Q9 **Endometriosis:** __/__/____

→ Presence of ectopic benign endometrial gland And stroma outside of the uterus.

Types:
- → superficial peritoneal
- → ovarian endometriosis
- → deep infiltrating endometriosis.

Sites: → Ovaries >, Pouch of Douglas, Fallopian tube, Utrine ligament, Periumbilical tissue. Laparotomy scars.

PATHOGENESIS: two main sources
- → from the uterine endometrium
- → from outside the uterus.

**Main theories**

① Regurgitation ~~tissue~~ theory: due to Retrograde menstration
② Benign metastasis theory: spread through blood & lymph
③ Metaplastic theory: embryonic developed coelomic epithelium → give Rise to Mullerian duct → develop endometrium.

∞ Metaplasia of coelomic epithelium.

__/__/____

(4) Extrauterine stem theory: endometrial tissue is retrograde.

Character of endometrial tissue that undergo endometriosis.

⇒ ↑ level of proinflammatory And Angiogenic factor
Eg: PGs, MMP (Matrix Metallopeptidase)

⇒ Secretion of Aromatase by endometriotic stromal cell
↳ ↑ local estrogen production from Androgens.

∴ these two factor ↑ survival of endometrial tissue in foreign location.

t/t → COX2 Inhibitor.

MORPHOLOGY:

⇒ lesions bleed periodically
⇒ cystic nodules with Red - blue to yellow brown
⇒ Endometriosis of ovary → chocolate cyst
↓
ovaries may be distorted by cystic space filled with dark brown fluid.
Repeated hemorrhage from deep cysts contains inspissated chocolate cysts.

__/__/____

MICROSCOPY:

shows both endometrial glands and stroma with or without hemosiderin-laden macrophages.

C/F

⇒ dysmenorrhea
⇒ pelvic pain
⇒ dyspareunia
⇒ Irregular disturbance
⇒ dysuria.

Consequence → Infertility in 30-40%.

## Endometrial hyperplasia:

- Abnormal proliferation of endometrial gland Relative to stroma → ↑ thickness of the endometrium.

- Imp cause of Abnormal uterine bleeding
- Precursor of endometrial carcinoma. (soil for it)

## Pathogenesis:

⇒ ↑ exposure of estrogen → hyperplasia.

Source → endogenous: Obesity
Menopause
cortical stromal hyperplasia
Chronic anovulation.

Exogenous: Administration of estrogenic substance

Mutation PTEN gene

__/__/____

## CLASSIFICATION:

① Endometrial hyperplasia without Atypia
② Endometrial atypical hyperplasia.

I **without Atypia** progress to Adenocarcinoma
→ proliferation of endometrial gland of irregular size and shape without significant cytological Atypia.

### MORPHOLOGY:

→ Highly thickened – with spongy cysts.

### MICRO

→ 3 criteria:

- ↑ endometrial gland to stroma Ratio
- cystically dilated endometrial gland
  - Irregular distribution of gland
  - Glands lined by simple epithelium.
- Uniform distribution of nuclear factor:
  - ↳ High level of estrogen cause Round nuclei

II **with Atypia** progress to endometrial carcinoma.

__/__/__

## ENDOMETRIAL CARCINOMA:

↑ number of endometrial gland compared with the stroma.

⇒ occur as expansion of mutated gland.

⇒ genetic mutation of .CTNB, PTEN, KRAS.

MORHOLOGY:

⇒ focal thickening Resembling a polyp.

MICROSCOPY:

⇒ Crowded Aggregate of cytologically altered tubular or branching gland.

show both Architectural And cytological Alteration.

⇒ Gland to stroma Ratio ↑ ⇒ back to back Arrangement

⇒ nuclear Atypia ⇒ Alteration in nuclear size, shape of texture.

## PATHOGENESIS: