

## Review Article

# An Overview on Homoeopathic Management for Urinary Tract Infection

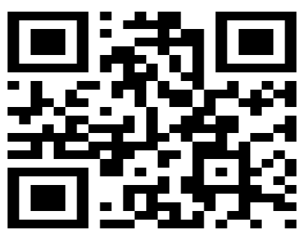
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### ABSTRACT

Urinary tract infection (UTI) is the most common type of infections having different causation and leading to the most reason for hospital admission. Mostly infecting women, children and old aged people. Though this infection acute on its onset is mostly associated with underlying chronic disease. Uncomplicated urinary tract infections occur in female patients with no structural abnormality or comorbidities such as diabetes, old age, pregnancy, or immunocompromised status. Complicated urinary tract infections occur in patients with structural abnormalities or comorbidities such as diabetes, old age, pregnancy, or immunocompromised status. Modern medicine uses antibiotic therapy for treatment but cannot prevent the recurrency of these infections and could do symptomatic relief. However, Dr. Hahnemann approached with individualization in homoeopathy thereby prescribing simple single remedy with proper case history, analysis and forming totality of symptoms with repertorization.

**Keywords:** UTI, Cystitis, Vesico-ureteric reflex, urethritis, calculi, chronic, acute, vaginitis, haematuria



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## INTRODUCTION

Urinary Tract Infection (UTI) as a condition in which the bacteria invade, persist and multiply within the urinary tract. It is an inflammatory response to the urothelium to bacterial invasion that represent in form of bacteriuria (presence of bacteria in the urine) and pyuria (presence of pus in urine) or hematuria (presence of blood in urine).

### Epidemiology

Urinary tract infections (UTIs) are some of the most common bacterial infections, affecting 150 million people each year worldwide and are very frequent bacterial infections in women. They usually occur between the ages of 16 and 35 years, with 10% of women getting an infection yearly and more than 40% to 60% having an infection at least once in their lives. Recurrences are common, with nearly half getting a second infection within a year.

Urinary tract infections occur at least four times more frequently in females than males.

### Pre-disposing factors

#### Anatomical factors

Posterior urethral valve - obstructing the bladder outlet

Vesico-ureteral reflux- urine flow backwards to the kidney due to faulty valve

Ureteric or urethral stricture- restriction in the urethra or ureter causing obstruction of urine flow

Benign prostatic hypertrophy- enlargement of prostate thereby obstructing the passage of urine.

#### Functional factors

Neurogenic bladder - lack of bladder control due to lesion to brain or spinal cord or any other nervous system problem

#### Mechanical factors

Catheterization-insertion of catheter for a

longer time in urethra lead to multiplication of bacteria and other microorganism

Stents-route to which the microorganism enters the urinary tract

Other factors

In female

Post-menopausal state (oestrogen deficiency)- decrease in the body's own tendency to make antibodies and strengthen the cells of the urinary tract

Perineal hygiene- due to less spacing between the perineal opening and the urethra chances of infection increases.

Contraceptive like spermicidal jelly, vaginal douching etc.

In male

Phimosis- due to presence of tight foreskin urine remains stagnant causing infections

Chronic prostatitis- enlarge prostate can cause obstruction of urine flow through the urethra

Seminal vasculitis- infection of the seminal vesicle can lead to UTI

Epididymorchitis-infection of the epididymis or the testis can also lead to UTI

In both male and female

Diabetes mellitus-due to presence of glucose in the urine it becomes more susceptible to bacterial invasion

Immunosuppressant (post-transplant)

Renal calculi- calculi causes obstruction and stagnation of urine which make it favourable for the microbial manifestation

Congenital abnormalities

Route of infection

Ascending route – Most bacteria enter the urinary tract from the faecal reservoir via ascent through the urethra into the bladder. It is now generally believed that uropathogenic bacteria are selected from the faecal flora by the presence of virulence factors that enable them to adhere to colonize the perineum and urethra and migrate to the urinary tract.

