APPROACH AND MANAGEMENT OF EARLY PREGNANCY BLEEDING

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GROUP C3

TOPIC OUTLINES:

- Introduction, incidence ,definition , causes.
- How to approach patient with early pregnancy bleeding?
- Differential Dx.
- Management plan.
- Prognosis.

Bleeding from the vagina is a **common event** at all stages of pregnancy

The source is virtually always **maternal**, not fetal

*Early Pregnancy Bleeding: Vaginal bleeding **before 24 weeks of gestation**

HOW TO APPROACH?

History

Physical examination

Investigations

Management

HISTORY

- Maternal Age?
- History of Present Pregnancy

  LMP
  - Sure dates or not (regular, contraceptives or lactating)
  - Symptoms of pregnancy
  - Diagnosis of pregnancy
  - Any previous vaginal bleeding in this pregnancy
- Analysis of bleeding
  - Amount "blood soaking through her clothes", color, clots
  - Severity (symptoms of shock, Pale, cold, clammy skin, Shallow, rapid breathing. Difficulty breathing, Rapid heartbeat, Heartbeat irregularities or palpitations, Thirst or a dry mouth, Low urine output or dark urine)
  - Associated symptoms (pain, passage of POC)
- Do they have significant pelvic pain or cramping?

HISTORY

- Risk factors for Ectopic pregnancy
  - Previous ectopic
  - Pelvic surgery
  - PID
  - Pregnancy on top of an IUD or progestin-only pills
  - Ovulation induction or IVF (assisted reproductive technologies)
- A history of two or more consecutive early pregnancy losses
- What is the patient's medical history?
  Diabetes mellitus, hypothyroidism, and SLE
- About smoking and drinking alcohol?
- About psychosocial stress?

PHYSICAL EXAMINATION

- General appearance
- Vital signs
- Any tissue the patient has passed should be examined.
- Abdominal examination
- Pelvic exam

INVESTIGATIONS

- **Transvaginal ultrasonography**

  Transvaginal ultrasonography is the mainstay of the evaluation of bleeding in early pregnancy.

- **Laboratory tests**

  hCG, CBC, blood group & Rh

DIFFERENTIAL DIAGNOSIS

01

Miscarriage

- Threatened Miscarriage
- Inevitable Miscarriage
- Incomplete Miscarriage
- Complete Miscarriage
- Missed Miscarriage
- Recurrent Miscarriage
- Septic Miscarriage

02

Local causes

- ⑩Vaginitis
- ⑩Trauma
- ⑩Tumor
- ⑩Warts
- ⑩Polyps
- ⑩Fibroids

03

Ectopic pregnancy

04

Molar pregnancy

MISCARRIAGE

MISCARRIAGE

- Vaginal Bleeding and/or Loss of pregnancy before fetal viability 24 weeks gestation(UK)
  I. Early miscarriage ≤ 12 weeks
  II. Late Miscarriage ≥ 12 weeks
- Bleeding complicate 21% of clinically detected pregnancies
- 15% of clinically recognized pregnancies spontaneously miscarry

Aetiology

A. Genetic: 50% of clinically identifiable first trimester miscarriages are chromosomally abnormal.
   ✓ The risk falls with advancing G.A, the most common is Trisomy, followed by monosomy X and triploidy.

B. Second Trimester: Uterine abnormality, Cervix Weakness, bacterial vaginosis and multiple pregnancy.

C. Infection (rare) : listeria monocytogenes, CMV, rubella and mycoplasma hominis.

D. Unexplained: 20% of miscarriages have no identifiable cause

1) THREATENED MISCARRIAGE

- Vaginal bleeding in the presence of a closed cervix and sonographic visualization of an intrauterine pregnancy with detectable fetal cardiac activity.
- the incidence of preterm delivery in these cases may be somewhat higher than in those who do not bleed in the first trimester
- Of those in whom a live fetus is present, 94% will produce a live baby

History	Pelvic exam	POC (product of conception)	Prognosis	Management
Mild Vaginal bleeding ± dull lower abdominal pain + Intact membrane	Cervix: closed U/S: viable intrauterine fetus Speculum: role out local causes (e.g cervical polyp)	Intrauterine	Reversible	Watch and wait < 5% go to abortion 1. Reassurance 2. if ≥ 12-week GA and she Rh (–) give anti D

2) INEVITABLE ABORTION

- In the case of inevitable abortion, a clinical pregnancy is complicated by both vaginal bleeding and cramp like lower abdominal pain.

- The cervix is frequently partially dilated, contributing to the inevitability of the process.

History	Pelvic exam	POC (product of conception)	Prognosis	Management
Vaginal bleeding + cramp lower abdominal pain ± rupture of membrane	Cervix: open U/S: May viable or non-viable fetus	Intrauterine	Irreversible	- Watch and wait - Misoprostol (PGE_2) 400-800 - D&C ± oxytocin

3) INCOMPLETE MISCARRIAGE

- this occurs when some of the product of the conception have been passed and some are left in the uterine cavity, often described by the woman as looking like pieces of skin or liver.

History	Pelvic exam	POC (product of conception)	Prognosis	Management
Heavy bleeding + painful uterine cramps/contractions + pass some POC	Cervix: open U/S: POC	Within cervical canal or uterus Remove it but avoided vaginal shock (neurogenic)	Irreversible	Surgical evacuation

4) COMPLETE MISCARRIAGE

- Endpoint of all miscarriages

- A complete early pregnancy loss can be distinguished from an ectopic pregnancy by ?? demonstrating **falling** rather than rising or plateaued hCG levels

History	Pelvic exam	POC (product of conception)	Prognosis	Management
Minimal vaginal bleeding + mild cramping + uterus small and well contracted	Cervix: open or close depend on stage U/S: Empty uterus	Completely outside the uterus	Irreversible	Expectant management (Reassurance and back to home)

5) MISSED MISCARRIAGE

- This occurs when the embryo has died or has not developed normally.

- Patients may notice that symptoms associated with early pregnancy (eg, nausea, breast tenderness) have abated

History	Pelvic exam	POC (product of conception)	Prognosis	Management
Asymptomatic	Cervix: closed U/S: GS ≥ 25mm with no identifiable embryo or no FH activity CRL ≥7mm or empty uterus	No expulsion	Irreversible	- Watch and wait to spontaneous mischarge (expectant) OR - Misoprostol (PGE_2) 400-800 (uterotonics) OR - surgical evacuation

6) RECURRENT MISCARRIAGE

History	Pelvic exam	POC (product of conception)	Prognosis	Management
≥ 3 spontaneous miscarriages	Cervix: depend on type U/S: Empty uterus, uterine anomaly may present	-	-	Evaluate mechanical, genetic, environmental or other risk factors

7) SEPTIC MISCARRIAGE

- Infection of any type of mischarge, Usually associated with illegal termination of pregnancy
- intrauterine infection are typically referred to as having chorioamnionitis.

When not treated urgently, septic abortion progresses rapidly and can be lethal

History	Pelvic exam	POC (product of conception)	Prognosis	Management
abdominal or pelvic pain, Malaise, purulent vaginal discharge, fever, elevated WBC	-	Occasionally, **Retained** POC may become **infected**	Irreversible	1. Rapid admission 2. IV broad spectrum antibiotic at least 12 h 3. Surgical evacuation

MANAGEMENT OPTIONS

A. Expectant

- Motivation and preparation
- Thorough explanation on what to expect and what to do
- 90% will miscarry within 3 weeks of expectant mangement
- Rescan 2-3 weeks.

B. Medical

- **Uterotonic agent** to facilitate the evacuation of the uterus (i.e. misoprostol)
- Associated with pain, bleeding, fever and diarrhea .
- U/S : to confirm completion of miscarriage.
- Efficacy for less than 10 weeks (92-94%)
- Contraindication: Mitral stenosis, hypertension, asthma, haemoglobinopathy, on anticoagulation medication.

C. Surgical

- Vacuum aspiration “by large plastic syringe” or E&C or D&C

❑ **Anti-D Ig (if she Rh -):**

1. all threatened miscarriages ≥ 12 weeks
2. all spontaneous miscarriages ≥ 12 weeks
3. all the miscarriages where the uterus

❑ **Antibiotics:**
Not for all women , if clinically indicated.

ECTOPIC PREGNANCY

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- Ectopic pregnancy refers to those pregnancies that implant outside the uterine cavity.
- The most common site for an ectopic pregnancy is in the fallopian tube(95%). Other sites for ectopic pregnancy include the cervix, the ovary (implantation below the ovarian cortex), the abdomen, and cesarean delivery scars.
- Bilateral fallopian tube pregnancies occur in 1 in 200,000 pregnancies.
- Heterotopic 1 in 30,000

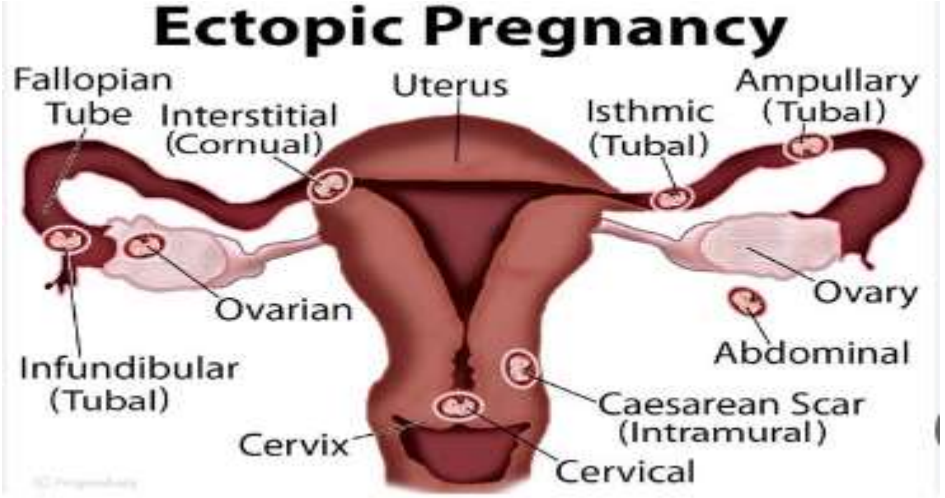


TABLE 24-1

INCIDENCE AND SITES OF ECTOPIC PREGNANCY

	Natural Conception	Assisted Reproductive Technologies
Overall incidence	About 1%	2-3%
Fallopian tube	>95%	<90%
Ovarian and abdominal	1-2%	5%
Cervical	0.15%	1.5%
Cesarean scar	1 in 1800	Unknown
Heterotopic*	1 in 30,000	1 in 100

*More than one site.

ETIOLOGY AND RISK FACTORS:

- **ectopic pregnancies generally result from abnormalities in the structure or function of the fallopian tube.**

1. History of previous ectopic pregnancy
2. Tubal abnormalities caused by:
   - internal inflammation (salpingitis)
   - tubal surgeries (tubal ligation or anastomosis)
3. Progesterone IUDs (mirena)
4. Assisted reproductive techniques
5. Hx of multiple sexual partners ... PID
6. Infertility
7. Smoking

APPROACH

I. **History:** clinical triad:
   - ✓ Abdominal pain
   - ✓ Amenorrhea
   - ✓ Vaginal bleeding (spotting)

II. **Physical examination**:(Hemodynamic stability, and a complete pelvic examination, Speculum and bimanual pelvic examination)
   - ✓ Abdominal tenderness
   - ✓ Adnexal or cervical motion tenderness
   - ✓ Tachycardia, Hypotension, Diaphoresis,

III. US and HCG

DIAGNOSE AN ECTOPIC PREGNANCY

HUMAN CHORIONIC GONADOTROPIN TESTING (HCG)

