



University of khartoum  
Faculty of Education  
College of Graduate Studies  
Department of Biology



# **Seminar Title: Diseases of the Urinary & Reproductive Systems**

## **Prepare and presentation:**

- Mohammed fadol alkarim
- Amna ahamed
- Ekhlas Ebrahim
- Entisaar ali
- Nosiba Mustafa
- Tagreed ahmed

**The supervision of Dr:**

**Somia Basher M.Ali**

## **Diseases of the Urinary & Reproductive Systems**

### **Structure and Function of the Reproductive System:**

- The female reproductive system consists of two ovaries, two uterine tubes, the uterus, the cervix, the vagina, and the external genitals. Note that the urethra is short ends within the labia.
- The male reproductive system consists of two testes, ducts, accessory glands, and the penis; seminal fluid and urine leaves the male body through the urethra.

### **Symptoms of urinary tract infections include:**

- a. urethritis - inflammation or infection of the urethra.
- b. cystitis - inflammation or infection of the urinary bladder.
- c. urethrocystitis - infections that easily spread from the urethra to the urinary bladder.
- d. ureteritis - inflammation or infection of the ureters.
- e. pyelonephritis - inflammation or infection of the kidneys.

### **Symptoms of reproductive tract infections include:**

- a. vaginitis - inflammation or infection of the vagina.
- b. endometriosis - inflammation or infection of the vaginal linings.
- c. salpingitis - inflammation or infection of the fallopian tubes.
- d. oophoritis - inflammation or infection of the ovaries.
- e. prostatitis - inflammation or infection of the prostate gland.

## **Bacterial Diseases of the Urinary Tract:**

### **Cystitis;**

#### **1.causative agent:**

saprophyticus Escherichia coli or Staphylococcus

#### **2.method of transmission:**

Sexual intercourse or careless personal hygiene transfers fecal matter to the urethra. In the female it may also be transmitted by gastrointestinal system infections and preexisting infections of the vagina, uterus, or urethra. In the male it may be transmitted by infections of the gastrointestinal system, kidneys, or urethra.

#### **3.symptoms:**

inflammation of the urinary bladder, dysuria (difficult or painful urination), and pyuria (the presence of leukocytes in the urine).

#### **4.Diagnosis:**

- Urine microscope.
- Urine culture.

#### **antibiotic sensitivity:**

can be also by tested with they cultures making them useful in the selection of the antibiotic treatment.

#### **5.epidomology:**

urine tract infection are the most frequent bacterial infection in women. They occur most frequently between the ages of 10 and 35 years.

With 10% of women getting and infection yearly and 60% having and infection of some point in their lives. Recurrences are common with nearly half of people getting ascend infection with in a year.

Urinary tract infection occur four times more frequently in females than male .

**d. prevention:** Good hygiene.

#### **6.treatment:**

Trimethoprim-sulfamethoxazole.

Quinolone antibiotics or ampicillin if resistance is encountered.

## **Viral Diseases of the Reproductive Tract:**

Viral diseases of the reproductive system are difficult to treat effectively and they represent an increasing health problem.

### **Genital Herpes:**

It is the most common and most severe of the herpes simplex viral infections.

#### **1. causative agent:**

herpes simplex virus type 2 (HSV-2)

#### **2. method of transmission:**

It is transmitted by sexual contact, but it can survive for short periods of time in moist areas such as hot tubs.

#### **3. symptoms:**

Some individuals are asymptomatic and shed the viruses. In females vesicles appear on the mucous membranes of the labia, vagina, and cervix. Ulcerations sometimes spread over the vulva and can even appear on the thighs. In males tiny vesicles appear on the penis and foreskin and are accompanied by urethritis and a watery discharge. The prostate gland and seminal vesicles also can be affected. Both sexes experience intense pain and itching at the sites of lesions and swelling of lymph nodes. A person is contagious any time viruses are being shed. Shedding always occurs when active lesions are present and usually starts a few days before lesions appear. Women have a higher incidence of miscarriages, an increased risk of developing cervical carcinoma, and babies must be delivered by Caesarian section. Latency is a hallmark of herpes infections. Within two weeks of infection, the viruses travel by way of sensory neurons to ganglia. Within the ganglia.

#### **4. Neonatal herpes:**

can be acquired when the baby passes through the birth canal and can appear at birth or up to 3 weeks after birth. Most have skin vesicles and others already have disseminated infection with neural or visceral lesions. Those with disseminated infections have a poor appetite, vomiting, diarrhea, respiratory difficulties, and hypo activity. Some also have neurological disorders, jaundice, and eye disorders. They usually die within 10 days, but the few that survive have central nervous system and eye damage.

### **5. Lab diagnosis:**

These infection are very common, the majority of them remain under diagnosed because they are a symptomatic or unrecognised.

Direct tests for viral isolation, the detection of antigen or more recently the detection of HSV DNA using molecular diagnostic techniques.

Testing for serotypes is recommended because of the different prognostic and counselling implications.

Types specific HSV serology is becoming more readily available and will enhance the ability to make the diagnosis and guide management in select patients.

Specimens obtained from vesicular lesions within appearance are the specimens of choice, but other lesion material from older lesion or swabs of genital secretions should be obtained if suspicion of HSV infection is high.

### **6. prevention:**

Avoid sexual contact with infected persons even when lesions are absent. Use condoms.

### **7. treatment:**

Acyclovir alleviates symptoms of a primary outbreak.

## **Fungal Disease of the Reproductive Tract:**

### **Candidiasis:**

It is one of the most common causes of vaginitis.

Invasive candidiasis is an infection caused by a yeast (a type of fungus) called *Candida*. Unlike *Candida* infections in the mouth and throat (also called “thrush”) or vaginal “yeast infections,” which are localized to one part of the body, invasive candidiasis is a serious infection that can affect the blood, heart, brain, eyes, bones, or other parts of the body

#### **1.causative agent:**

*Candida albicans* - a yeastlike fungus

#### **2. method of transmission:**

It is the result of an opportunistic overgrowth when the competing microbiota is suppressed by antibiotics, hormonal changes during pregnancy, or oral contraceptives.

#### **3. symptoms:**

Thick white vaginal discharge and severe vaginal itching.

#### **4.Diagnosis:**

diagnosis of a yeast infection is done either via microscopic examination or culturing. For identification by light microscopy, a scraping or swab of the affected area is placed on a [microscope slide](#). A single drop of 10% [potassium hydroxide](#) (KOH) solution is then added to the specimen. The KOH dissolves the skin cells, but leaves the *Candida* cells intact, permitting visualization of [pseudo hyphae](#) and budding [yeast cells](#) typical of many *Candida* species. For the culturing method, a sterile swab is rubbed on the infected skin surface. The swab is then streaked on a culture medium. The culture is incubated at 37 °C for several days, to allow development of yeast or bacterial colonies. The characteristics (such as morphology and colour) of the colonies may allow initial diagnosis of the organism causing disease symptoms.

#### **5. prevention:**

Consumption of dairy products containing lactobacillus, such as yogurt. A diet that supports the immune system. Oral hygiene can help prevent oral candidiasis when people have a weakened immune system. Wearing cotton underwear may help to reduce the risk of developing skin and vaginal yeast infections

#### **6. treatment:**

miconazole NY statin, terconazole, or clotrimazole

