



GENITOURINARY SYSTEM

SUBJECT : Pathology

LEC NO. : 13-part 1 - Uterus diseases

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GENITOURINARY SYSTEM

يوظفهم العافية وريد ، هاي المحاضرة حاورنحها بخط الأيد بسبب هنيق الوقت فاعذروني ♥

-
- ملاحظات خاصة
 - أضفنا الأضافات المكتوبة
 - قرأته المكتوبة
 - ركزت عليه المكتوبة

Puerperal Sepsis

- حمى النفاس ، و النفاس هو الفترة الي بعد الولادة ، ومدتها 40 يوم
له مرحلة رجوع الرحم لحجمه الطبيعي

وال Sepsis هو ← suppurative inflammation

* So it's an acute suppurative inflammation of uterus following labour or abortion.

Note any fever within 10 days after labour or abortion is considered puerperal sepsis until proved other wise.

* The organism → pyogenic bacteria, E.coli, Strept. hemo.

* Route of infection

- endogenous infection ← { vulva, vagina. } ← blood born infection.
- exogenous infection ← { contaminated } ← gloves, instruments.

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Disease of Uterus

1-Purperal sepsis حمى النفاس

*acute suppurative inflammation of uterus following labour or abortion

مهمة

*Any fever during 2 weeks post labour or abortion consider Purperal sepsis till proved otherwise

*Caused by pyogenic bacteria E. Coli or Streptococcus (endogenous route of infection or exogenous)

*Complication:

1 - Toxemia

2-Septicemia

3-Peritonitis

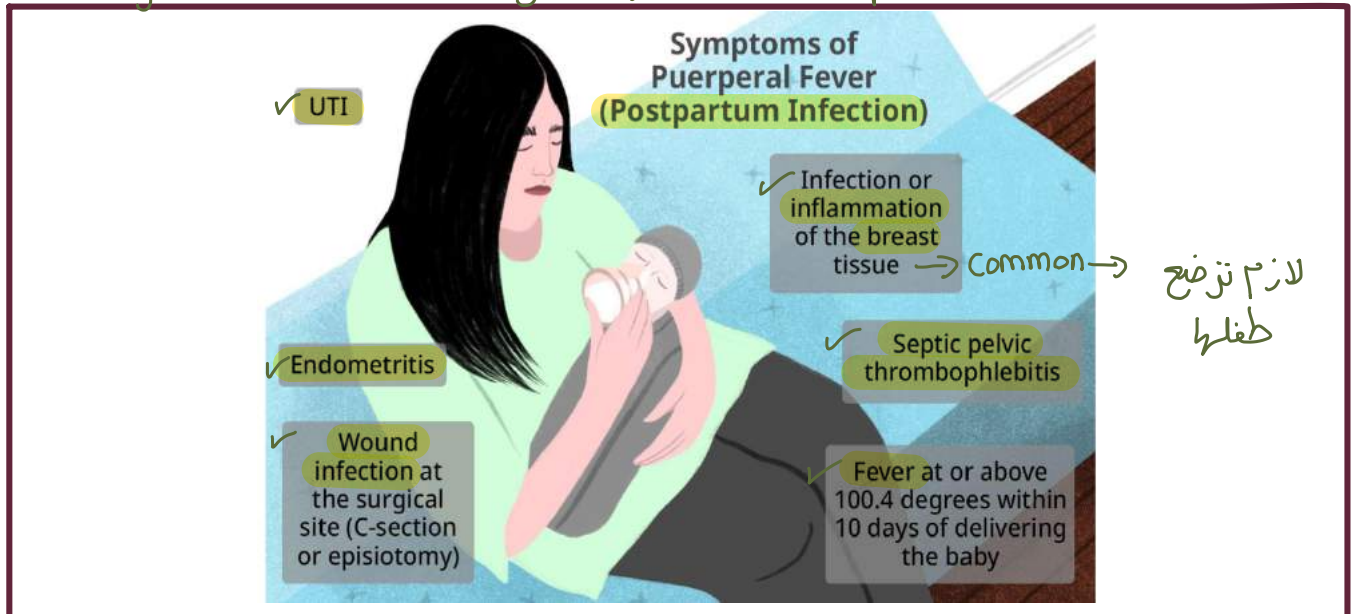
4- Pyemia

5- Septic Thrombophlebitis \rightarrow embolism + thrombosis in blood vessels

* It's a life threatening condition in endometrium.