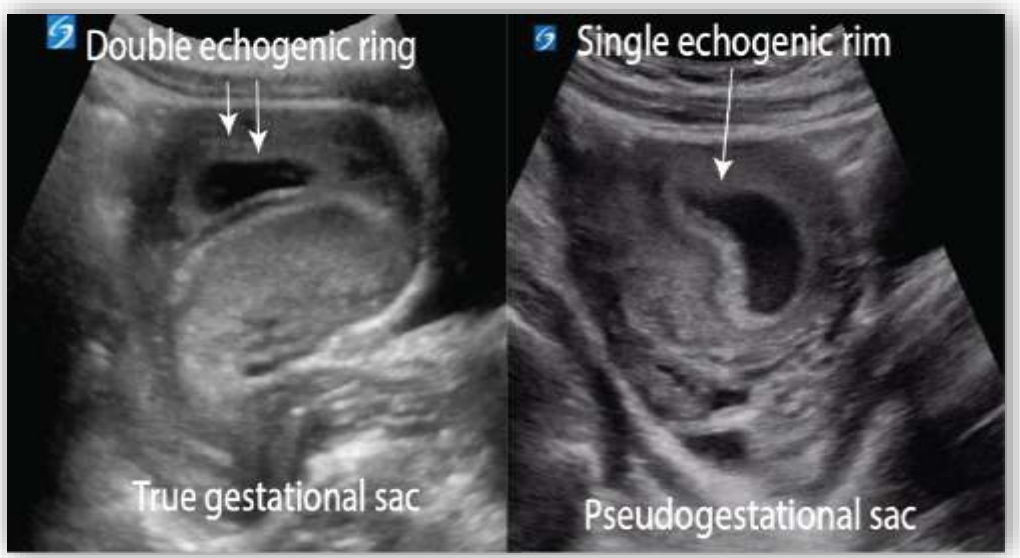
- **Serum hCG is measured serially** (every 48 to 72 hours) to determine whether the change is consistent with a normal or an abnormal pregnancy. A single hCG measurement alone cannot confirm the diagnosis of ectopic pregnancy or IUP.

- **Rise in hCG ≥35 percent** – In general, hCG levels in normal early IUPs will rise by at least 35 percent every two days

- **Rise in hCG <35 percent** – An hCG that rises <35 percent every two days across three different measurements is most consistent with an abnormal pregnancy (eg, ectopic pregnancy, nonviable IUP)

- **Plateauing or decreasing hCG** – An hCG concentration that plateaus or decreases is most consistent with a failed pregnancy (eg, arrested pregnancy, tubal abortion, spontaneously resolving ectopic pregnancy, complete or incomplete abortion).

TRANSVAGINAL ULTRASONOGRAPHY



- Findings diagnostic of an ectopic pregnancy include a gestational sac with a yolk sac or embryo (with or without a heartbeat) outside of the uterus.
- A **gestational sac alone** (without a yolk sac or embryo) is **insufficient for diagnosis.**

- complex inhomogeneous extra ovarian adnexal mass. This is the most common ultrasound finding in ectopic pregnancy and is present in 89 percent or more of cases.
- An extra ovarian adnexal mass containing an empty gestational sac (sometimes referred to as a "tubal ring").
- finding of fluid with debris (consistent with blood) in the pelvic cul-de-sac and/or abdomen may be consistent with rupture of an ectopic pregnancy

- **(pseudodecidual sac) that can be seen in ectopic pregnancies**

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- If left untreated, an ectopic pregnancy in the fallopian tube can progress to a **tubal abortion** or **tubal rupture**, or it may **regress spontaneously.**

MANAGEMENT

Medical treatment

Methotrexate is a folic acid antagonist

- The dose of MTX used to treat ectopic pregnancy (50 mg/m^2 or 1 mg/kg)

Optimal candidates

- ✓ Hemodynamically stable,
- ✓ Willing and able to comply with posttreatment follow-up,
- ✓ Have a human chorionic gonadotropin beta-subunit (hCG) concentration ≤ 5000 mIU/mL
- ✓ No fetal cardiac activity.

CONTRAINDICATIONS TO THE USE OF METHOTREXATE

Patient-Related

1. Hemodynamic instability
2. Unreliable for return visits
3. Known sensitivity to MTX
4. Overt or laboratory evidence of immunodeficiency
5. Hepatic, renal, or hematologic dysfunction
6. Active pulmonary disease
7. Peptic ulcer disease
8. Breastfeeding

Ectopic Pregnancy–Related

1. Gestational sac ≥ 3.5 cm
2. Embryonic cardiac motion seen
3. Human chorionic gonadotropin levels > institutionally predetermined value (usually between 6000 and 15,000 mIU/mL)

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- For patients with tubal pregnancy treated with MTX, we suggest a single-dose protocol in most cases. The two-dose protocol may be beneficial when hCG levels are high (>3000 international units/L) or if an adnexal mass measures >2 cm. We reserve the use of multiple-dose MTX therapy for interstitial or cervical pregnancies

- commonly used protocol, on days 4 and 7, a serum hCG concentration is drawn. If the decrease in hCG between days 4 and 7 is less than 15 percent, a second dose of MTX 50 mg/m2 IM is administered.

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- After day 7, hCG testing is repeated weekly. On day 14: If there is a ≥15 percent hCG decline from days 7 to 14, check hCG weekly until the level is undetectable (this level varies by laboratory).
- -If the hCG does not decline to zero, a new pregnancy should be excluded.

- -In our practice, if three weekly values are similar, we give an additional dose of MTX (50 mg/m2). This typically accelerates the decline of serum hCG.

MANAGEMENT

Surgery

- In the presence of a healthy contralateral tube, salpingectomy should be performed in preference to salpingotomy.
- In women with a history of fertility-reducing factors , salpingotomy should be considered.

