

FALLOPIAN TUBE

Salpingitis

- Precipitated by curettage, IUD, sexually transmitted, ascending infections, spread from other pelvic organs
- Causes:
 - N. Gonorrhea
 - Tuberculosis
 - Bacterial – coliforms, streptococci
 - Mycoplasma
 - Chlamydia



Gross:

bilateral, distally blocked by inflammatory exudate, lumen dilated, tubo-ovarian abscess

Microscopy:

a/c salpingitis-> tuboovarian abscess-> pelvic peritonitis and abscess -> pyosalpinx-> hydrosalpinx-> c/c salpingitis

Tuberculous salpingitis

- Secondary tuberculosis by hematogenous spread from lungs, urinary tract, abdominal cavity
- a/w tuberculosis of endometrium, cervix and lower genital tract
- Gross: tube dilated w purulent exudate, fimbriae patent, tubal peritoneum and peritoneum studded with yellow tubercles
- Microscopy
- Caseating granulomatous chronic inflammation in serosa, muscularis, mucosa

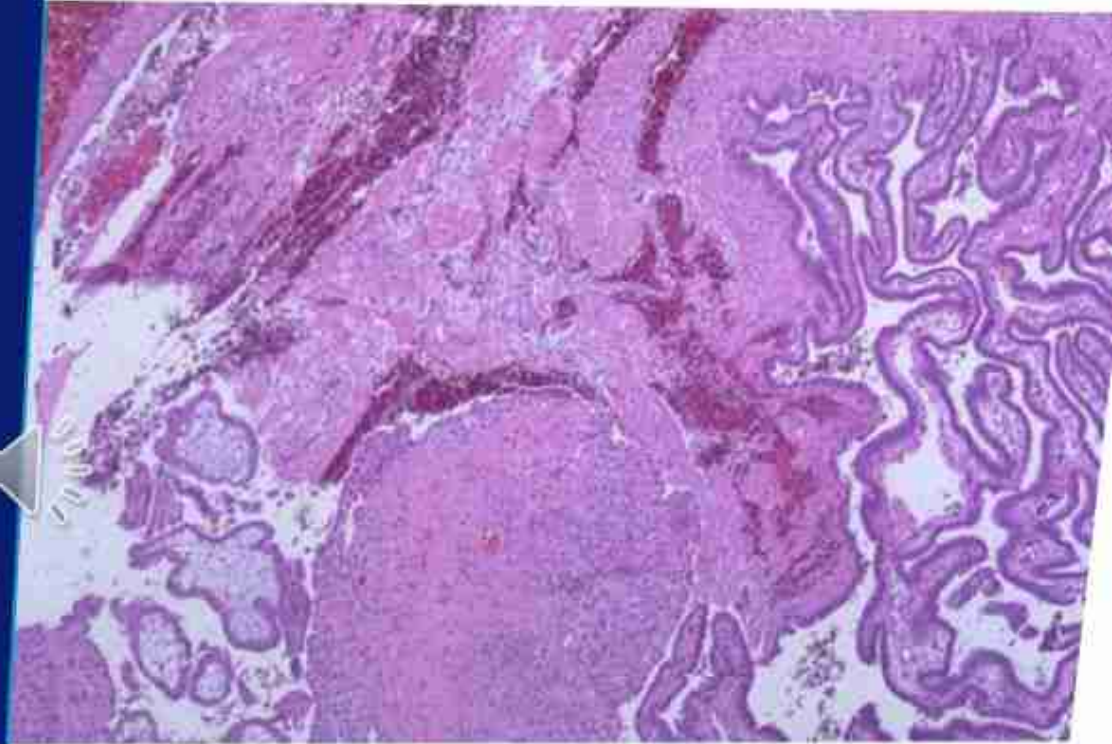


Ectopic tubal pregnancy

- Implantation of fertilised ovum in tube
- Mc form of ectopic pregnancy
- Predisposing factors: PID, tubal surgery, IUCD, congenital anomalies of FGT
- MC site in tube – ampulla, least common – interstitial
- Hazardous – can rupture and cause intraperitoneal hemorrhage



A ruptured tubal ectopic pregnancy. The twins are at the lower right adjacent to the blood clot at the right



tubal ectopic pregnancy; hemorrhage and chorionic villi in the tubal wall

Tumors and tumor like lesions

- Tumors are rare – adenomatoid tumor, choriocarcinoma, leiomyoma, teratoma, adenocarcinoma
- Tumor like lesions – hydatis of Morgagni

GESTATIONAL TROPHOBLASTIC DISEASES

- Spectrum of Tumor and tumor like lesions of trophoblastic origin
 - Hydatidiform mole - partial and complete (noninvasive)
 - Invasive mole
 - Choriocarcinoma
 - Placental site trophoblastic tumor



HYDATIDIFORM (VESICULAR) MOLE:

- Abnormal placenta having 2 features:-
 - 1- Enlarged edematous and hydropic change of chorionic villi which become vesicular(Cystic swelling)
 - 2-Variable circumferential trophoblastic proliferation.
- Maybe non invasive and invasive:
 - Non invasive includes two types: - Complete (classic) and Partial/Incomplete
10% develop into invasive mole, and 2.5% develop into choriocarcinoma.
 - Invasive mole: - Penetrates the uterine wall, produce hemorrhage but does not metastasize. - Responds well to chemotherapy.

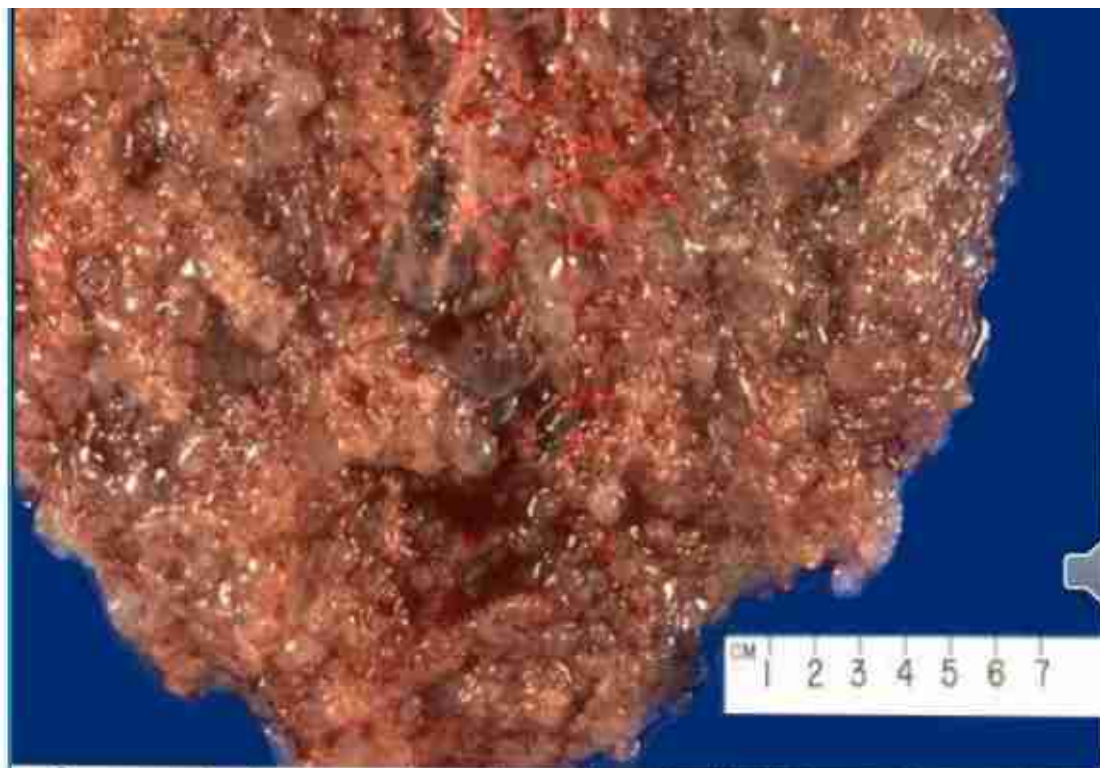


- High incidence in teenagers and older women
- Appears in 4th-5th month of gestation
- Increased uterine size, vaginal bleeding, and toxemic symptoms
- History of passage of grape like mass per vaginum
- M. imp test: serial determination of beta-hCG which is highly elevated in serum n urine compared to normal

Complete mole



- Gross: enlarged uterus filled with grape like vesicles of upto 3 cm diameter containing clear fluid, rarely macerated fetus maybe seen
- Microscopy:
 - i. large round edematous acellular villi due to hydropic degeneration forming central cistern
 - ii. Decreased villous stromal vascularity
 - iii. Trophoblastic proliferation in masses and sheets circumferentially around the villi

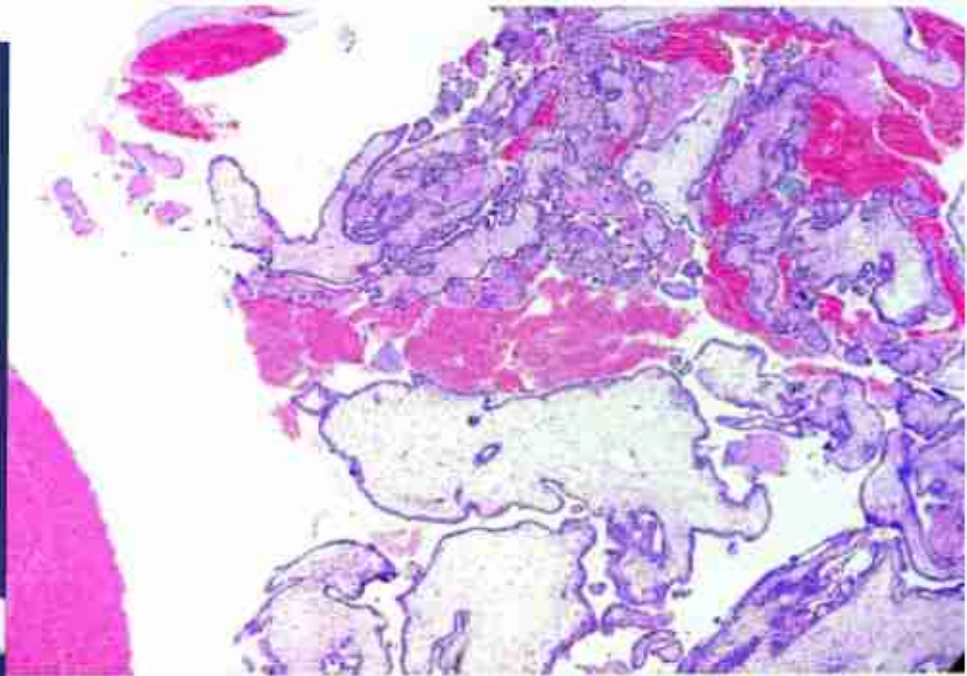
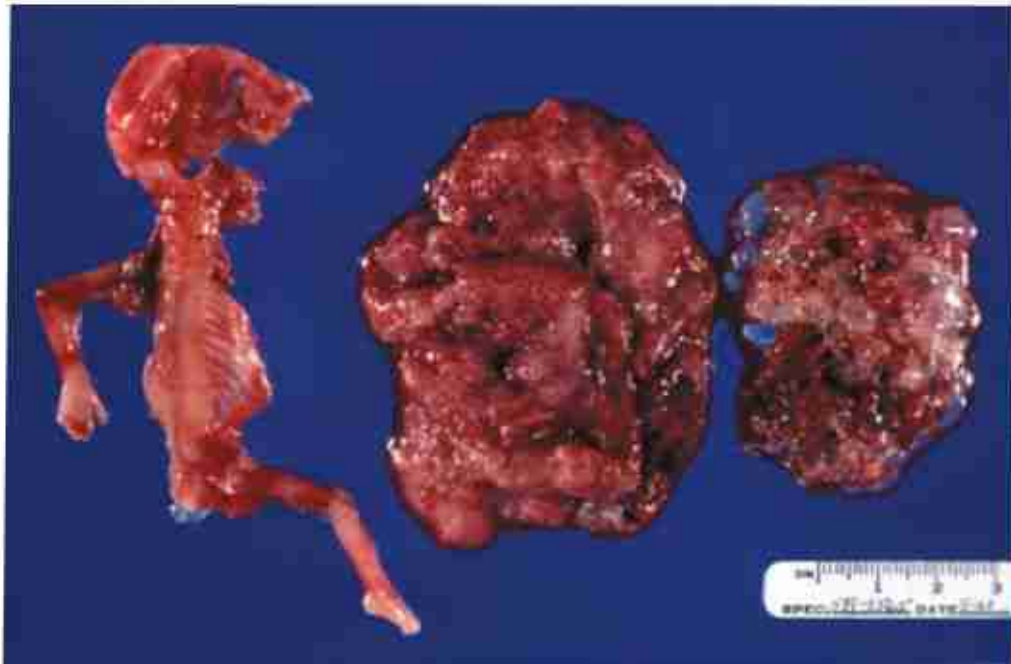


