WOMEN'S HEALTH

- Cystitis
- Vaginal discharge
- Primary (spasmodic)dysmenorrhea.
- Premenstrual syndrome.

- Literary is an inflammation of bladder,
- but practically inflammation of urethra and bladder.
- **Incidence:**
- Majority of cases are women between the age of 15-34 years.
- Uncommon in men <50 years because of
- ------ longer urethra.

--------- antibacterial properties of fluid from prostate.

More common in men > 50 years because of prostate enlargement.

Factors which increase risk of cystitis are:

1- young women.

2- frequent sexual activity (honey moon cystitis).

3- DM.

4- pregnancy.

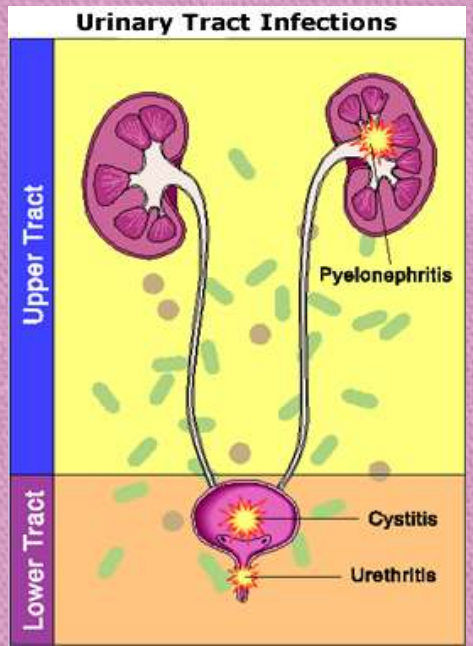
Bowel flora ???

Clinical features

Symptoms starts suddenly: dysuria, frequency, urgency, nocturia, hematuria, (view with caution because it might indicate stones or tumor), passing small amounts of urine.

Conditions to eliminate

1- pyelonephritis (upper UTI):Fever, loin pain, chills, NV. Should be referred to confirm diagnosis and exclude pelvic inflammatory diseases and insure treatment (7day coarse of ciprofloxacin).



- **2- vaginitis:**
- Dysuria, nocturia, vaginal discharge.
- **3- sexually transmitted diseases :**
- *Chlamydia trachomatis*, *Niesseria gonorrhea*
- symptoms are gradual in onset and lasts for longer duration + pyuria (pus in urine).
- **4- medicine induced:**
- NSAID (tiaprofenic acid), allopuranol, danazol, and cyclophosphamide.
- **5- oestrogen defciency:**
- Occur in postmenopausal women due to reduction in endometrial lining which becomes more prone for irritation or trauma (for recurrent symptoms, topical estrogen is used)
- **6- patients at risk for complications (DM, Preg., immunocompromized)** these patients cystitis may develop to upper UTI.
- **7- children (structural urinary abnormality).**
- **8- men.**

Treatment of cystitis:

- Alkalanizing agents (sodium citrate and sodium bicarbonate)
- These will return pH of urine to normal and reduce symptoms of dysuria.
- 2 days treatment present as sachet , dissolvable tab.
- Dose 1 sachet tid, few SE, no DI, safe for preg.

