

FEMALE REPRODUCTIVE PATHOLOGY

CERVIX

CERVICITIS → acute and chronic - result from microorganism infections

ACUTE - red, swollen w/ pus and PMN's predominate
erosions + Mononuclear cells

Chronic - more common - hyperemic w/ epithelial

ENDOCERVICAL POLYP → Most common cervical growth, excisable, rarely becomes cancer.

CERVICAL INTRAEPITHELIAL NEOPLASIA (CIN) → a Spectrum of Intraepithelial change from minimal

atypia to more abnormalities to Invasive Squamous Cell Carcinoma.

CIN-1 = Mild dysplasia ^{basal 1/3} CIN-2 = Moderate dysplasia ^{lower + middle 1/3} CIN-3 = severe dysplasia or Carcinoma-in-situ ^{2/3 of epithelium dysplastic or all in situ}

- Multiple Sex partners, is HPV-associated so it is an STD. (mainly HPV 16 + 18)

MICROINVASIVE SCC → Early stage (IA) of cervical cancer - invades Stroma (less than 3mm)

- No Vascular Invasion or lymph metastases

INVASIVE SCC → Tumor generally evolves from CIN. This cancer spreads via lymph not blood

- Tumor can compress & Ureter = pee + kidney problems (50% die of renal failure)
- Early complaint = Vaginal Bleeding

UTERUS

ENDOMETRIOSIS → you have benign endometrial glands + stroma outside of uterus (usually in ovaries)

- THEORIES: Menstruated endometrium is implanted ~~via~~ → transported up fallopian.

- Hematogenous spread of endometrium to lungs/kidneys
- peritoneum metaplasia

- Early Foci = mulberry Nodules - red/bluish nodules on surface.

- Menstrual cycle bleeding leads to brown discoloration, repeated hemorrhage in ovaries creates

Chocolate Cysts

- Common Complaint = dysmenorrhea or Infertility

LEIOMYOMA / FIBROID = leiomyoma of the uterus

- Benign Smooth muscle tumor, Common (75% of 30+). Well demarcated firm pale gray masses w/out encapsulation.
- Can get >30cm diameter, can be bladder/bowel obstructive + cause bleeding.
- Grow slow but fast when pregnant

FALLOPIAN TUBE

SALPINGITIS - can result from ascending infections - gonorrhoea, E. coli, chlamydia

ACUTE → PMNs infiltrate, marked edema, can seal up + fill w/ pus

CHRONIC → mechanical obstruction = infertility or ectopic pregnancy

Ectopic Pregnancy → any implantation outside endometrium (95% fallopian)

- Tubal wall ruptures by 12th week = l. ft threatening from severe hemorrhage

OVARY

TERATOMA → a germ-cell originated tumor that differentiates into somatic structures. (Benign)

- At least 2 (often all 3) embryonic layers represented

Mature teratoma (dermoid cyst) - 90% contain skin, sebaceous glands, Hair / 1/2 have smooth muscle, sweat glands, bone, cartilage, teeth, respiratory tract epithelium.

- Can undergo malignant transformation developing into SCC's

Immature Teratoma → all 3 germ layers represented but the tissues are embryonal

- predominantly a solid tumor

GESTATIONAL TROPHOBLASTIC DISEASE - all disorders w/ abnormal proliferation/maturation of trophoblasts + neoplasms

COMPLETE HYDATIDIFORM MOLE → a Placenta w/ swollen chorionic villi resembling

Bunches of Grapes w/ varying degrees of trophoblastic proliferation

- No Embryo - fertilized "empty ovum" - lacks functional DNA.
- Have Homozygous paternal chromosomes (46 XX from 23x duplicating)
- 11-25 weeks - abnormal bleeding, elevated hCG,
- Complications = hemorrhage, DIC, trophoblastic embolism, * Choriocarcinoma (malignant transformation)

PARTIAL HYDATIDIFORM MOLE → Fetus present but dies at 10 weeks + mole aborted

- Do Not evolve into choriocarcinoma

INVASIVE HYDATIDIFORM MOLE → The villous trophoblast invades underlying Myometrium

- can spread (lungs) but don't leave the blood vessels unlike choriocarcinoma.

Choriocarcinoma - a Malignant Tumor derived from the TROPHOBLAST

- Invades through venous sys in myometrium, metastasizes to lungs, brain, GI, Liver.
- Initial sign is abnormal uterine bleeding

BREAST

FIBROCYSTIC CHANGE : Non-proliferative → Sclerosing → Proliferative (no atypia) → Proliferative (w/ atypia)

↳ ① Cystic dilatation of terminal ducts ② ↑ Fibrous stroma ③ Proliferation of duct epithelium

NON-PROLIFERATIVE F.C. → No ductal proliferation, ↑ in dense fibrous stroma, some dilatation

- Large cysts w/ fluid giving them blue color

Proliferative F.C. → ↑ in # of duct cells (ductal epithelial hyperplasia)

Sclerosing Adenosis → Proliferation of small ducts + myoepithelial cells in terminal lobular region
- also has associated Fibrosis → (Sclerosing)

Adenosis

FIBROADENOMA → Tumor w/ epithelial + Stromal elements from terminal duct LOBULAR UNIT

- * Most Common Benign tumor of the Breast.
- enlarge during pregnancy, stop growing post-menopause
- Round Rubbery, freely movable, sharply demarcated

CARCINOMA OF THE BREAST → #1 Cancer in Women *2 killer (after lung)

- Uncommon before 35, Risk ↑ - Family History, more in developed countries, previous boobie cancer
- almost all are adenocarcinomas (lobular unit)
- INVASIVE DUCTAL CARCINOMA → most common boobie cancer → Malignant invasion causes fibroblast proliferation creating a palpable mass - hard/fixed
- INVASIVE LOBLAR CARCINOMA - 2nd most common → a firm mass or diffuse indurated Area
 - INDIAN FILING → strands of malignant cells

Metastasis → Lymph spread → axillary internal mammary, supraclavicular

- can also spread to distant sites - lung liver etc.

STAGE - most important Prognostic factor → localized/small → larger/lymph spread → large/distant spread
worsening prognosis →

GRADE - also useful - highly irregular nuclei w/ many nucleoli = poor prognosis.

PROGNOSTIC FACTORS - BAD = lymph/vascular invasion, Dermal lymph invasion, if cancer doesn't have estrogen/progesterone receptors, if cancer has increased proliferative capacity (judged by mitotic index + # of cells in S phase + staining of nuclear proteins), aneuploidy (weird chromosome #'s)

Better → if the cells have estrogen/prog receptors