

A REVIEW ON KNOWLEDGE AND PRACTICE REGARDING PREVENTION OF URINARY TRACT INFECTION AMONG ADOLESCENT GIRLS

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ABSTARCT

HISTORY OF URINARY TRACT INFECTION: Urinary tract infections have been described since ancient times with the first documented description in the Ebers Papyrus dated to (1550 BC).

Medical texts from the 19th century contain information regarding the treatment of Urinary tract infections during that date. Early volumes of the Journal of Urology from the beginning of the 20th century are rich with information on the first attempts at chemotherapy for Urinary tract infections. Researches were used to collect appropriate information after (1969). The Ebers papyrus from ancient Egypt recommended herbal treatments to ameliorate urinary symptoms without providing insight into pathological mechanisms. Hippocrates believed that disease was caused by disharmony of the 4 humors and accordingly diagnosed urinary disorders. Roman medicine further expanded the conservative approached such as bed rest, diet, narcotics and herbs advocated by Greek physicians, while also improving invasive techniques (surgical lithotomy for stones and catheterization for retention). The Arabian physician Aetius refined uroscopy and created a detailed classification and interpretation of urinary disease based on this technique.

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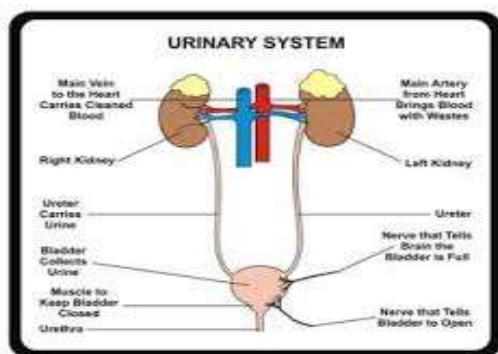
INTRODUCTION

Urinary tract infection is the one of the major problem in developing countries. It is very common in females especially in the adolescent girls. Mainly because of changes in the hormones and it is also

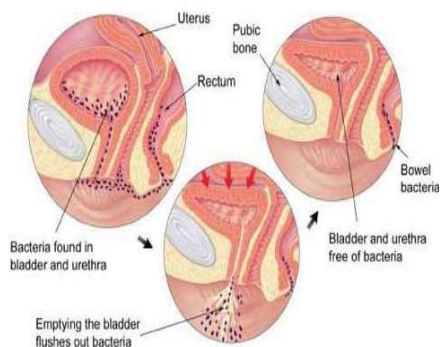
associated with poor intake of water, infrequent voiding, poor menstrual hygiene and anatomical defect¹. Urinary tract infection is a unique infection that

can happen any way along the urinary tract. The urinary tract includes the: bladder, kidney, ureter, and urethra.

Urinary tract infections are caused by the presence of bacteria in the urine, although fungi and viruses could be involve².



Urinary Tract Infection



Adolescent is an extremely enthusiastic, energetic, joyous and fun-loving period. But the beauty of this phase is marked by emotions, myths, insecurities, apprehensions, misbelieves etc. which are the direct result of lack of information and knowledge.

Adolescence period is the time of transition from childhood to adulthood. The term adolescence literally means ‘to emerge’ or ‘to achieve identity’.

This is the crucial period in the adolescent life because alteration in the physical and physiological function take place in the body .In this stage of their life adolescent should take care them self in various aspects like personal hygiene, nutrition, exercise and periodic health check-up³.

The commonest presenting complaints in Urinary Tract Infection in adolescent girls is dysuria and coupled with an initial reaction of fear /apprehension at menarche in majority of girls there would be a general false believes of causes of and its prevention⁴.

Some studies found that 32.3% had recurrent urinary tract infection, 19.5% sample have adequate knowledge about urinary tract infection, 42% have moderate knowledge and 35.5% have poor knowledge⁵. Study conducted among adolescent girls found that they attend the gynecology OPD. Among these adolescent girls, 9% of them have urinary tract infection and out of these 9%, 20% of nursing students are having urinary tract infection and high prevalence of urinary tract infection in 17-20 year of age.

Uncomplicated urinary tract infection is more prevalent among adolescent girls. The main causes of urinary tract infection is infrequent bladder emptying (72%), inadequate water intake (40%), poor menstrual hygiene (32%), poor perineal washing (32%), vaginal discharge (28%), poor nutrition (12%) and pregnancy (20%).⁶

Bacterial urinary tract infection (UTI) is the most common kind of infection affecting the urinary tract. Urine, or pee, is the fluid that kidneys filter out of the bloodstream. Pee contains salts and waste products, but it doesn't normally contain bacteria. When bacteria get into the bladder or kidney and multiply in the pee, a UTI can happen.

The urinary tract includes the kidneys (which filter the blood to produce urine), the ureters (the tubes that carry urine from the kidneys to the bladder), the bladder (which stores urine), and the urethra (the tube that carries urine from the bladder to the outside). Urinary tract infections (UTIs) happen when bacteria get into the urethra and travel up into the bladder.

