LOWER GENITAL TRACT INFECTIONS

BY

SALAH ALI ISMAIL (MD)

Professor & head of OB. & GYN. Department

Sohag faculty of medicine

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Physiological Vaginal Discharge

*Sources: Bartholin glands, vagina (transudate) & cervical glands.

* Characters:

- Colorless. - Odorless.

- Non- irritant.

- Doesn‘t stain the underclothes.

-pH is acidic in the child-bearing years (3.5-4.5)

Microbiology of the genital tract

-The lower genital tract contains the normal flora. Lactobacilli (Doderllin bacilli) maintain the acidity that characterizes the secretions.

- The lower genital tract is protected from invasion by vaginal flora (HOW? By :

- The acidity of the vaginal secretions.
- The stratified squamous epithelium.

Microbiology of the genital tract

-The upper genital tract is always sterile.

-How the upper genital tract is kept sterile?

Through the presence of the cervix which provides a mechanical, biochemical & immunological barrier.

-The natural barriers are weakened by:

- Menstruation. ■ Labor or abortion
- Instrumentation or surgical intervention.

VULVOVAGINITIS (VV)

1-VV of children

- Causes: 1- Bacteria. 2- FB.

  3-Parasities (Oxyuris)

- Clinical Features:

Symptoms: Purulent vaginal discharge, pain & soreness of the vulva, dysuria.

Signs: -reddened vagina, sometimes edematous or excoriated. –visualization of the lower vagina by putting the girl on her side. – PR to feel FB.

VULVOVAGINITIS (VV)

1-VV of children

☻ Investigations:

-Swab & microscopic exam to determine the causative organism.

-Radiography (FB)

-EUA & inspection of the upper vagina using an aural or nasal speculum.

☻ Treatment:

-FB should be removed.

-Oxyrius (pinworms) Mebendazole (vermox) 100mg single dose.

-Gonorrhea: Penicillin or cephalosporins.

-Candida albicans: antifungal therapy.

-Resistant infectio: 50mg estriol (Ovestin 1/2 tab) for 10 days.

2-Postmenopausal Vaginitis

☻ Causes: Atrophy of the mucosa renders it prone to infection & irritation → invasion by any of the common pyogenic organisms.

☻ Clinical Features:

Symptoms:

- Thin yellowish vaginal discharge (?blood tinged).

–itching.

- Burning & sorness of the vagina.

Signs: Thin pale vaginal epithelium that bleeds easily on a light scrap.

2-Postmenopausal Vaginitis

☻ Investigations: The condition may accompnay malignant disease of the uterus. If doubt exists or if no improvement on treatment → D & C biopsy or cervical cytology are essential.

☻ Treatment:: Local estrogen application once daily for 2 Ws , then twice weekly for 8Ws.

Systemic estrogen therapy may be used (Primarin 0.625mg orally for 4 Ws). The course may need to be repeated twice or thrice after 1 W interval.

VULVOVAGINITIS DURING MENSTRUAL YEARS

I-Trichomonas Vaginitis :

-It is an extremely common sexually transmitted disease.

-Causative Organism: T. Vaginalis

A unilocular flagellate protozoon.

☻ Clinical Features:

Symptoms: - A large % are asmptomatic.

-Profuse yellowish, greenish or grayish vaginal discharge.

-vaginal sorness, burning & itching.

Signs: -Speculum examination shows thin, greenish or yellow vaginal disharge pooling in the posterior fornix.

- the mucous membrane is diffusely red and may show puncutate hemorrhages in the cervix (Strawberry appearance) which is pathognomonic.

1-Trichomonas vaginitis

☻ Investigations:

-pH >6.

-Hanging drop exam (wet smear): shows the motile protozoon identified from its shape and 4 moving flagellae..

-Leishman or Geimsia stain : will show the protozoon.

☻ Treatment:

1-↑ vaginal acidity (betadine or vinegar douch)

2-Any of the azole drugs (metronidazole, secnidazole, tinidazole, armidazole)

Metronidazole can be given as 2gm single dose,or in a dose of 500mg twice daily for 5 days, or 250 mg tds for a week.

Secnidazole is given as a single dose (95% effectivness)

3-Clotrimazole also has an inhibitory effect on T. Vaginalis.

N.B.: Both partners should be treated as the disease is sexually transmitted.

2-Monilia vaginitis
(Vaginal candidiasis)

-Causative Organism: The yeast candida albicans is implicated in > 80% of cases, C.glabrata, C.Krusei & C. tropicalis account for most of the rest.

It is not a STD

Factors predisposing for vaginal candidiasis:

1- Immunosupression (e.g. HIV infection) & immunosupression therapy (as steroids).

2-DM. 3- Pregnancy or high-dose COCS.

4-Broad spectrum antibiotic therapy.

5-Vaginal douching, bubble bath, showe gel, tight clothing.

6-Increased estrogen.