Haematogenous route – Infection of the kidney by the haematogenous route is uncommon in normal individuals. However, the kidney is occasionally secondarily infected in patients with *Staphylococcus aureus* bacteraemia from oral sites or with *Candida* fungemia.

Lymphatic route – Direct extension of bacteria from the adjacent organs via lymphatics may occur in unusual circumstances such as a severe bowel infection or retroperitoneal abscesses.

Classification of urinary tract infection (uti)

Upper Urinary Tract Infection

Includes infections manifesting upper urinary tract organs like kidney and ureter.

Lower Urinary Tract Infection

Includes infections manifesting lower urinary tract organs like bladder and urethra.

### **Pathophysiology**

Urine is an excellent culture culture medium for bacteria, in addition, the urothelium of susceptible person may have many receptors, to which strains of many bacteria become adherent. When the bacteria invade bladder mucosal wall, there is an inflammatory reaction called cystitis produced. The majority of organisms causing urinary tract infection are enteric coliforms that typically inhabit the periurethral vaginal introitus. These organisms ascend the urethra into the bladder and cause the infection. Sexual intercourse is a common cause of UTI as it promotes the migration of bacteria into the bladder. People who frequently void and empty the bladder tend to have a lower risk of a UTI. Factors that make it less favourable for bacterial growth include: a pH less than 5, the presence of organic acids and high levels of urea. Frequent urination and high urinary volumes are also known to decrease the risk of UTI. Bacteria that cause UTIs tend to have adhesins on their surface which allow the organism to attach to the urothelial mucosal surface. In addition, a short urethra also makes it easier for the uropathogen to invade the urinary tract. Premenopausal women have large concentrations of lactobacilli in the vagina and an acidic pH which prevents colonization with uropathogen.

### **Clinical features**

Typical clinical features of cystitis and urethritis are-

Fever with chills and rigors

Abrupt onset of increase urine frequent and urgency

Burning pain in the urethra during micturition (dysuria)

Suprapubic pain during and after voiding

Intense desire to pass more urine after micturition, due to spasm of the inflamed bladder wall (strangury)

Urine that may appear cloudy and having unpleasant odour

Non-visible or visible haematuria

#### **Classification of clinical manifestation**

**Asymptomatic bacteriuria-** A diagnosis of ABU can be only considered when the patient does not have local or systemic symptoms referable to the urinary tract. The clinical presentation is usually that of a patient who undergoes screening urine culture for a reason unrelated to the genitourinary tract and is incidentally found to have bacteraemia.

**Uncomplicated cystitis-** The typical symptoms of cystitis are dysuria, urinary frequency and urgency. Nocturia, hesitancy, suprapubic discomfort and gross haematuria are often noted as well. Unilateral back or flank pain is generally an indication.

**Pyelonephritis-** Mild pyelonephritis can present as low-grade fever with or without lower back pain or costovertebral angle pain whereas severe pyelonephritis can manifest as high fever, rigors, nausea, vomiting and flanks and/or loin pain. Fever is the main feature which typically exhibit a high, spiking 'picket-fence' pattern

**Prostatitis-** It includes both infective and non-infective abnormalities of the prostate glands. Acute presents as dysuria, frequency and pain in the prostatic, pelvic, or perineal region. Fever and chills are usually present, and symptoms of chronic bladder outlet obstruction are common.

**Complicated UTI-** symptomatic episodes of cystitis or pyelonephritis in a man or women with an anatomic predisposition to infection, with a foreign body in urinary tract, or with factors predisposing to a delayed response to therapy.

#### **Diagnostic tool**

Urine dipstick test

Urine culture

Ultrasonography Abdomen and Pelvis

Cystoscopy

Renal Ultrasonography (IVU)

Dimercaptosuccinic acid (DMSA) renal scan

Pelvis examination and rectal examination

Voiding cystourethrogram/micturating cystourethrogram

#### **Prevention of UTI**

Drink plenty of liquids to flush bacteria out of the urinary system.