There are three main types of UTI. Bacteria that infect only the **urethra** (the short tube that delivers pee from the bladder to the outside of the body) cause **urethritis**). Bacteria can also cause

a bladder infection, which is called **cystitis**. Another, more serious kind of UTI is infection of the kidney itself, known as **pyelonephritis**. With this type of UTI, a person often has back pain, high fever, and vomiting.

The most common type of UTI is cystitis. These mostly just cause discomfort and inconvenience. Bladder infections can be quickly and easily treated. And it's important to get treatment promptly to avoid the more serious infection that reaches the kidneys.

Both bladder and kidney infections are more common in women than men. Most cases of bladder infection in women are uncomplicated and easily treated with a short course of antibiotics. In men, bladder infections may also affect the prostate gland, and a longer course of antibiotics may be needed. Kidney infections can also usually be treated at home with antibiotics, but treatment typically lasts longer. In some cases, kidney infections must be treated with intravenous antibiotics, which may need to be given in the hospital.

CAUSES⁷

➤ UTIs usually happen because bacteria enter the urethra, then make their way up into the bladder and cause an infection.

- Girls get UTIs much more often than guys, most likely due to differences in the shape and length of the urethra.
- Girls have shorter urethras than guys, and the opening lies closer to the anus (where poop comes out) and the vagina, where bacteria are likely to be.
- Bacteria can get into the urethra several ways. During sex, for example, bacteria in the vaginal area may be pushed into the urethra and eventually end up in the bladder, where pee provides a good environment for the bacteria to grow.
- Bacteria may also get into a girl's bladder if she wipes from back to front after a bowel movement (BM), which can contaminate the urethral opening. The use of spermicides (including condoms treated with spermicide) and diaphragms as contraceptives also may increase the risk of UTIs.
- Sexually transmitted diseases (STDs) may cause UTI-like symptoms, such as pain with peeing. This is due to the inflammation and irritation of the urethra or vagina that's sometimes associated with chlamydia and other STDs. If untreated, STDs can lead to serious long-term problems, including pelvic inflammatory disease (PID) and infertility. Unlike UTIs, STDs *are* contagious.
- The most common functional problem of the urinary tract is **vesicoureteral reflux**, a condition in which some pee flows backward, or refluxes, from the bladder into the ureters and even up to the kidneys.

FACTORS THAT INCREASE THE RISK OF UTI INCLUDE:

1. Having sex frequently
2. Having diabetes
3. Having a bladder or kidney infection in the past 12 months
4. Using a spermicide for birth control
5. For men, not being circumcised or having insertive anal sex

SIGNS & SYMPTOMS⁸

UTIs can cause such signs as:

- Pain, burning, or a stinging sensation when peeing
- An increased urge or more frequent need to pee (though only a very small amount of pee may be passed)

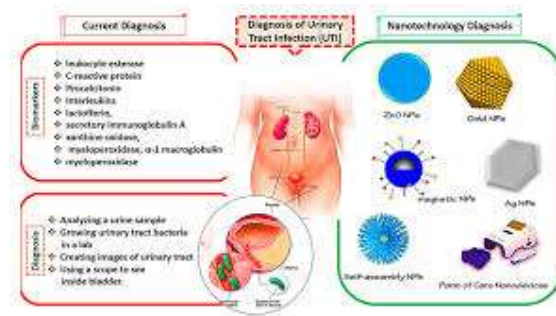
- Fever
- Waking up at night a lot to go to the bathroom
- Belly pain in the area of the bladder (generally below the belly button)
- Foul-smelling pee that may look cloudy or contain blood
- Discomfort in the lower abdomen
- Blood in the urine

Kidney infections can sometimes cause the same symptoms as those of a bladder infection (listed above), but they can also cause:

- Fever (temperature higher than 99.9°F or 37.7°C)
- Pain in the flank (one or both sides of the lower back, where the kidneys are located)
- Nausea or vomiting

DIAGNOSIS⁹

Only a health care provider can treat urinary tract infections. The first thing a doctor will do is confirm that a person has a UTI by taking a clean-catch urine specimen. At the doctor's office, you'll be asked to clean your genital area with disposable wipes and then pee into a sterile (bacteria-free) cup.



The sample may be used for a urinalysis (a test that microscopically checks the pee for germs or pus) or a urine culture (to grow and identify bacteria in a lab). A urinalysis checks for white blood cells in the urine. (White blood cells are responsible for fighting infection, so their presence in the urine suggests infection.) A urine culture is a test that uses a sample of urine to try and grow bacteria in a laboratory. It can identify the type of bacteria that is causing the UTI and determine which antibiotics are active against that bacteria. It usually requires about 48 hours to get results.

A urinalysis and urine culture is often performed in men and in women who:

- Are experiencing their very first episode of UTI symptoms
- Have a suspected kidney infection
- Have symptoms that are not typical for bladder infection
- Have had "resistant" bladder infections before (meaning

the infections did not get better with standard antibiotics)

- Have used antibiotics recently
- Have frequent bladder infections
- Do not begin to feel better within 24 to 48 hours after starting antibiotics
- Are pregnant

TREATMENTS¹⁰

UTIs are treated with antibiotics. After several days of antibiotics, your doctor may repeat the urine tests to be sure that the infection is gone. It's important to make sure of this because an incompletely treated UTI can come back or spread.