Indications of surgical management

1. Heterotopic pregnancy
2. Failure or contraindication to MTX
3. Hemodynamically unstable
4. Signs or symptoms of impending or ongoing rupture of ectopic mass

LOCAL CAUSES (OTHERS)

VAGINITIS, TRAUMA, TUMOR, WARTS, POLYPS, FIBROIDS

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VAGINITIS, TRAUMA, TUMOR, WARTS, POLYPS, FIBROIDS

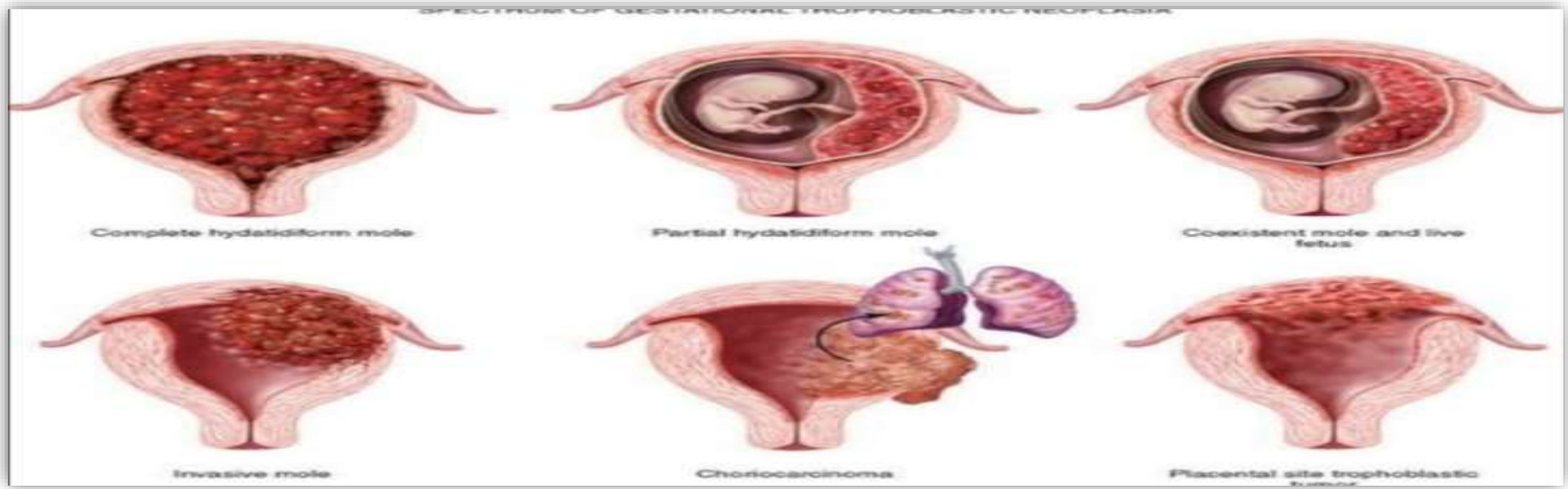
Ectropion:

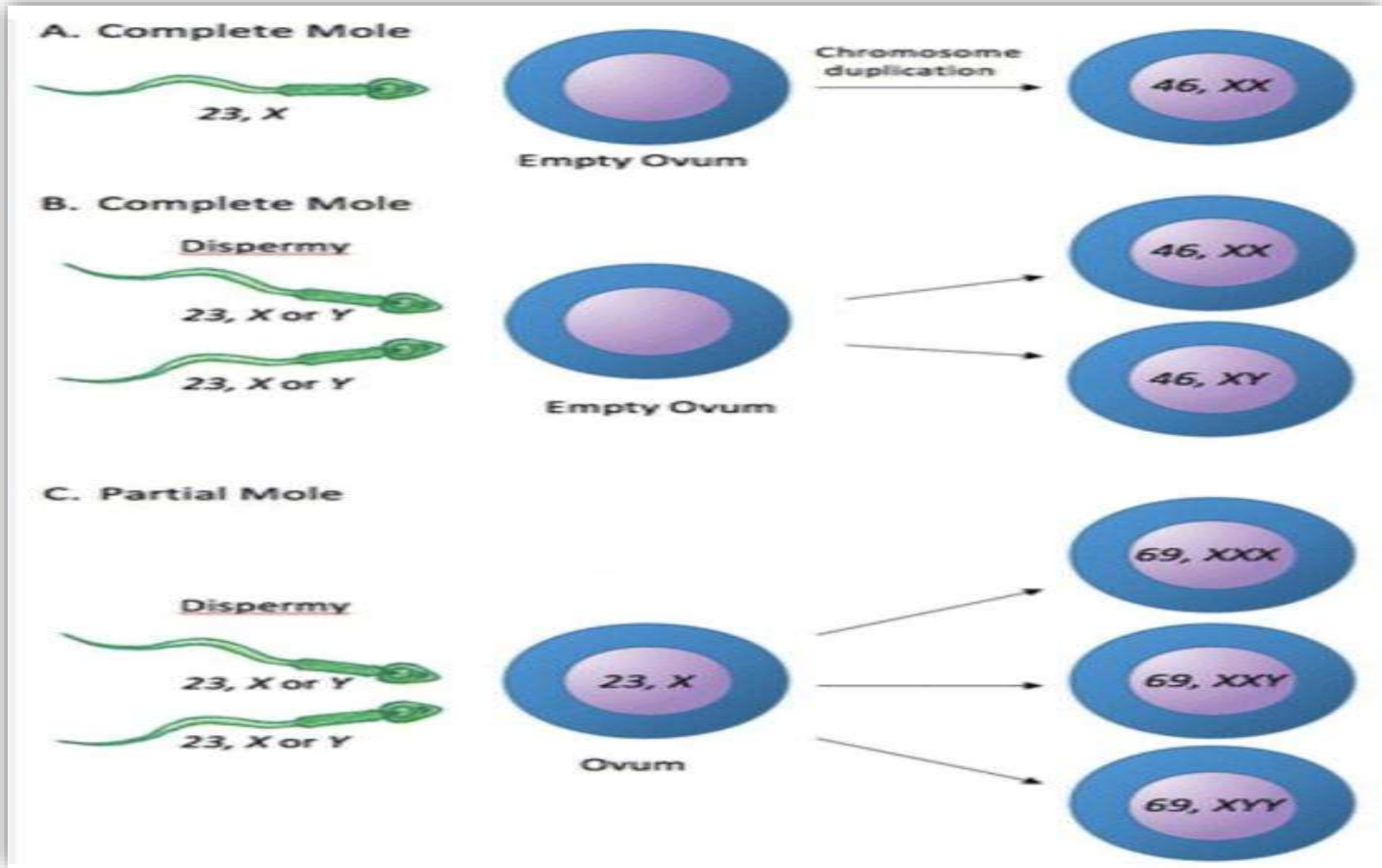
- columnar epithelium exposed to the vaginal milieu by eversion of the endocervix
- is a common and normal finding in pregnancy.
- The exposed columnar epithelium is prone to light bleeding when touched, such as during vaginal intercourse, insertion of a speculum, bimanual examination
- Therapy is unnecessary.

