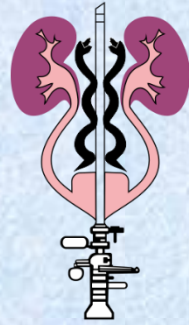


Genitourinary Tract Infections and Sexually Transmitted Infections (STI)



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UTI

**inflammatory response of urothelium to
bacterial or other microorganism localization**

Definations

- **Infection: Bacteriuria + pyuria**
 - asymptomatic
 - symptomatic
- **Bacteriuria : bacteria in urine**
- **Colonization: Bacteriuria without pyuria**

Introduction

- **UTIs represent a wide variety of syndromes including**
 - **urethritis,**
 - **cystitis,**
 - **prostatitis,**
 - **Pyelonephritis.**

Introduction

- **Young women are particularly susceptible, 40% of all women will suffer at least one UTI in their life.**
- **Infection in men occurs less frequently until the age of 50, when incidence in men and women is similar.**

Classification

According to anatomic site of involvement:

- **Lower tract infection: cystitis, urethritis, prostatitis**
- **Upper tract infection: pyelonephritis, involving the kidneys**

Classification

According to Degree

1-Uncomplicated

2-Complicated

predisposing lesion of the UT such as:

- **congenital abnormality of the UT,**
- **a stone,**
- **a catheter,**
- **prostatic hypertrophy,**
- **obstruction, or**
- **neurological deficit**

Recurrent UTIs

- Multiple symptomatic infections with asymptomatic periods
- ***Reinfection:*** caused by a different organism than originally isolated
- ***Relapse:*** repeated infections with the same initial organism

Etiology

The microorganism that cause UTIs usually originate from the bowel flora of the host

Uncomplicated UTI:

- **E.coli accounts for 85%**

Etiology

- **The majority of UTIs are caused by a single organism**
- **In patients with stones, indwelling catheter, or chronic renal abscesses multiple organisms may be isolated**

Diagnosis:

Microscopic examination

- The presence of one organism
sample more than 100,000
bacteria/ml

Diagnosis

Hematuria, non-specific, may indicate other disorders such as calculi or tumor

Proteinuria is found in the presence of infection

Treatment

Desired outcome

- Prevent or treat systemic infection
- Eradicate the invading organism
- Prevent reoccurrence of infection

Infection in males

- **Infection in males are considered complicated**

Infection in males

The most common causes are

- Instrumentation
- Catheterization
- Renal and urinary stones
- In the elderly the most common cause is bladder outlet obstruction due prostatic hypertrophy.

Sexually Transmitted Infections (STI)

Sexually Transmitted Infections

- **Infections that are most commonly passed through sexual contact:**
 - **Oral**
 - **Vaginal**
 - **Anal**
 - **Skin-to-skin**

TRANSMISSION

- **In order for transmission to occur, it is necessary to have:**
 - **A body fluid with the germ in it**
 - **A way of spreading the germ from one person to another**

BODY FLUIDS

- **Semen**
- **Vaginal fluid**
- **Blood**
- **Fluid in sores or blisters**
- **Saliva**
- **Tears**
- **Sweat**
- **Urine**
- **Ear wax**

METHODS OF TRANSMISSION:

Low Risk

- **Hugging**
- **Kissing**
- **Holding hands**
- **Dancing**
- **Sitting on toilets**
- **Sharing lip balm**
- **Massage**
- **Sharing forks, knives, etc.**

METHODS OF TRANSMISSION:

High Risk

- **Sexual Intercourse**
 - vaginal
 - anal
 - oral
- **Blood-to-blood contact**
- **Sharing needles or other drug-use equipment**
- **Tattoo or body piercing**
- **Infected mother to her baby**

Symptoms

What are the symptoms? How would I know if I have been infected?

- **Sores (either painful or painless)**
- **Blood in urine**
- **Burning sensation when urinating**
- **Rashes**
- **Itching**
- **Warts**
- **Unusual discharge**

Bacterial vs. Viral STI's

- Bacterial STI's include Chlamydia, LGV, gonorrhea & syphilis
- Can be treated and cured with antibiotics
- Untreated infection can cause PID, infertility, & epididymitis
- Viral STI's include HPV, HIV, Herpes, & Hepatitis B
- There is NO cure
- Medication available to treat *symptoms* only
- Can pass onto others for the rest of your life

Chlamydia

- The *most* common bacterial STI
- Greatest number of infections found in people 15 to 24 years old
- Untreated, it can affect the cervix and urethra, and occasionally the rectum, throat and eye
- 50% have *NO* symptoms - men and women
- Can be treated with antibiotics