* Exogenous route \Rightarrow contaminated tools.

* Endogenous route \Rightarrow through vagina for example.



- هي Severe وبعطي المريفن IV antibiotics.

- وينصح المرأة الحامل تفضل تنظف المنطقة بمبي وملح طنج UTI.

- و برضه ضروري ترضع البسي والا ار Breast حيحصر و يفسر فيه inflammation.

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2-ENDOMETRITIS

❑ Inflammation of the endometrium.

•Causes:

1-Pelvic inflammatory disease (PID)

2-Miscarriage or delivery

3-Intrauterine device (IUCD). → اللولب

Clinically: pelvic pain

Fever, abdominal pain, menstrual abnormalities, infertility and ectopic pregnancy due to damage to the fallopian tubes.

* PID ممكن يكون عندها abscess في مكان في Pelvic .
و بتكون تشكي من Chronic pelvic pain .

* حصير معها ectopic pregnancy بسبب التغييرات الي حتمس عالم بسبب inflammation في fallopian-tube .
البويضات ما تحتحرك باتجاه الرحم بسبب انه inflammation ممكن ياتر على الاهداب في fallopian-tube .

❖ Acute or Chronic

❖ **Acute**: due to N. gonorrhoeae or C. trachomatis with predominant neutrophilic cell response

❖ **Chronic endometritis**, frequently due to chlamydial & Mycoplasma, with predominant lympho-plasmacytic cell response; the diagnosis of which requires the presence of plasma cells in the endometrium..
↑ مهم جدا

❖ Occasionally TB endometritis may present, frequently with TB salpingitis & peritonitis

❖ Rx: ¹removal of cause, ²antibiotics, ³D&C.

* مهم نقارن بين Chronic و acute من حيث السبب و microscopic feature

* عمليات التنظير أو Dand C سه بنوسع ال Cervix سه بندخل جهاز التنظير سه بعدها بنبدأ بالتنظير .

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3-ADENOMYOSIS

- Is the **growth of the basal layer of the endometrium down into the myometrium.**
- **Endometrial stroma, glands, or both embedded in myometrium.**
- **Thick uterine wall, enlarged uterus. ****
- Derived from **stratum basalis**, **no cyclical bleeding.**
- Marked adenomyosis may produce premenstrual menorrhagia, dysmenorrhea (painful menses), (due to enlarged uterus, uterine contractions are exaggerated) & pelvic pain



BACKGROUND

- * ECTOPIC ENDOMETRIAL TISSUE FOUND WITHIN MYOMETRIUM
- ↳ HYPERPLASIA of MYOMETRIUM
- * COMMON AMONG INDIVIDUALS WHO HAVE GIVEN BIRTH