GESTATIONAL TROPHOBLASTIC DISEASES

GESTATIONAL TROPHOBLASTIC DISEASES

- It is spectrum of disorders;




A. Complete Mole
23, X
Empty Ovum
Chromosome duplication
46, XX
B. Complete Mole
Dispermy
23, X or Y
23, X or Y
Empty Ovum
46, XX
46, XY
C. Partial Mole
Dispermy
23, X or Y
23, X or Y
23, X
Ovum
69, XXX
69, XXY
69, XYY

RISK FACTORS

1. Extremes of maternal age
2. previous molar pregnancy
3. previous spontaneous abortions
4. Ethincy
5. Dietary factors including patients that have diets deficient in carotene (vitamin A precursor) and animal fats.

CLINICAL PRESENTATIONS:

most common presentation

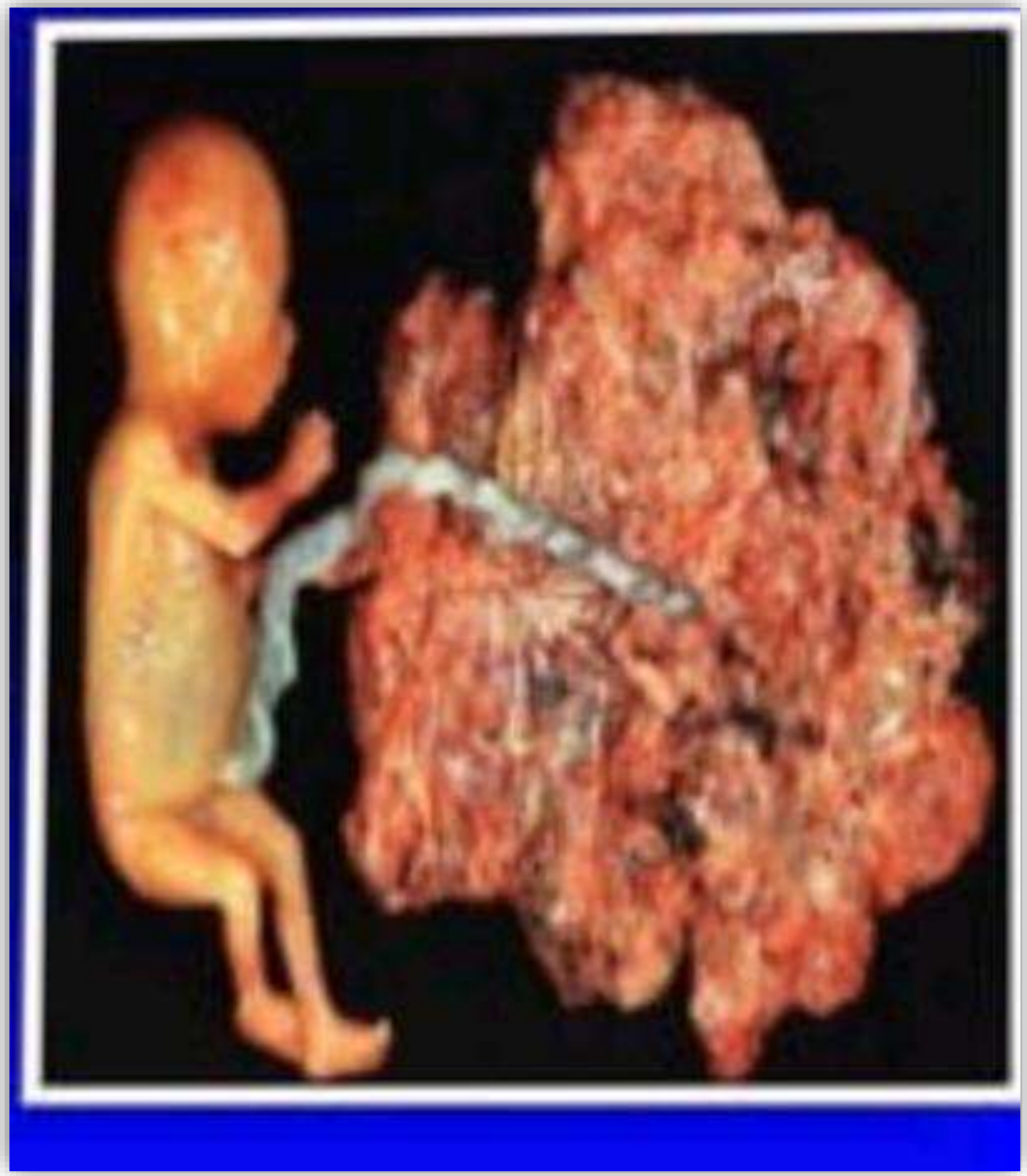
- Irregular vaginal bleeding positive pregnancy test and supporting ultrasonographic evidence.