CHLAMYDIA



CHLAMYDIA - Epididymitis



GONORRHEA

- The 2nd most common bacterial STI
- Most common in people aged 15 to 29
- Can affect the cervix, urethra, rectum, throat, and occasionally the eyes
- Can be treated with antibiotics
- Often *NO* symptoms, especially in females

GONORRHEA: Signs & Symptoms

- **Female**

- Increased vaginal discharge
- Painful urination
- Lower abdominal pain
- Bleeding after sex and between periods
- Pain during sex

- **Male**

- Thick, yellowish-green discharge from penis
- Painful urination
- Testicular pain or swelling
- Rectal pain, discharge or itching

GONORRHEA



SYPHILIS

- **A bacterial infection that progresses in stages**
 - **Primary: (3 days – 3 months) starts as a small, painless sore called a chancre; goes away on it's own**
 - **Secondary: (2 – 24 weeks) rash on the body, palms of hands & soles of feet, hair loss, feeling sick**
 - **Latent: lesions or rashes can recur**

SYPHILIS - Complications

- **Untreated syphilis may lead to *tertiary syphilis*, which can damage:**
 - **The cardiovascular system (heart & blood vessels)**
 - **The neurological system**
 - **Other major organs of the body**
 - **Complications may lead to death**

Genital Herpes

(Herpes Simplex Virus - HSV)

- **Two types: HSV-1, causing cold sores, and HSV-2, causing genital herpes**
- **It is a viral infection causing outbreaks of painful sores and blisters**
- **Spread through direct vaginal, oral or anal sexual contact with an infected partner**
- **Also transmitted by receiving oral sex from a partner with a history of cold sores**
- ***Symptoms* can be treated with antiviral medications, but NO CURE**

Genital Herpes – Signs & Symptoms

- **Prior to an outbreak, the person may feel a tingling or burning sensation where the virus first entered the skin**
- **Painful sores (external or internal)**
- **Inflammation and redness**
- **Fever**
- **Muscular pain**
- **Tender lymph nodes**

Genital Herpes



Hepatitis B (HBV)

- **Virus that attacks the liver**
- **Most infected people (90%) naturally produce antibodies to fight the disease, but some develop chronic HBV and will carry the virus for the rest of their life**
- **Chronic infection can lead to liver damage, cirrhosis, and cancer**
- **There is NO CURE, but vaccination can prevent infection**

Hepatitis B - ascites

Woman suffering from liver cancer caused by HBV



Human Papilloma Virus or HPV (Genital Warts)

- **One of the most common STIs**
- **About 75% of people will have at least one HPV infection during their lifetime**
- **There are over 100 types of HPV**
- **Low-risk HPV types cause genital warts**
- **High-risk HPV types may cause cancer of the cervix**
- **There is NO CURE, but vaccination is available to prevent certain types of HPV**

HPV – Signs & Symptoms

- **Many people with low-risk types have no symptoms**
- **Other HPV types may cause:**
 - **Warts on vulva, cervix, penis, scrotum, anus or in the urethra**
 - **Itchiness**
 - **Discomfort and bleeding during sex**

HIV / AIDS

- **HIV is a virus that destroys the immune system over time, robbing the body of its ability to fight other infections and illnesses**
- **Once the immune system is weakened, other infections occur and AIDS develops (the fatal stage of HIV infection)**
- **The virus is present in blood, semen, vaginal secretions & breast milk**

HIV / AIDS – Signs & Symptoms

- **2 to 4 weeks after exposure, some people experience mild flu-like symptoms that last a few weeks, then disappear**
- **Many people have NO symptoms until years after exposure**
- **The only way to know is to get TESTED!**

Pubic Lice & Scabies

- **Infections caused by parasitic infestations**
- **Pubic lice: tiny crab-like insects that nest in pubic hair & bite their host to feed on blood**
- **Scabies: mites that burrow below the surface of the skin to lay their eggs**
- **Can live for 1 – 3 days on bedding, towels and clothing**
- **Treated with medicated creams & lotions**

Pubic Lice



Scabies mite



STI Prevention

- Abstain from sexual intercourse (only method that is 100% effective)
- Don't share needles or other drug-use equipment
- Have only one faithful, *uninfected* sexual partner
- Get tested for STI's before having sex
- Use a latex condom & spermicide
- Avoid alcohol & other drugs

When should I get tested?

- **Once you become sexually active, you need a check-up & STI testing once a year**
- **You also need an STI test if:**
 - **You didn't use a condom or the condom broke**
 - **Your partner has an STI**
 - **Your partner is having sex with someone else**
 - **You have ever injected drugs**
 - **You or your partner have any STI symptoms**
 - **You have been raped**

Remember...

**...your medical information will always
remain CONFIDENTIAL!**