In young, healthy adolescents and women with a **bladder infection**, the usual treatment includes a course of antibiotics. The typical drug options are nitrofurantoin (sample brand name: Macrobid), trimethoprim-sulfamethoxazole (sample brand name: Bactrim), and fosfomycin (brand name: Monurol). Depending on which antibiotic your doctor prescribes, you may need a single dose or up to a five-day course.

The optimal treatment for a **kidney infection depends** upon the severity of the infection as well as your general health and risk for infection with antibiotic-resistant bacteria.

Home treatment: If your fever and pain are mild and you are able to eat and drink, you will probably be given a one to two week course of antibiotics to take by mouth at home. The first dose of antibiotics may be given as an injection in the office, clinic, or emergency department. Let your healthcare provider know if you do not begin to feel better within one to two days after starting treatment. For fever and pain, you can take a nonprescription medication like acetaminophen (sample brand name: Tylenol) or ibuprofen (sample brand names: Motrin, Advil).

Hospital treatment: If you have a high fever, severe pain, or cannot keep down food or fluids, you will need to be hospitalized and given intravenous (IV) antibiotics and fluids. As you begin to improve, you will be allowed to go home and continue taking oral antibiotics there. Most pregnant women with a kidney infection are hospitalized and treated with IV antibiotics and fluids.

- If someone has a lot of pain from a UTI, the doctor may recommend a medicine to help relieve the spasm and pain in the bladder. This will turn pee a bright orange color, but it's harmless and will usually make a person much more comfortable within hours. In the

case of a kidney infection, a doctor may prescribe pain medicine.

- If you've finished all the medicine or if your symptoms aren't much better after 2 to 3 days of treatment, contact your doctor.
- Drink lots of water during and after treatment because each time you pee, the bladder cleanses itself a little bit more. Cranberry juice may also be helpful. Skip drinks that contain caffeine (which can irritate the bladder), such as soda and iced tea.
- People who get a doctor's help for a UTI right away should be clear of symptoms within a week. Someone with a more severe infection may need treatment in a hospital so they can get antibiotics by injection or IV (Intravenously, given into a vein right into the bloodstream).
- A doctor may tell people with UTIs to avoid sex for a week or so, which lets the inflammation clear up completely.

PREVENTION

- A few things can help prevent UTIs. After peeing, girls should wipe from **front to back** with toilet paper. After BMs, wipe from front to back to avoid spreading bacteria from the rectal area to the urethra.

- Also, go to the bathroom when needed and don't hold the pee in. Pee that stays in the bladder gives bacteria a good place to grow.
- Keep the genital area clean and dry. Girls should change their tampons and pads regularly during their periods. Bubble baths can irritate the vaginal area, so girls should take showers or plain baths.
- Avoid long exposure to moisture in the genital area by not wearing nylon underwear or wet swimsuits. Wearing underwear with cotton crotches is also helpful.
- Skip using feminine hygiene sprays or douches, as these can irritate the urethra.
- If you are sexually active, go to the bathroom both before and within 15 minutes after sex. After sex, gently wash the genital area to remove any bacteria. Avoid sexual positions that irritate or hurt the urethra or bladder. Couples who use lubrication during sex should use a water-soluble lubricant such as K-Y Jelly.
- Finally, drinking lots of water each day keeps the bladder active and bacteria-free.
- **Changes in birth control:** Women who develop frequent bladder

infections and use spermicides, particularly those who also use a diaphragm, may be encouraged to use an alternate method of birth control.

➤ **Postmenopausal**

women: Postmenopausal women who develop recurrent bladder infections may benefit from using vaginal estrogen. Vaginal estrogen is available in a flexible ring that is worn in the vagina for three months (eg, Estring), a small vaginal insert (Vagifem), or a cream (eg, Premarin or Estrace)

➤ **Antibiotics:** Antibiotics are highly effective in preventing recurrent bladder infections but can cause side effects and promote the growth of resistant bacteria, which are more difficult to treat if they cause subsequent UTIs. Therefore, antibiotics for preventing UTIs should only be considered after trying the above preventive approaches. Preventive antibiotics can be taken in several different ways¹¹:

- Continuous antibiotics: You can take a low dose of an antibiotic once per day or three times per week. The antibiotic prophylaxis regimen, if tolerated, is

usually assessed at three to six months to determine whether it has been helpful. If so, it may be continued for several more months to years.

- Antibiotics following intercourse: In women who develop UTIs after sex, taking a single low-dose antibiotic after intercourse can help to prevent bladder infections. This usually results in less antibiotic use than continuous antibiotics.
- Self-treatment: A plan to begin antibiotics at the first sign of a bladder infection may be recommended in some situations. Before starting this regimen, it is important that you have had testing (urine cultures) at least once in the past to confirm that your symptoms were caused by a bladder infection. This is because it's possible to have symptoms of a bladder infection but not actually have an infection, in which case antibiotics would not be helpful.

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