FEMALE GENITAL SYSTEM:-

INVASIVE CERVICAL CANCER

Pt C/o - post-coital bleeding
foul smelling white discharge
bleeding PV.
postmenopausal bleeding

O/E - uteroproliferative growth which bleeds on touch.

Age: 40 - 60 years

Etiopathogenesis:-

I Risk factors - 1) Women having early age of sexual activity
2) Women having multiple sexual partners
3) Women with persistent HPV infection with high risk types of oncogenic viruses.
4) High risk male sexual partners - promiscous male with multiple sexual partner.

II. HPV is strongly implicated in cervical cancer.

- High risk types - 16 & 18
- Low risk - 6 & 11 - condylomas

→ integrate into the host cell genome
↓
upon integrate, protein product
HPV - 16 & 18, E7 & E6 proteins → inactivate RB → ⊖ cyclin dependent kinase (I) (p21 & p27) → uncontrolled cellular proliferation
respectively → inactivate p53 & RB-1 gene

Morphology

Gross :- 3 pattern - fungating ulcerating, infiltrating → cauliflower like growth.
- arise from SCJ.

Histologically -

1) Epidermoid (squamous cell carcinoma) (70%)
⇒ moderately diff. large cell type (70%)
⇒ well diff keratinising epidermoid Ca (25%)
⇒ small cell undiff Ca (neuroendocrine or oat cell) (5%)

2) Adenoca - 20-25%.
well diff means secreting adenoca. or clear cell type containing glycogen but no mucin.

⊛ Staging

- Stage 0: Ca in situ
- Stage I: Ca strictly confined to cervix
- IA - diagnosed only by microscopy.
  IA1 - less than 3mm in depth & 7mm in hz axis.
  IA2 - 3-5mm dept & 7mm or less hz
- IB - Clinical lesion confined to cervix
  ↳ 1 < 4cm
  2 > 4cm

Stage II: Ca beyond cervix but has not extended to pelvic wall.
- no obvious parametrial involvement
- obvious " "

Stage III - Ca has extended to the pelvic wall.

A - no extension to pelvic wall

B - extension to pelvic wall

Stage IV - Ca extends beyond the true pelvis

A - growth to adjacent organs

B - spread to distant organs

* Screening method - Pap Smear
+ Naked eye visual inspection of the uterine cervix with either 5% acetic acid (VIA) or with lugol's iodine (VILI) under intense illumination.

— x — x — x — x

major risk factors

Early age at coitus

multiple sexual partners

high risk male sex partner

↓

HPV inf.

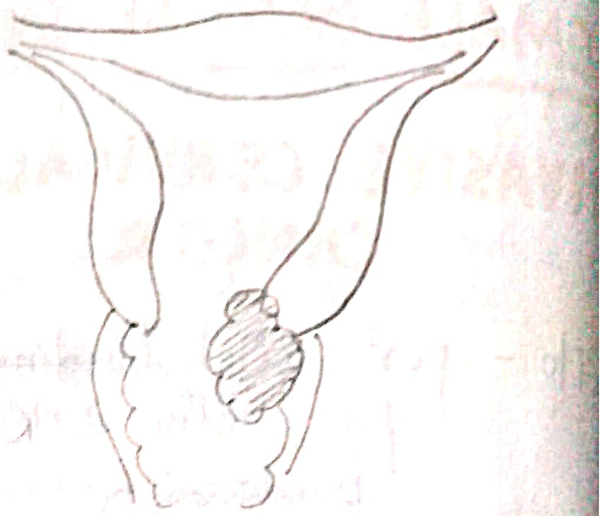
↓

Epithelial Δ in basal cells of SE

low risk 6, 11 → Episomal inf → Condyloma acuminata

high risk 16, 18, 31, 33, 52, 58 → Integration → CIN-1 / L-SIL → persistence → CIN-2,3 / HSIL → ICC

persistence → inactivation of P53, RB



GESTATIONAL TROPHOBLASTIC DS

Group of conditions resulting from abnormal growth of trophoblasts which are cells that normally develop into placenta during pregnancy.

The 1° forms of GTD include both hyatidiform mole (both complete & partial) & gestational choriocarcinoma.

A) HYATIDIFORM MOLE

i) Enlarged, oedematous & hydropic change of chorionic villi or cystic Δ of chorionic villi.

(ii) variable trophoblastic proliferation.

Types :- 1) Non - Invasive → complete, partial

2) Invasive

Complete hydatidiform mole:-

whole placenta is neoplastic w/o any fetal parts and are diploid.

→ fertilization of egg that has lost its chromosomes either by one or 2 sperms.