Complete vesicular (hydatidiform) mole

Partial mole

Gross: uterus smaller than expected, contains some cystic cilli, part of placenta is normal, fetus with malformations maybe seen

Microscopy: some villi are edematous, others normal or fibrotic, focal and mild trophoblastic proliferation



Low magnification image showing two population villi: small fibrotic villi and edematous hydropic villi.

Invasive mole(Chorioadenoma destruens)

Gross: invasion of molar tissue into uterine wall causing hemorrhage, rarely invades blood vessel to reach lung

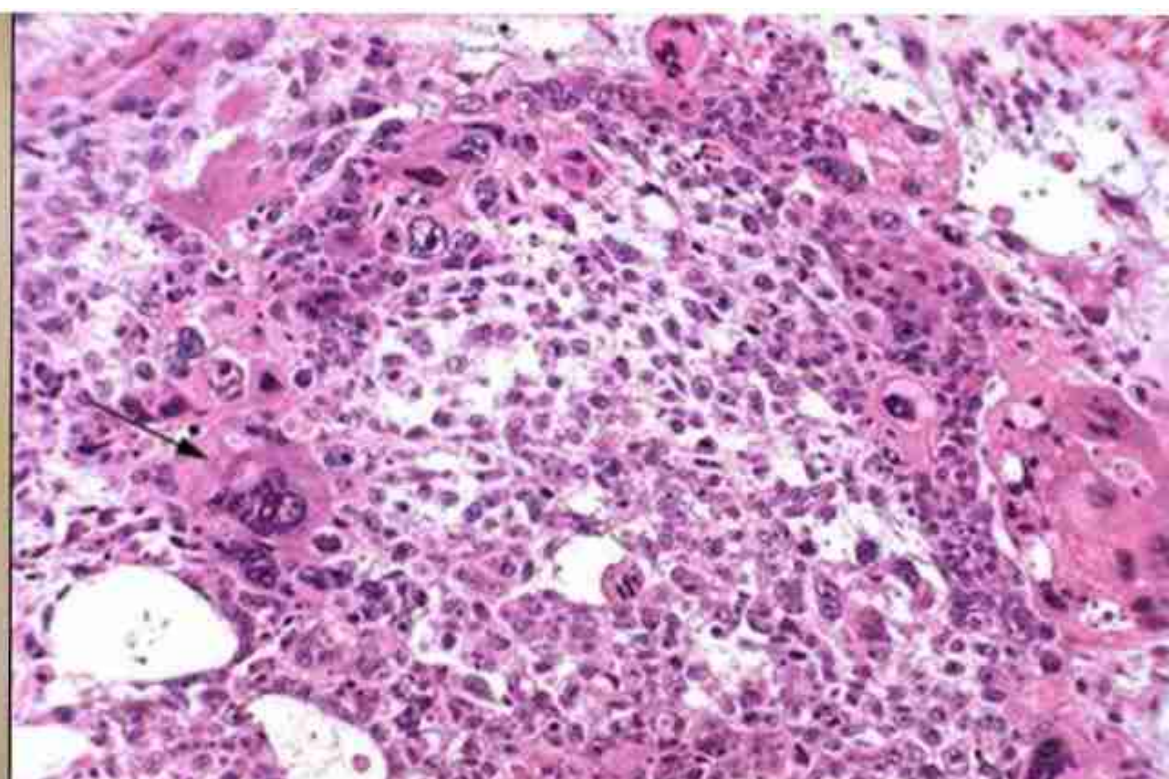
Microscopy: benign, identical to classic mole, but causes hemorrhage, a/w persistent beta-hCG elevation