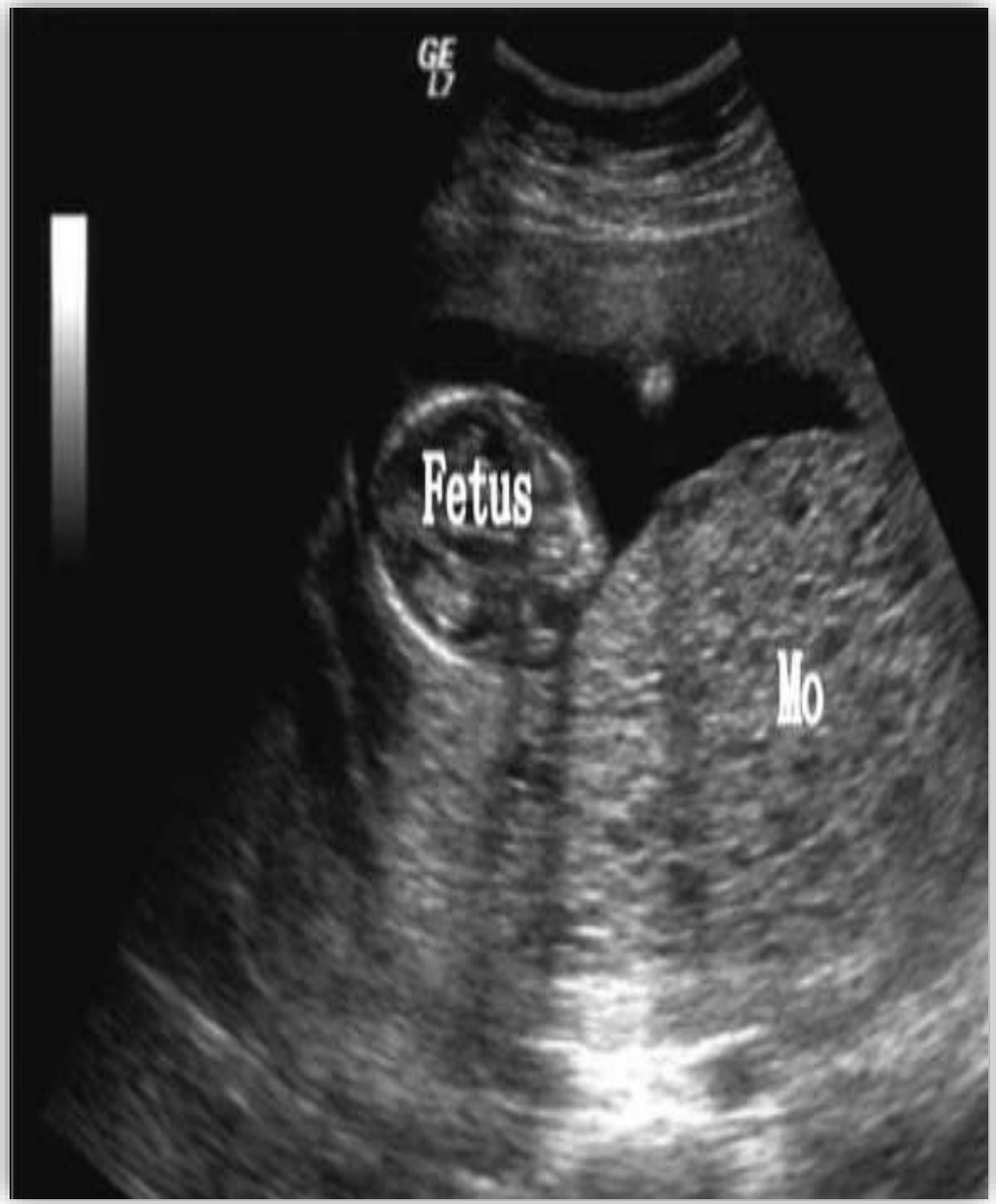
***(cystic appearance with no gestational sac=snowstorm appearance, theca lutin cysts…**

***(enlarged placenta with cystic changes - may empty sac or fetus can be seen..)**

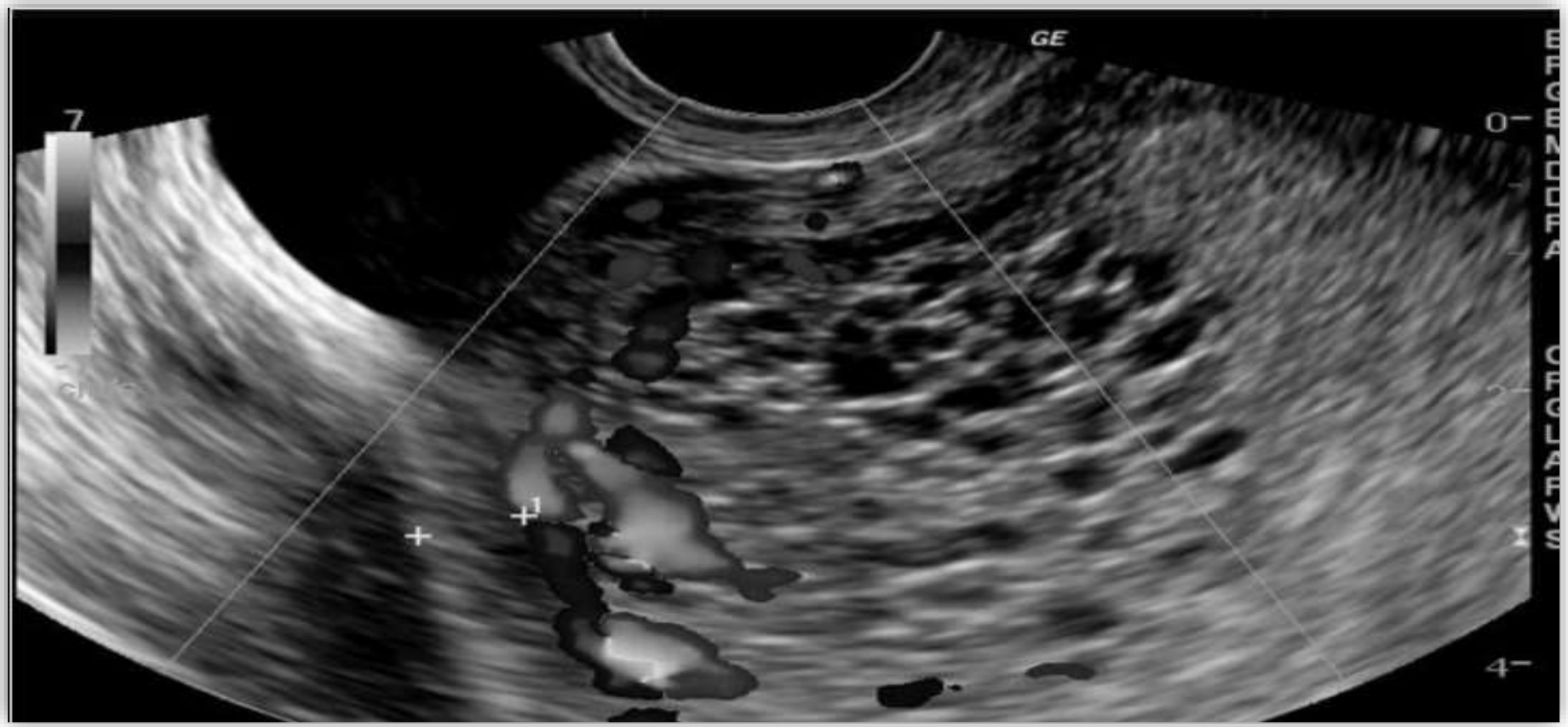
Other presentations =hyperemesis, early onset pre eclampsia, hyperthyroidism, abdominal enlargement

- **rarely haemoptysis and respiratory failure or seizures due to metastatic disease affecting the lungs or brain.**




Fetus
Mo

SNOWSTORM APPEARANCE



PHYSICAL EXAMINATION

- Enlarged uterus
- Bilateral ovarian cysts
- Vaginal metastasis ..30%of cases

  risk for bleeding and infection.

Complete

Suction and cutterage

Medical. Termination?

-GTN

-Dissemination and Respiratory failure

Partial

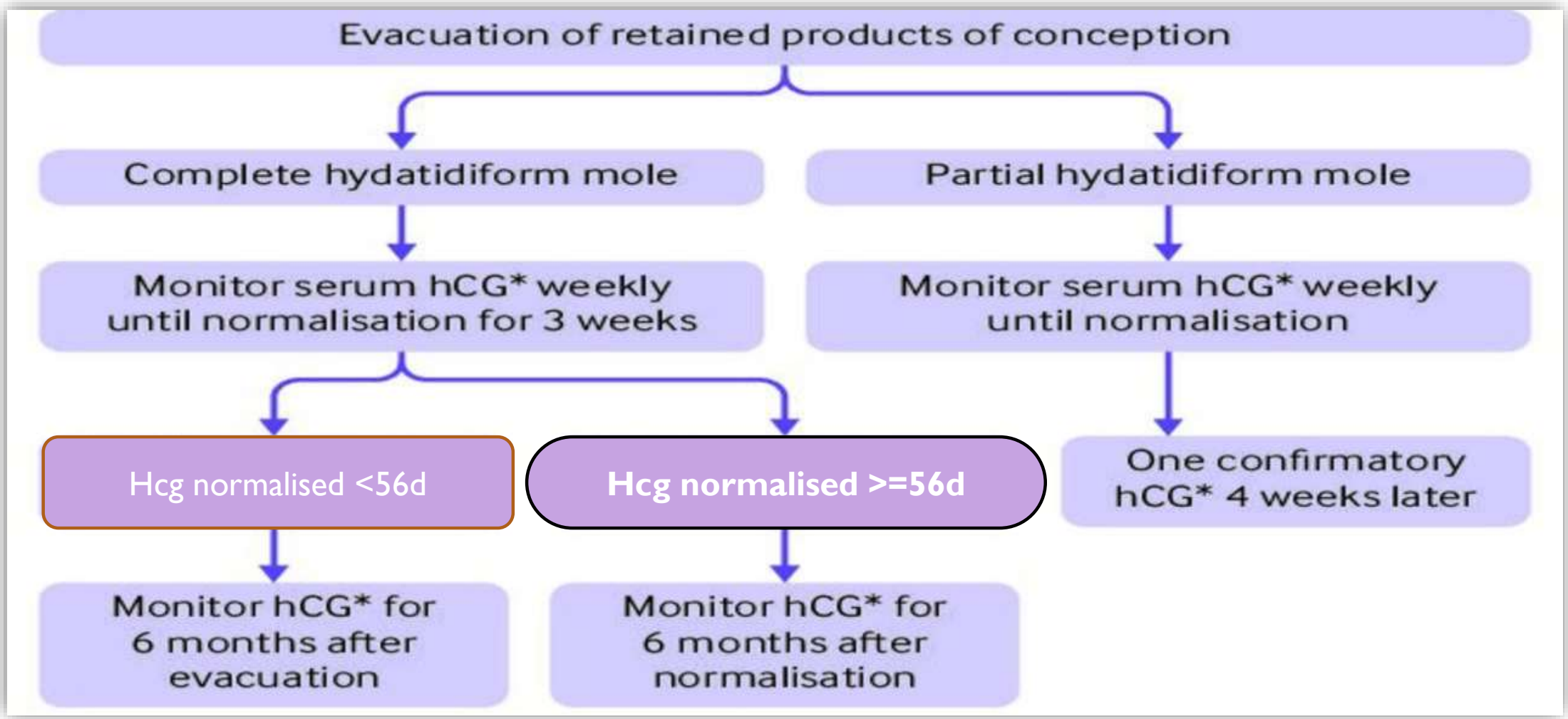
Suction and cutterage

Medical termination?

Anti - D prophylaxis after removal

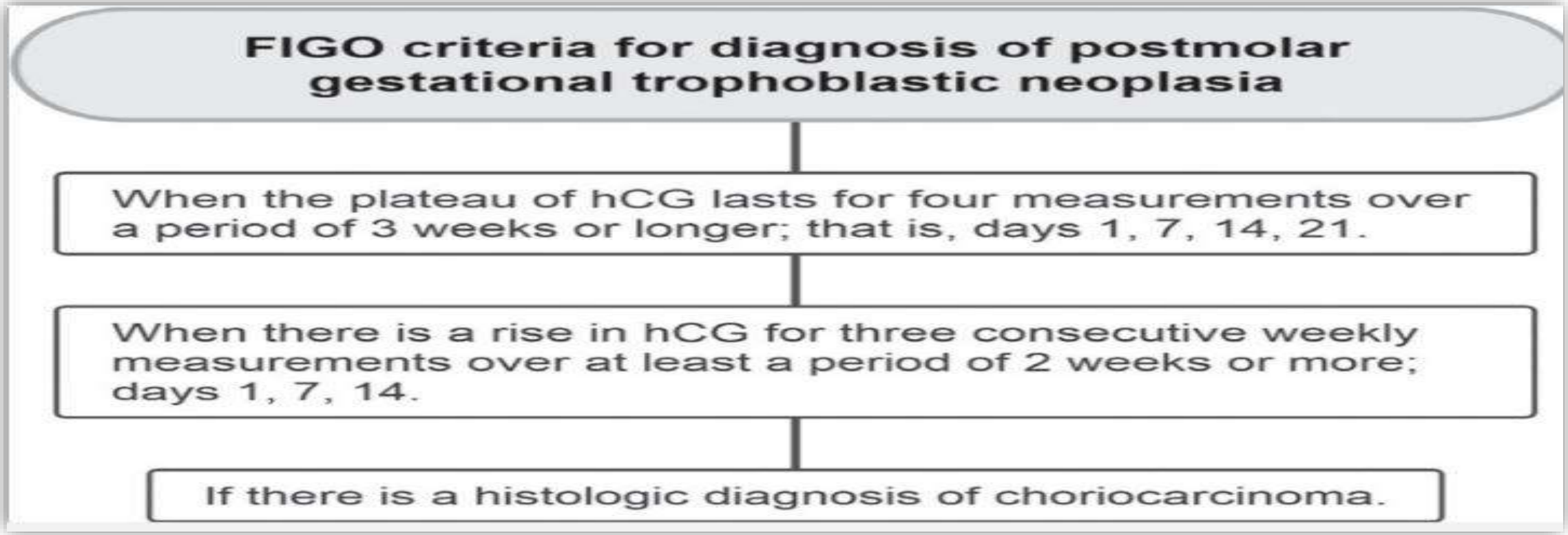
-SEND TO HISTOPATHOLOGY
IF NOT, DO PREGNANCY TEST 3 W IF +VE.. SERUM LEVELS BETA HCG.. U/S