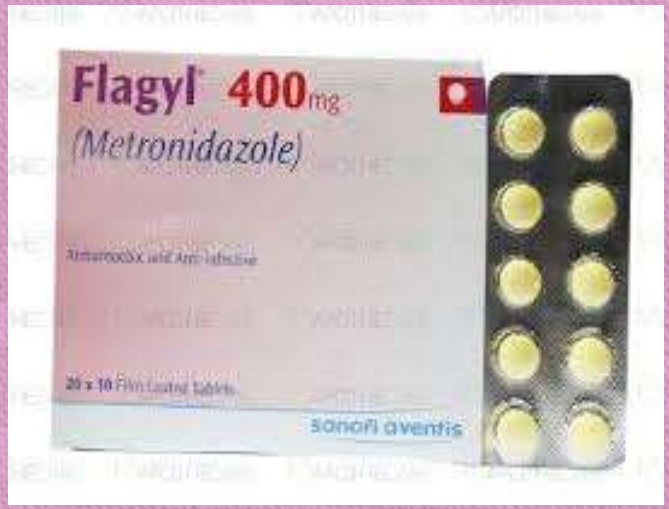
Vaginal discharge

- Causes of discharge in order of incidence:
- A- **Bacterial vaginosis** linked to pelvic inflammatory dis. And needs POM.
- B- **Vulvovaginal candidiasis (thrush)** needs OTC drugs.
- C- **Trichomoniasis** linked to infertility and needs POM.

Volvovaginal candidiasis(thrush)

- Incidence:
- Low in prepubertal girls unless receiving antibiotics.
- Common in adolescent.
- Etiology:
- Naturally vagina produces a watery, odorless discharge.
- The vaginal normal flora (lactobacilli) converts epithelial vaginal glycogen into acids which prevents the growth of pathogens.
- The glycogen conc. is controlled by estrogen, so any disturbance in the conc. of estrogen affect the conc. of glycogen.
- Low estrogen-------- low glycogen ---------high vag. pH------growth of opportunistic inf. (candida albicans).
- During ovulation the quantity and viscosity of the discharge increase

- **Clinical features of thrush**
- itching, vaginal discharge (little or no odor), curd-like.
- **Conditions to eliminate:**
- 1- bacterial vaginosis:
- White discharge with fishy odor, itching
- is not common.
- Need referral for metronidazole 400mg
- bid for 5 days.



- 2-trichomoniasis:
- Uncommon protozoan inf. Transmitted through sexual intercourse, 50%of patients are asymptomatic. If symptoms present :profused, frothy, greenish-yellow malodorous discharge+itching
- Need referral to be treated as bacterial vaginosis.

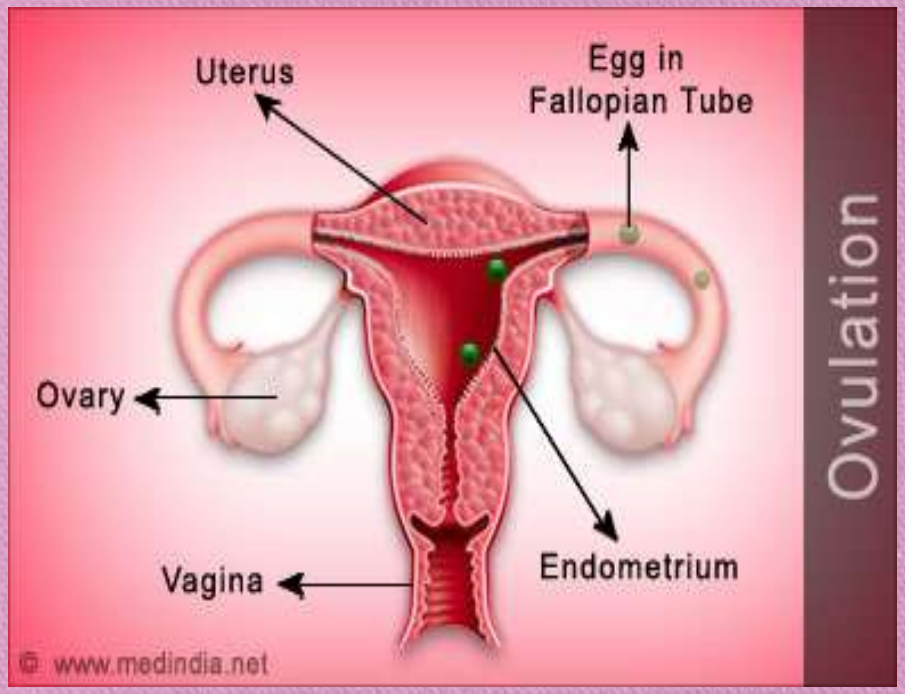
- 3- cystitis.
- 4- atropic vaginitis:
- In postmenopausal women should be referred to rule out malignancy.
- 5- medicine induced:
- Broad spectrum antibiotics, CS, immuocompressants, and medication which affect estrogen level (COCP, HRT, tamoxifen and raloxifen).
- 6- DM: hyperglycemia enhance production of protein surface receptors on c. albicans, this hinder phagocytosis by neutrophils.
- 7- pregnancy: only topical agents are used.
- 8- chemical and mechanical irritants:
- By altering vag.pH.
- 9- < 16 years of age because it is rare.

Treatment:

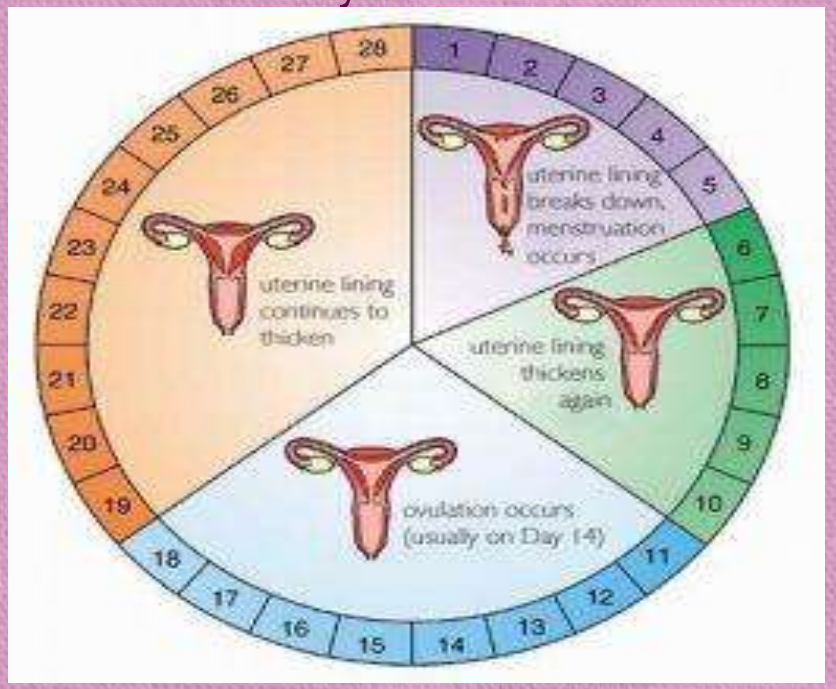
- **Topical imidazole (clotimazole, ecoazole miconazole)**
- Pessories, cream, vag. Tab.
- Symptoms should disappear within
- 3 days of treatment.
- Internal preparations should be
- applied at night to give the medicine time for absorption.
- **Systemic triazole (fluconazole).**
- Single oral dose taken at any time of the day.
- **SE** GI in 10% of patients.

Primary dysmenorrhea PD (period pain)

ovulation



menstrual cycle



- Menstruation spans the years between menarche to menopause.
- Starting 12-50 years.
- Usually menstrual cycle lasts 28days, however it may last 21-45 days.
- Menstruation 3-7 days.

Primary dysmenorrhea: menstrual pain without organic pathology.

Secondary dysmenorrhea: a pathologic condition can be defined.

Incidence:

Common in adolescents (50%), 7-15% of these have v. severe dys.,they become seriously debilitated in the (6-12)months starting having regular periods, however there may be a gap of months-years between menarche and onset of symptoms due to many (50%) of women being anovulatory in the 1st years, since anovulatory cycles are pain free.

More in unmarried women than married.