7-Underlying dermatosis (eczema)

2-Monilia vaginitis
(Vaginal candidiasis)

☻ Clinical Features:

Symptoms: -Discharge, Scanty whitish curde-like vaginal discharge (Cottage cheese),which may smell yeasty

- Pruritis that may be intense. -Local irritation & swelling.

Signs: -Marked redding of the entire vagina or vulvovaginal mucous membrane.

–Scrtach marks are often present.

-.Thrush-like patches in the vagina or vulva or both.

2-Monilia vaginitis
(Vaginal candidiasis)

☻ Investigations:

-pH of the vaginal fluid is usually normal (between 3.5 & 4.5).

-Microscopy of a wet smear of the vaginal fluid with 10-20% KOH added →the fungi (long thread like fibers or mycelia to which tiny buds are attached).

-Culture of the vaginal fluid on Sabaroud‘s agar medium for confirmation.

2-Monilia vaginitis
(Vaginal candidiasis)

☻ Treatment:

*It is better to use *topical(vaginal creams & pessaries)* rather than a systemic treatment to minimize the risks of systemic side effects.

1- Gentian violet.

2- Nystatin; 1 vaginal tablet (100.000IU) at bed time for 2 Ws.

3-Imidazole: Miconazole & clotrimazole have 83.5% cure rate .

*Fluconazole 150mg oral capsule is usually effective for uncomplicated cases.

3- Bacterial vaginosis

* BV is the commonest cause of abnormal vaginal discharge in women of child-bearing age. The condition often arises spontaneously around the time of menstruation & may resolve spontaneously in mid-cycle.

-Causative Organism: BV is a consequence of altered vaginal microbiologic composition. The concentration of anaerobic organisms increase up to a thousand-fold. The anarobic bacteria interact synergetically with Gardnella vaginalis to produce symptoms. This is accompanied by a rise in vaginal pH to between 4.5 and 7 , and ultimately the lactobacilli may disappear.

The organisms most commonly encountered are G.Vaginalis, Bacteroids, Mobiluncus & Mycoplasma hominis.

3- Bacterial vaginosis

☻ Clinical Features:

Symptoms: a vaginal discharge that is typically thin, homogenous& adherent to the walls of the vagina. It may be white or yellow. It has an offensive fishy odour, particularly noticeable around the time of menstruation & following intercourse. It is associated with little vaginal or vulvar irritation.

It is now established that BV ↑ the risk of 2nd trimester miscarriage & PL , infections after surgery, postpartum & postabortive endometritis & PID.

3- Bacterial vaginosis

☻ Investigations:

- Wet smear →clue cells & absence of lactobacilli.

-Positive Whiff test: release of a fishy smell on addition of KOH

-Gram stain: Clue cells + absent lactobacilli + mixed bacterial flora.

☻ Diagnosis: depends on Amsel criteria:

1-Vaginal pH > 4.5 2-+ve Whiff test.

3-A characteristic discharge on exam

4- Presence of clue cells on microscopy.

3- Bacterial vaginosis

☻ Treatment:

-Metronidazole is effective when given orally or locally.

-Clindamycin cream 2%.

CHRONIC CERVICITIS

-It means chronic inflammation of the endocervix including glands & deeper tissues.

-It is a common gynecological condition because:

* Exposure of the cervix during coitus, trauma, abortion or delivery.

* Liability of any infection of the cervix to become chronic.

CHRONIC CERVICITIS

☻ Clinical Features:

Symptoms:

-Non-irritant intermenstrual vaginal discharge. It may be accompanied with post-coital or post-douche spotting or bleeding.

-Gynecological backache.

-pelvic congestion.

-Painful or frequent micturation may be the only symptom

-may be discovered accidently in infertile patients.

CHRONIC CERVICITIS

Signs: by speculum exam, one or more of the following clinical types may be found:

1-Simple endocervicitis: purulent mucous is detected at the external os.

2-Hypertrophic cervicitis: the cervix is diffusely enlarged & congested.

3- **Mucous polyp:** due to hyperplasia of the endocervical mucosa. They are small soft polyps, deep red in color.

4-Nabothian follicles: Yellowish or bluish retention cysts up to 1 cm because of obstruction of their openings of endocervical crypts by plugs of epithelial cells or inspessated mucous or by fibrosis with retention of their mucous secretions.

5-Cervical ectropion (fish-mouth appearance): the anterior & posterior lips of the cervix are everted & endocervical canal exposed.

6- Cervical ectropy (erosion) **may be associated.**

CHRONIC CERVICITIS

☻ Investigations:

As cervicitis is often caused by a sexually transmissible agent, tests for chlamydia & gonorrhea should be performed. If ulceration is present, test for herpes simplex.

CHRONIC CERVICITIS

TREATMENT:

1-Medical treatment for Chlamydia T. infection (Doxycycline, azithromycin or ofloxacin)

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2-Cauterization :to destroy the abnormal cervical epithelium using electrocautery or cryocautery.

3- Trachelorrhaphy .

4- Cone excision

5- Amputation of the cervix.