SYMPTOMS

- * MENORRHAGIA
- * DYSMENORRHEA
- * DYSpareunia
- * CHRONIC PELVIC PAIN
- * UTERINE ENLARGEMENT & DISCOMFORT

DIAGNOSIS

- * PHYSICAL EXAM
- * ULTRASOUND
- * MRI
- DISTINGUISH BETWEEN ADENOMYOSIS & LEIOMYOMAS

TYPES

- DIFFUSE SCATTERED
- FOCAL SPECIFIC AREA

Labels in diagram: ENDOMETRIAL TISSUE, MYOMETRIUM

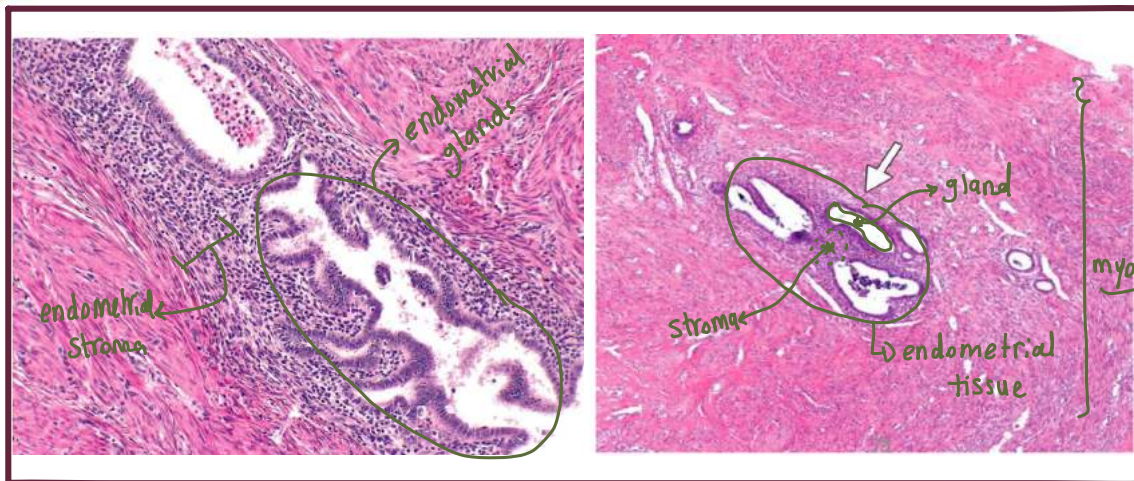
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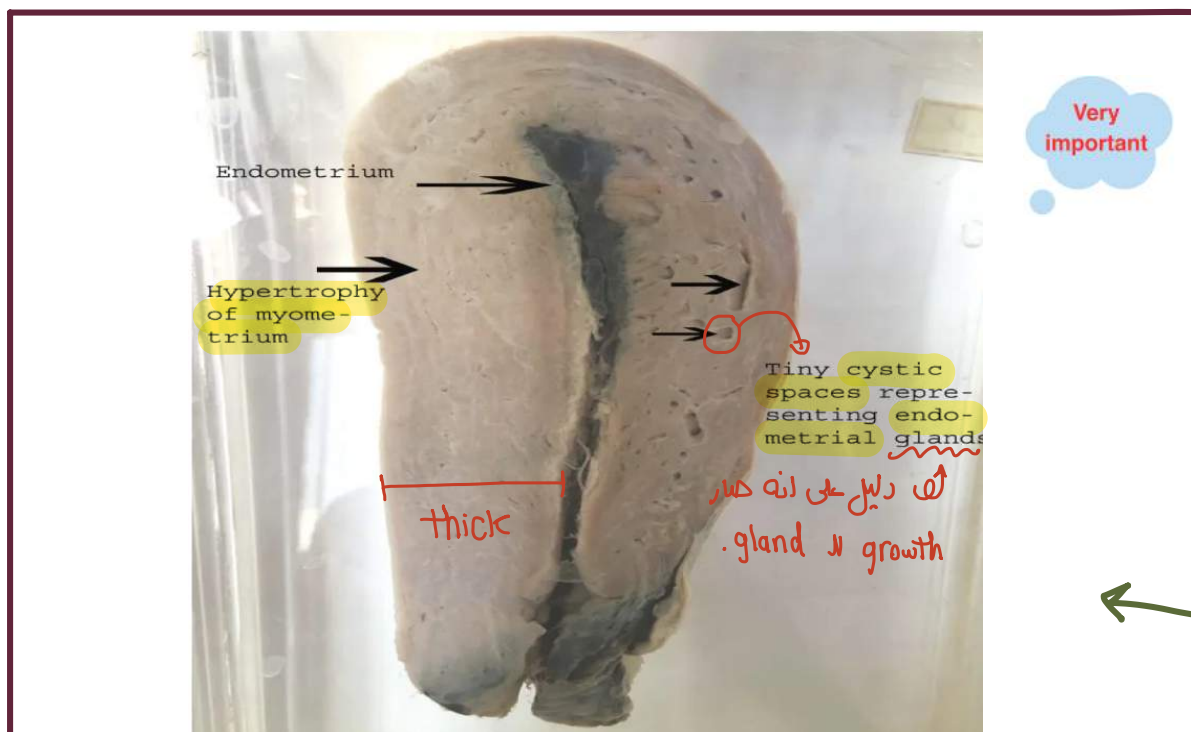
GENITOURINARY SYSTEM