[A - 90%] [B - 10%]

empty ovum — Empty ovum

23X — 23X/Y — 23X/Y

duplication of sperm chromosome ↓ 46XX ↓ androgenesis complete mole (homozygous)

46XX — 46XY Complete mole (heterozygous)

⇒ genetic :- completely paternal

⇒ 2% → choriocarcinoma

Partial hydatidiform mole:-

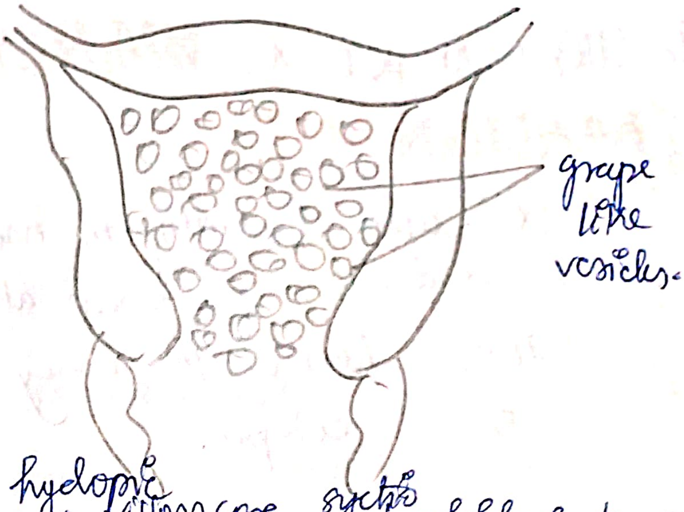
Part of placenta - neoplastic, fetal parts are present & triploid (69ch)

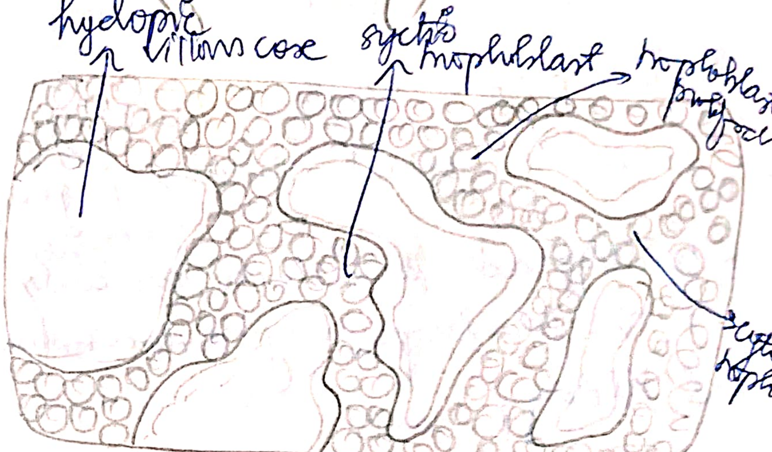
23X/Y + 23X/Y dispermy

ovum

69XXX — 69 XXY — 69XYY

- triploid
- 2 sets of paternal chromosome
- fetal tissue present





Morphology -

Gross: grape like vesicle → clear watery fluid

Micro:- ① Large, round, oedematous acellular villi due to hydropic degeneration

② ↓ vascularity of villous stroma

③ trophoblastic proliferation in the form of masses & sheets of both cyto & syncytio

Partial - gross - cystic villi while part of placenta - normal. Malformed fetus present.

Micro:- some edematous villi others normal.

Invasive:- gross - invasion into uterine wall - hemorrhage persistent elevation of βHCG.

TUMORS OF UTERINE CORPUS

(B) CHORIOCARCINOMA: HIGHLY MALIGNANT

↳ 50% after hydatidiform mole
25% after spontaneous abortion
20% - normal pregnancy
5% - ectopic

most imp clo - vaginal bleeding following normal labnormal pregnancy

- widespread metastases are early & V in lungs, vagina, brain, liver & kidney.

Gross :- hemorrhagic, soft, fleshy mass.

Tumour - blood clot

Microscopically - i) Absence of identifiable villi
ii) sheets of highly anaplastic & bizarre cells & syncytiotrophoblastic cells
iii) invariable presence of hemorrhage & necrosis

Gestational CC - responds well to therapy
NHCC - poor prognosis

Death - fatal hemorrhage in CNS or pulmonary insufficiency in lungs

★ EPITHELIAL TUMORS AND PRECURSORS

- PRECURSORS:
  → Hyperplasia w/o atypia
  → Atypical hyperplasia / endometrioid intraepithelial neoplasia

★ ENDOMETRIAL CARCINOMA:-

- Endometrioid Ca (type I)
- Serous Ca (type II)
- Neuroendocrine tumor
  ↳ low grade NET - carcinoid
  ↳ high grade NET - Small cell, Large cell

★ MESENCHYMAL TUMORS

Benign - leiomyoma
Malignant - leiomyosarcoma

★ OTHERS.

LEIOMYOMAS -

- fibroids.
  Mc uterine tumor of smooth muscle origin.
- Symptomatic cases :- AUB, pain, symptoms due to compression & infertility.
- Aetiology - stimulus - oestrogen, human growth hormone
  sterility