- **Etiology:**
- Overproduction of uterine PGE2 and F2α, this increases myometrial contractility
- PG production is controlled by progesterone.
- Before menstruation progesterone decreases thus allow PG to increase.
- Vasopressin (a hormone from posterior pituitary) increases the synthesis of prostaglandin
- **Cl F**
- Lower abdominal cramping pain (6hr before for 2-3 days after menstrual bleeding), NV in 50% of patients.
- Symptoms are intense in the first day of mensis.
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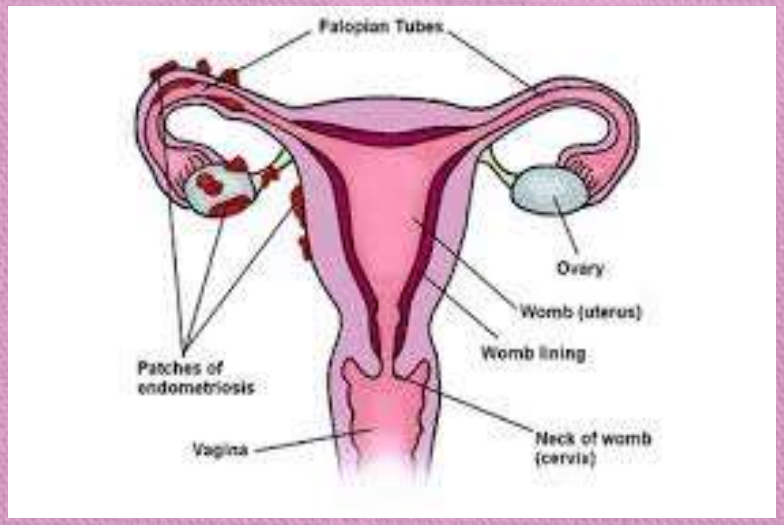
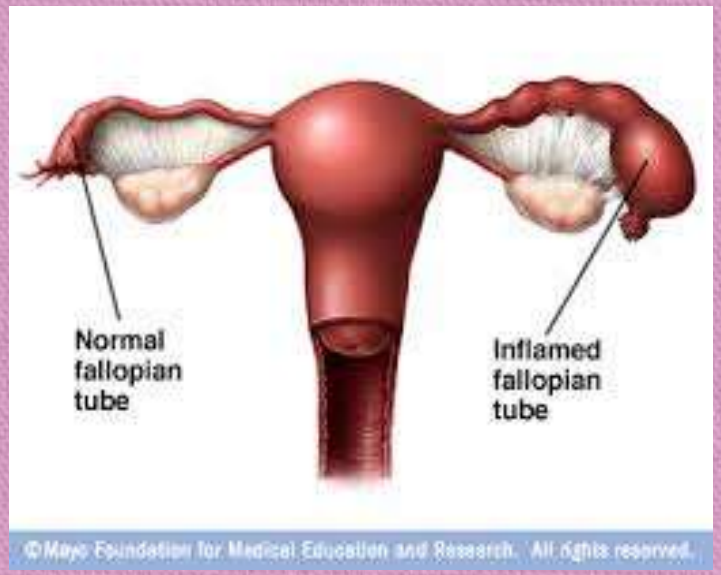
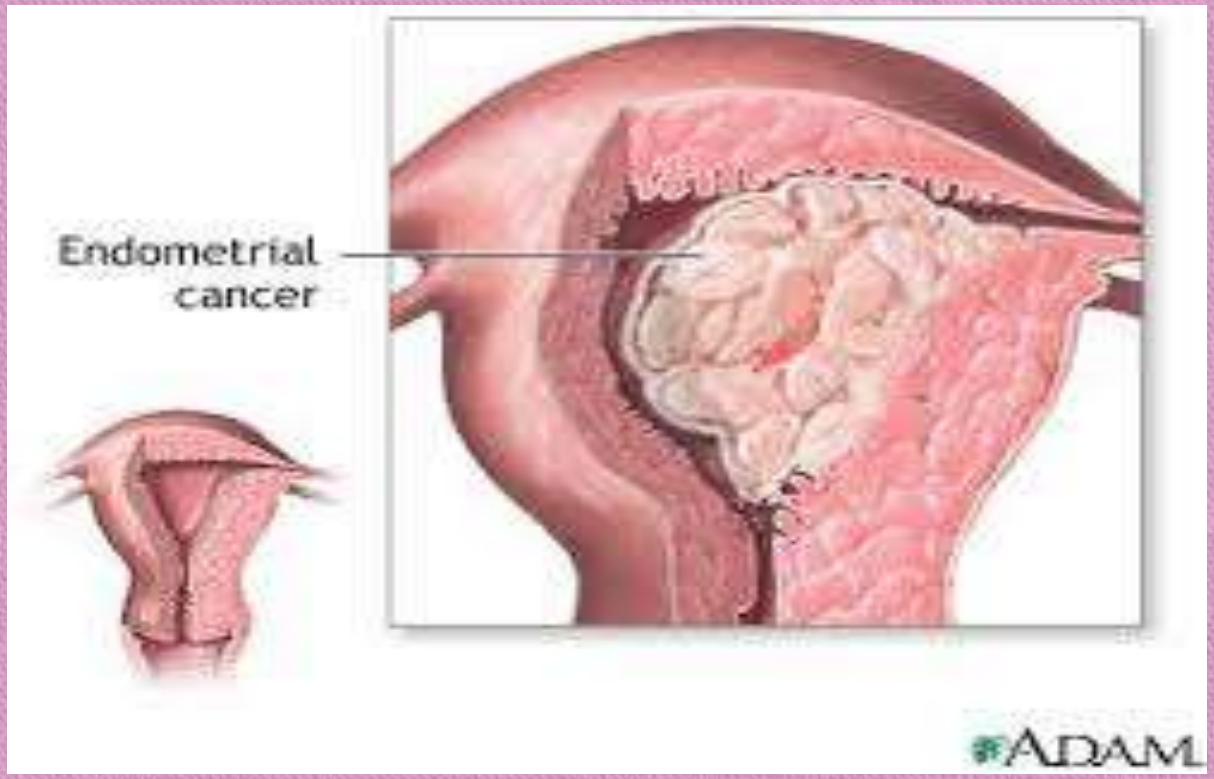
Conditions to eliminate:



- **1- secondary dys.(endometriosis):**
- Presence of endometrial tissue out-
- side the uterus.
- A woman >30 years, present for the
- 1st time with dys.
- Aching rather than cramping, starts 5-6 days before mensis.
- **2- pelvic inflammatory dis.:**
- Is an imp. Cause of infertility and
- Ectopic pregnancy, diagnosed during
- Infertility investigations.
- Symptomatic cases show dys., fever,
- Malaise, vag.discharge, irregular
- mensis

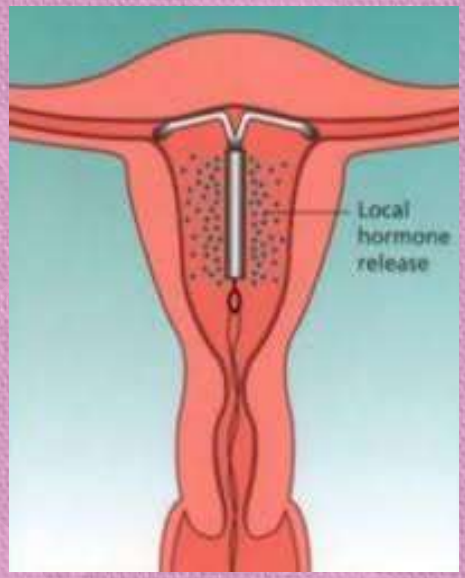


- **3- endometrial carcinoma:**
- in postmenopausal women, characterized by inappropriate uterine bleeding. Pain and discharge are rare.



PD and intrauterine devices (IUD)

- The use of intrauterine devices may cause secondary dysmenorrhea, as well as sometimes causing discomfort and heavier periods, can also cause infection.
- **Mirena** this device releases 20 µg of the second
- generation progestogen levonorgestrel every 24hr
- into the uterine cavity (local effect).
- Regarding the potential progestogenic side
- effects it should be noted that this is a relat-
- ively low dose of hormone compared with that
- used in oral contraceptive pills.



- This may be a contraceptive method of choice for women who have heavy mensis.
- SE:Changes in pattern and duration of menstrual bleeding.
- Endometrial disorders

Treatment of primary dys.

