION

Height: Weight: BMI: B.P: G.C:

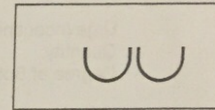
Breast Examination:

CVS & Resp. Sys:

Abdominal Exam:

Pelvic Exam:

Vulvar Skin: Vaginal Tissue: Normal / Atrophic
 Perineal skin Sensation: Reflexes:
 UVJ Mobility: -ve +ve Urethral Meatus:
 Cough Stress Test: -ve +ve without reduction of POP



POP Grade:

Cystocele	G0	GI	GII	GIII	GIV
Rectocele	G0	GI	GII	GIII	GIV
Uterine Prolapse	G0	GI	GII	GIII	GIV
Vault descent	G0	GI	GII	GIII	GIV

Paravaginal defect: Yes No

with reduction of POP

Aa	Ba	C
GH	PB	TVL
Ap	Bp	D

POPQ Stage:

Pelvic Muscle Tone: strong med week absent
 strong med week absent
Anal Sphincter Tone: strong
Bimanual Exam: Cervix: Pap smear: Yes No
 Uterus: Adenexae: Rt. Lt.

Impression:

1. 2.
 3. 4.

Plan:

- MSU: Urinalysis Culture
- Free Uroflowmetry + PVR
- Pelvic Physiotherapy
- Fluid & life style modifications, specify:
- Medication(s), specify:
- Surgery, specify:
- Referral, specify:
- Others, specify:
- Bladder Diary
- Urodynamic testing
- Bladder drill (behavioral therapy)

Name of Assessor: _____



King Khalid University
King Khalid University Hospital
Obstetrics & Gynaecology

History & Physical Examination Sheet
Urogynaecology

Age / D.O.B. : Occupation:
Reason of Referral :
Chief Complaint (s) :

Duration:

A. 1. Urinary Incontinence

Frequency: q ___ hrs or ___/day
Degree of Bother: not bothersome slightly moderately greatly
Nocturia: ___/night
Urgency:
Degree of Bother: not bothersome slightly moderately greatly
Urge Incontinence: Frequency of U.I.:
Quantity: small moderate Large
Degree of Bother: not bothersome slightly moderately greatly
SUI: Frequency of SUI:
Quantity: small moderate Large
Degree of Bother: not bothersome slightly moderately greatly

Leaks for no obvious reason:
Nocturnal Enuresis Duration:
Coital incontinence:
Use of Protection pads No.:

2. Voiding Disorders:

Hesitancy: Slow Stream:
Strain to Void: Incomplete emptying:
Postvoid dribble: Dysuria: Hematuria:

3. Others

Frequency of UTI: (per month/per year) Last attack:
Documented UTI: Treatment:

Pain with full bladder

Bowel Symptoms:

Freq. of Bowel movements: (per day/per wk) Consistency of stool: liquid / firm / hard
Straining with B.M: Incomplete evacuation:
Anal incontinence: gas incontinence (liquid, soft, hard stool)
Fecal incontinence frequency:

C. POP (Prolapse Symptoms)

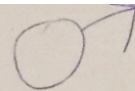
Sensation of Bulge / Pressure: Visible bulge:
Need for manual reduction: Interference with sexual intercourse:

D. Others:

Sexually Active: Dysparaunia: Pelvic/Perineal Pain:
Vaginal discharge: Vaginal dryness: Abdominal Pain:

E. Habits: Smoking ___/day Coffee ___/day Tea ___/day
Soda ___/day Juice ___/day Water ___/day

F. Prior investigation(s) and / or therapy:



- Age: 35
- General health:
 - Any previous children from previous marriage(s):
 - Age of youngest child: 0
 - Any Investigations: When, Where, Results/ consultations:
 - Any Treatment given: When, by whom, outcome/ side effects:

*oligo spermia = Now
Azospermia*

- Past Medical HX: orchitis, mumps
- Past Surgical HX: hernia repair, varicocele repair, testicular trauma
- Medications:
- Allergy:
- Smoking / Alcohol/ drugs:
- Social HX:
 - Occupation: any exposure to hazards: 0
 - Residence:
 - Family Hx: Cancer, DM, HTN, infertility, congenital defects, learning disabilities, mental retardation, early menopause, genetic diseases.

Husband's Investigation:

Date	FSH	LH	Testosterone	HB _s Ag	HB _c Ag	HIV.	Blood Group	VDRL

1. Husband's Semen Analysis:			2. Husband's Semen Analysis:		
Date: / /			Date: / /		
Abstinence		Post Wash	Abstinence		Post Wash
Volume	↓		Volume		
Count	↓		Count		
Morphology			Morphology		
Motility	↓		Motility		
Suitability:			Suitability:		



King Khalid University Hospital

Hospital file #

Pink file #

Nationality:

♀

- Age: [Redacted]
- G P O A Ectopic
- Same husband?
- Duration of Infertility: 2 years +

LMP: / /20

Infertility Treatment: Yes No

Ovulation Induction	Clomid	HMG	IUI	OUTCOME
Dose				
No. of Cycles				
Responded	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Previous IVF/ ICSI Cycle: Yes No

Year	Place	No. of Oocytes Retrieved	No. of eggs Fertilized	No. of embryos Transferred	OUTCOME
7/12	psvitel				No response

- Any Hyper response (OI / IVF):

- Menstrual HX:

- Menarche: 14
- Period: regular / irregular: Q days
- Duration of bleeding: 5-6 days
- Amount of bleeding: Normal
- Any dysmenorrhea: ✓
- Any inter-menstrual bleeding: X
- Any PMS: ✓✓
- Any use of methods to monitor ovulation cervical mucus/ BBT/ LH kits? results X

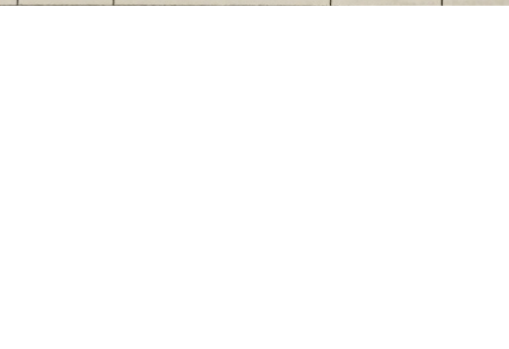
- STDs / PID:

- Pelvic pain: X

pg. 1

- Hirsutism, acne, Wt. change, acanthosis nigricans: ✓
- Hot flashes, night sweats, sleeping difficulties, dry vagina: ✓
- Contraception: ✓
 - Method: ✓
 - Duration:
 - Side effects: ✓
- Sexual History:
 - Frequency:
 - Timing of intercourse:
 - Dyspareunia:
 - Sexual dysfunction Male/Female:
- Last PAP ✓
 - Date:
 - Result:
- Breast problems
 - Masses/ discharge:
 - Mammograms:

Year	G.A.	Sex	Mode of delivery	B.F.	Current health

- Past Medical HX: 
- Past Surgical HX:
- Medications: ✓
- Allergy:
- Smoking/ Alcohol/:
- Social HX:
 - Occupation: (
 - Residence:
- Family Hx: Cancer, DM, HTN, infertility, PCOS, endometriosis, congenital defects, learning disabilities, mental retardation, early menopause, genetic diseases.