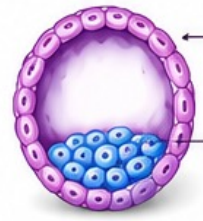
TROPHOBLASTIC DISEASES

Trophoblasts:
Outer layer cells of the blastocyst. Release proteolytic enzymes that allow implantation and placental formation.

Diseases may be:
- Benign → **Hydatidiform mole**
- Malignant → **Choriocarcinoma**

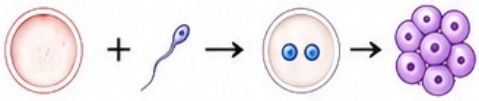


High risk groups:
- < 20 years
- > 40 years

More common in Asian women.

HYDATIDIFORM MOLE (result of abnormal fertilization)

COMPLETE MOLE
(No maternal chromosomes)



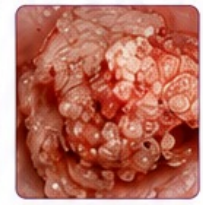
- Not compatible with life
- No embryogenesis
- Never contains fetal parts or chorionic (embryonic) tissues

PARTIAL MOLE
(Maternal chromosomes present)

- Compatible with early embryo formation
- May contain some fetal parts
- Contains both abnormal (edematous) and normal chorionic villi

MORPHOLOGY
Both show "grape-like" appearance (hydropic, cystically dilated villi).


Complete mole (diffuse)


Partial mole (focal)

COMPARISON BETWEEN COMPLETE AND PARTIAL MOLE

Feature	Complete Mole	Partial Mole
Karyotype	46,XX (or 46,XY) diploid (entirely paternal)	69,XXX (or XXY) triploid (paternal + maternal)
Villus edema	All villi (diffuse)	Some villi (focal)
Trophoblastic proliferation	Extreme / diffuse (circumferential)	Focal / slight
Atypia of trophoblast	Present	Absent
Serum & tissue hCG	Very high	Less elevated
Embryo / fetal parts	Absent	May be present
Prognosis & behavior	Worse prognosis High risk of choriocarcinoma	Better prognosis Low risk of choriocarcinoma

CLINICAL FEATURES (both; worse in complete mole)
- Vaginal bleeding in 1st trimester
- Very high hCG levels
- Hyperemesis gravidarum (severe N/V)
- Passage of "grape-like" vesicles per vagina
- Absence of fetal parts (in complete mole)
- Preeclampsia (early onset)
- Uterus larger than dates

Monitoring: Ultrasound + Serial HCG levels

TREATMENT (Hydatidiform mole)
1. Stabilize the patient
2. Surgical evacuation of uterus (suction curettage)
3. Monitor serial serum hCG until undetectable

PROGNOSIS

Complete mole
- Non-invasive: 80–90% cure rate
- If invasive mole: < 10%
- If choriocarcinoma: 2–3% (very aggressive)

Partial mole
- Excellent prognosis
- Rarely progresses to choriocarcinoma

Incidence: ~ 1 in 2,000 pregnancies
More common in Asia.
High risk: < 20 years or > 40 years.

CHORIOCARCINOMA (Malignant trophoblastic tumor)

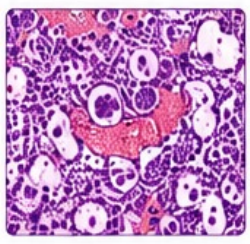
Definition
Malignant tumor arising from gestational chorionic epithelium (cytotrophoblast and syncytiotrophoblast) or from germ cells.

Epidemiology
- Very rare: ~ 1 in 30,000 pregnancies
- More common in Asians
- High risk: < 20 yrs or > 40 yrs

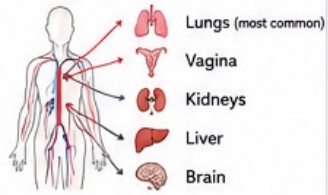
Causes
- 50% following a hydatidiform mole (usually complete)
- 25% following abortion
- 25% following normal pregnancy

Clinical Features
- Very high hCG levels
- Vaginal bleeding / brownish discharge
- Hemorrhage and necrosis common
- Symptoms depend on site of metastasis

Pathology
- No chorionic villi
- Tumor composed of anaplastic:
  - Cytotrophoblast
  - Syncytiotrophoblast
- Hemorrhage and necrosis frequent



Spread (Hematogenous)
Very aggressive – early vascular invasion



Investigations
- Serum β-hCG: markedly elevated
- Ultrasound: may show mass, but often nonspecific
- Chest X-ray / CT: lung metastasis
- MRI/CT brain: if neurological symptoms
- Histopathology: confirms diagnosis

Prognosis
- Despite aggressive behavior, prognosis is good with treatment
- Cure rate > 80–90% with appropriate chemotherapy
- Poor prognosis if diagnosis delayed or widespread metastasis