Very important



* الصورة اجت بسنة من السنوات ، وهي Spot diagnosis

a 40 year old woman, presented with dysmenorrhea, menorrhagia, pelvic pain, what's your diagnose?



Very important

it leads to hypertrophy of myometrium
 ← بسيا او uterous حيض بحاول يتقلص

الصورة جاية
بالامتحان

وقل رب زدني علماً



Endometriosis

بطانة الرحم المهاجرة

* Endometrial gland and stroma outside of uterine endometrial lining

↳ most likely due to → retrograde menstruation with implantation at an ectopic site.

* Present as dysmenorrhea (ألم أثناء الدورة) + pelvic pain + may cause infertility

↳ normal cycle.

* Most common site → ovary → Chocolate cyst

* Other sites of involvement

↳ uterine ligaments → pelvic pain

↳ Pouch of Douglas → pain with defecation

↳ Bladder wall → pain with urination

↳ Bowel serosa → abdominal pain and adhesions

↳ Fallopian tube mucosa → Scarring increases risk factor for ectopic tubal pregnancy.

-implants appear as yellow-brown "gun-powder" nodules.

* involvement of the uterine myometrium → called adenomyosis ^{در سنه حون}

* There's an increased risk of carcinoma at the site of endometriosis, especially in the ovary.



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4-ENDOMETRIOSIS

- Is the presence of endometrial glands and stroma **outside the uterus.**
- It occurs in **10% of women in their reproductive years & in 50% of women with infertility**
- **Dysmenorrhea, and pelvic pain, pelvic mass filled with blood (chocolate cyst).**
↳ hemosidrin
- Multifocal, multiple tissues in pelvis (ovaries, pouch of Douglas, uterine ligaments, tubes, and rectovaginal septum).
- Sometimes distant sites e.g. **umbilicus, lymph nodes, lungs,** etc



"Chocolate" cyst in an ovary

* Cyclic bleeding على عكس ال adenomyosis .
* ال Chocolate cyst عبارة عن hemosidrin بسبب كثرة ال bleeding .

Pathogenesis

- Three theories:
 - **regurgitation theory.** (most accepted).
Menstrual backflow through tubes and implantation..
 - **metaplastic theory.** Endometrial differentiation of coelomic epithelium.
 - **vascular or lymphatic dissemination theory.**
May explain extrapelvic or intranodal implants.

* هذول نظريات لا etiology تبعت المرض .

↳ ال اذول رجوع الدم ← وهي مقنعة لكل شي من صفت female genital sys.