FOLLOW UP


Evacuation of retained products of conception
Complete hydatidiform mole
Partial hydatidiform mole
Monitor serum hCG* weekly until normalisation for 3 weeks
Monitor serum hCG* weekly until normalisation
Hcg normalised <56d
Hcg normalised >=56d
One confirmatory hCG* 4 weeks later
Monitor hCG* for 6 months after evacuation
Monitor hCG* for 6 months after normalisation

WHEN TO START CHEMOTHERAPY ?

GTN DIAGNOSIS



FIGO PROGNOSTIC SCORING

Risk factor	0	1	2	4
Age	<40 years old	>40 years old	–	–
Antecedent Pregnancy	Mole	Abortion	Term	–
Interval months from pregnancy	<4	4–6	7–12	>12
Pretreatment serum hCG level	$<10^3$	10^3–10^4	10^4–10^5	$>10^5$
Largest tumor size (including uterus)	<3 cm	3–4 cm	>5 cm	–
Size of metastases	Lung	Spleen, kidney	Gastrointestinal system	Liver, brain
Number of metastases	–	1–4	5–8	>8
Previous failed chemotherapy	–	–	Single drug	2 or more drugs

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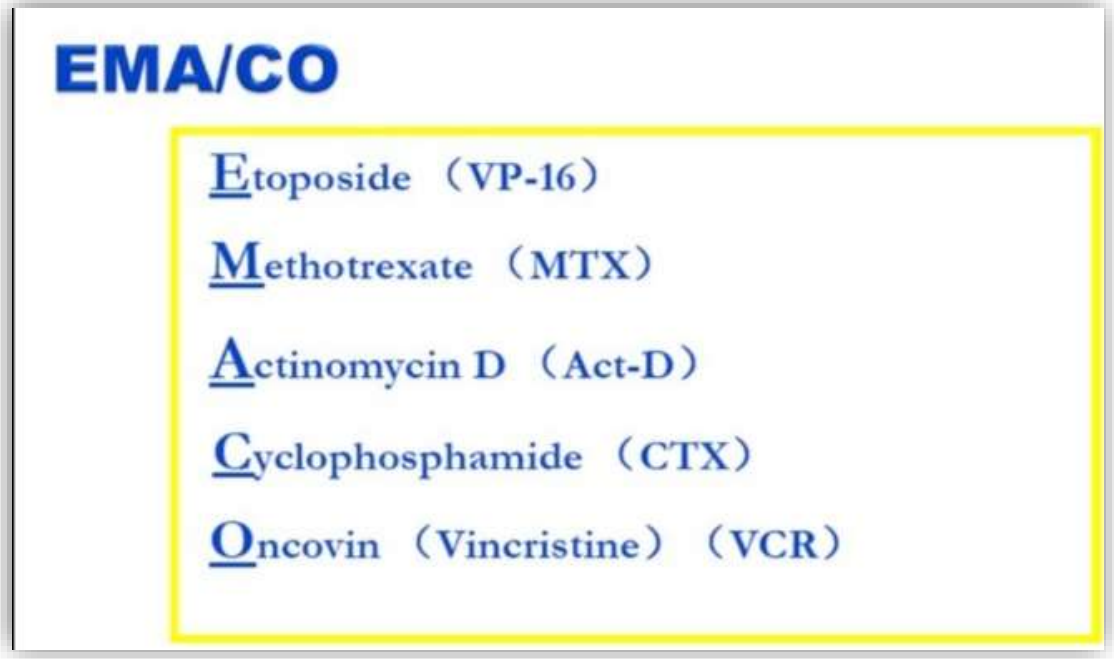
- ≤ **6** are treated with methotrexate, alternating daily with folinic acid for 1 week followed by 6 rest day.
- ≥ **7** are treated with combination of chemotherapy EMA CO
- **>13** are eith high risk for dearth in the next 4 weeks



FIGO Anatomic Staging	
Stage I	Disease confined to the uterus
Stage II	Disease extends outside the uterus but is limited to the genital structures (adnexa, vagina, broad ligament)
Stage III	Disease extends to the lungs with or without genital tract involvement
Stage IV	Disease involves other metastatic sites

Choriocarcinoma

- Clinical features of bleeding p/v, lower abdominal pain, or in 1/3 of cases no pelvic symptoms but symptoms of distant metastasis lungs, brain,liver, skin, cauda equina & the heart may present
- Highly malignant, appears as soft purple largely hemorrhagic mass
- Diagnosis =Hcg
- Respond to chemotherapy

PSTT

- Women mainly presents with menstrual irregularities & lower abdominal pain, galactorrhea due to hyperprolactinemia increased h PL
- Spread is late local Infiltration & metastasis is through lymphatic
- Not related to hcg
- Hystrectomy is curative

THANK YOU

Resources:

- Hacker & Moore's book
- Up to date
- Pubmed researchs