Choriocarcinoma

- Highly malignant, widely metastasizing
- 50% follow hydatidiform mole & 20% follow normal pregnancy, 25% follow abortion & 5% follow ectopic pregnancy.
- C/f: Vaginal bleed following normal or abnormal pregnancy, occasionally metastasis to brain and lung
- Diagnosis confirmed by persistent elevation of beta-hCG in plasma and urine
- Spread: To lung, vagina, brain, liver & kidneys
- Death is due to fatal hemorrhage or pulmonary insufficiency

- Gross: Large, soft, yellowish white & fleshy with areas of hemorrhage and necrosis.
- Microscopy:
 - Absent normal villi
 - Mass and columns of highly anaplastic and bizarre cytotrophoblasts, intermediate trophoblasts & syncytiotrophoblasts invading the myometrium, blood vessels, lymphatics
 - Hemorrhage and necrosis





FEATURE	COMPLETE MOLE	PARTIAL MOLE	CHORIOCARCINOMA
1. Karyotype	46,XX or rarely 46,XY	Triploid i.e. 69,XXY or 69,XXX	46,XY or variable
2. Clinical findings			
i) Diagnosis	Mole	Missed abortion	Abortion; molar, ectopic or normal pregnancy
ii) Vaginal bleeding	Marked	Mild	Marked, abnormal
iii) Uterus size	Large	Small	Generally not bulky
3. hCG levels			
i) Serum hCG	High	Low	Persistently high
ii) hCG in tissues	Marked	Mild	Localised in syncytiotrophoblast only
4. Embryo	Not present	May be present	Not present
5. Gross appearance			
i) Vesicles	Large and regular	Smaller and irregular	No vesicles
ii) Villi	Present	Present	Always absent
6. Microscopy			
i) Villous size	Uniform	Variable	None present
ii) Hydropic villi	All	Some	None
iii) Trophoblastic proliferation	Circumferential, all three (cytotrophoblast, intermediate trophoblast and syncytiotrophoblast)	Focal, syncytiotrophoblast only	Cytotrophoblast, intermediate cytotrophoblast and syncytiotrophoblast, bizarre forms
iv) Atypia	Minimal	Minimal	Marked
v) Blood vessels	Generally absent	Present	Lack of new blood vessels formation. Trophoblast-lined pseudovascular channels present
vi) Necrosis	Absent	Generally absent	Present
7. Persistence after initial therapy	20%	7%	May metastasise rapidly if not treated
8. Behaviour	2% may develop choriocarcinoma	Choriocarcinoma almost never develops	Survival rate with chemotherapy 70%

(hCG, human chorionic gonadotropin)

Assignment

- Classification of GTDs
- Differentiate complete mole, partial mole and choriocarcinoma with salient features