↳ النظرية الثالثة تنفس حوثوا باد lung او Lymph nodes او nose



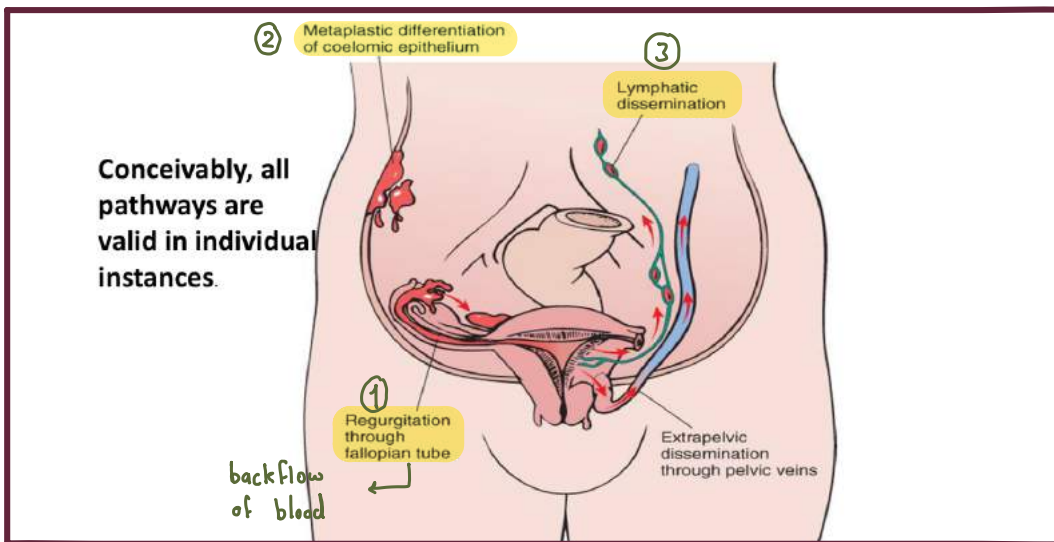
حسب المريضة عندها نزيف

بالأنف مع كل دورة شهرية

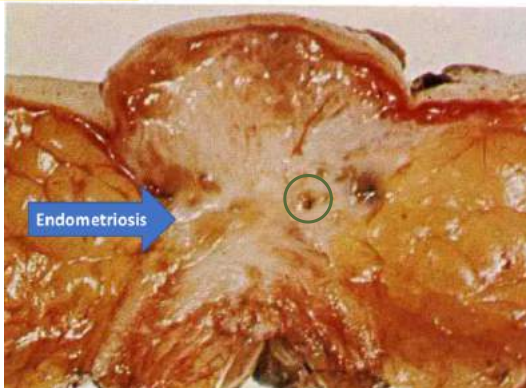
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Endometriosis: umbilicus. Accidental implantation of endometrial tissue during previous caesarean section in the abdominal wound caused the formation of a raised greyish-white mass of endometriotic tissue mass in the umbilicus within which there are several small blood-filled cysts.



* Small blood-filled cyst \Rightarrow endometrial glands + stroma

ENDOMETRIOSIS: CLINICAL MANIFESTATIONS

Infertility

Dysmenorrhea
Painful Periods

Dyspareunia
Painful Sex

Dyschezia
Painful Bowel Movements

Dysuria
Painful Urination

Endometriosis

Fallopian tube

Ovary

Endometrium

Vagina

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Grossly

In contrast to adenomyosis, endometriosis almost always contains functioning endometrium, which undergoes cyclic bleeding.

*Because blood collects in these abnormal foci, they usually appear grossly as red-blue to yellow-brown nodules or implants. ↳ due to implantation of functional endometrium. contains functionalis endometrium, so undergoes cyclic bleeding.

*In the affected ovaries, large blood-filled cysts may form chocolate cysts as the blood ages. Seepage (leakage) & organization of the blood leads to widespread fibrosis.

*Consequences: fibrosis, sealing of tubal fimbriated ends, and distortion of the ovaries, and infertility

*In all sites, the histologic diagnosis of endometriosis depends on finding 2 of the following 3 features within the lesions:

- (1) endometrial gland
- (2) endometrial stroma (Positive CD10 immuno-stain)
- (3) hemosiderin pigment.

Clinical manifestations of endometriosis depend on its site:

*Endometriosis is a common cause of dysmenorrhea (painful menses) & pelvic pain; both of which are present in almost all cases of endometriosis as a result of intrapelvic bleeding & peri-uterine adhesions.

*Extensive scarring of the oviducts & ovaries produces lower abdominal discomfort & eventually causes sterility.

*Pain on defecation reflects rectal wall involvement, &

*Dyspareunia (painful intercourse) & dysuria reflect involvement of the uterine & bladder serosa, respectively.

*Ovarian endometriosis may present as a pelvic mass (chocolate cyst).