- 1- **NSAIDs:**
- Their choice is logical because of increased prostaglandin level cause PD and they reduce prostaglandin synthesis by inhibiting cyclooxygenase.
- Orally.
- Little evidence about the superiority of any NSAIDs, iboprofen and naproxen are OTC drugs.
- Some women (30%) will not respond.
- SE GIT.
- DI: lithium, anticoagulants, methotrexate.

- **2- hyoscin butyl bromide (buscopan):**
- Relaxes uterine smooth muscles, but they have limited oral bioavailability.
- SE dry mouth, constipation, sedation.
- DI :SE increased with TCAD, antihistamines.
- Started 2 days before and continued 3 days
- after mensis.

- **3- low dose COCP:**
- Inhibit ovulation as it lessens endometrial lining
- and reduces PG production from the luteal phase.
- Although not available as OTC but used when other drugs fail to treat the PD.
- Contraindications: hypertension, obesity, family history of venous thromboembolism.

- **3- Acetaminophene:**
- ***P****aracetamol* has little or no effect on the levels of prostaglandins involved in pain and inflammation and so it is theoretically less effective for the treatment of dysmenorrhoea than either NSAIDs or *aspirin*.
- However, *paracetamol* is a useful treatment
- when the patient cannot take NSAIDs or
- a*spirin* because of stomach problems or
- potential sensitivity.

- *Paracetamol* is also useful when the patient is suffering with
- nausea and vomiting as well as pain, since it does not irritate the stomach.
- The pharmacist should remember to stress the maximum dose that
- can be taken.
- **Future therapy:**
- Vasopressin antagonist

Premenstrual syndrome PMS

- A wide range of symptoms starts around the time of ovulation and are clear during the luteal phase (2^{nd} half) of the menstrual cycle,
- ((cyclical mental abnormalities))
- significantly regress or disappear during the remainder of the cycle.
- 90% of women experience PMS but 1/5 of them seek medical help especially those in their thirties and forties.
- Etiology:
- Unknown.

Cl.F

Common symptoms of PMS		
Physical	**Behavioral**	**Mood**
Swelling	Sleep disturbances	Mood swings
Breast tenderness	Appetite changes	Anxiety
Headache	Poor conc.	Depression

Conditions to eliminate:

- **1- Primary dys.:**
- Differs from PMS in time of symptoms and there are no mod symptoms in dys.
- **2- mental health disorders (depression, anxiety, insomnia… etc)**
- These are not cyclical.
- **Treatmentt:**
- **1-B6 (pyridoxine)** The recommended dose is
- 100–200 mg daily for 3 days before the onset of
- symptoms until 2 days after the start of menstru-
- ation, or 50–100mg daily throughout the month.

- SE: care if tingling or numbness in the hands and feet toxicity as high doses > 500mg/day…….peripheral neuropathy.
- if no response, refer for the use of SSRI.

- **2- calcium** 200mg/day of elemental calcium for 3 months (calcium carbonate 1.25 provide 500mg of elemental calcium).
- SE nausea and flatulance care in renal impairment.
- DI iron and tetracycline absorption is reduced with calcium (2hr gap)

Case study

- **TM is a 46 YOW who is concerned about her constant tiredness, her doctor has attributed this to the heavy periods. While discussing possible management strategies her doctor mentions the possibility of her having an IUD fitted. TM is alarmed by this. She have used in the past and it did not suit her because it made her bleed more frequently.**
- Questions
- 1- What sort of IUD will the clinician be considering in this case?
- 2- How should this patient be counselled?

- **At the pharmacy, a mother brought a prescription for her 16 year old daughter, they were concerned that the doctor has prescribed contraceptive pills for her severe lower abdominal cramping pain that starts 6-12hr. before onset of period and it was worse than the previous times, your action will be:**
- Dispense the prescription.
- Refuse to dispense the prescription.
- Reassure them that only symptomatic treatment is enough.
- Give ibuprofen tab.
- Give ibuprofen now and hyoscine butyl bromide to be given 2 days before the next period and continued 3 days after menstruation.

- Thank you for listening