Wipe from the vagina to the anus after defecation to avoid spreading bacteria.

Drink water before and after sex so that one will urinate a good volume with a steady stream afterwards. This will help eliminate any bacteria that may have entered.

Consider using another method of birth control or a different brand of condom for your spouse if you suspect that chemical over the condom is causing irritation.

Avoid tight clothing. It may irritate tissues, trap heat, and promote bacterial growth.

#### **Treatment of UTI**

Increase fluid intake

Antibiotic therapy

Urinary analgesics and antispasmodic therapy

Aminoglycoside for gram negative bacteria

#### **Role of homoeopathy in treatment of urinary tract infection**

Homoeopathy approaches the problems of the patient in a unique way known as individualization. Here the patient is considered as a separate unique individual.

Each person differs from the other in the reactive pattern, so is the case with Homoeopathic medicines. The human being right from the moment of birth lives in a dynamic environment, which is affecting him at all time in many ways. If the stimuli are stronger than the organism's natural resistance, a state of imbalance will occur, with signs and symptoms. The results can be seen on the mental, emotional and physical level. Homoeopathy treats the person as a whole. It means that homeopathic treatment focuses on the patient as a person, as well as his pathological condition. The homeopathic remedies for UTI are selected after a full individualizing examination and case-analysis, which includes the medical history

of the patient, physical and mental constitution etc. A miasmatic tendency (predisposition/susceptibility) is also often taken into account for the treatment of chronic conditions. The medicines given below indicate the therapeutic affinity but this is not a complete and definite guide to the treatment of this condition. The symptoms listed against each medicine may not be directly related to this disease because in homeopathy general symptoms and constitutional indications are also taken into account for selecting the homeopathic remedies for UTI.

#### **Remedies use for urinary tract infection**

**Apis Mellifica-** The keynote for Apis in urinary affections are scanty or suppressed urine, drowsiness, oedema in various parts, thirstlessness and suffocation on lying down. The urine is dark, highly aluminous and contains cast, so it is readily seen how Apis may corresponds to any forms of Bright's disease. In difficult micturition of children Apis is often a useful remedy. It has frequent desire, with the passage of a few drops at a time. Among other symptoms are great irritation at the neck of the bladder and incontinence of urine. It is also the remedy to be thought of in retained urine or inflamed bladder after abuse of Cantharis.

**Apocyanum Canninum-** It acts on the kidneys and give rise to various dropsical conditions. It produces a scanty urine, which is light in colour, or, as it is given, sherry-coloured. Its first effect is to produce a copious diuresis; this is followed by the scantiness of urine which results in dropsy. It also produces an incontinence and may be useful in enuresis. A sinking bruised feeling at the stomach is an indication for its use. It differs from Arsenic and Apis in the fact that it has unquenchable thirst. Arsenic wants little and often, Apis is thirst less.

**Berberis Vulgaris-** It seems to correspond too many symptoms which occur in cases of renal calculi. It has severe tearing pains in the kidneys, not merely backache, but pains deep in the kidneys themselves; these pains extend down the back in the kidneys themselves; these pains extend down the

back and down the ureters into the bladder; nor do stop here, for we find cutting pains in the bladder extending into the urethra. These pains in the back and along the ureters are very severe; they are worse stooping, lying or sitting, and relieved by standing. In the bladder they cause a desire to urinate, and the patient is constantly urinating, for the bladder seems imperfectly emptied. The bladder aches. The urine itself is reddish, has a reddish deposit consisting of mucus, epithelium and lithates.

**Cantharis-** It consist of persistent and violent urging to urinate, with great tenesmus; the urine is passed only in drops and seems like molten lead passing through the urethra, so intense is the burning. There is with this, usually an aching in the small of the back. It is often indicated in acute cystitis, gravel and urethritis, the great keynotes being the burning and the tenesmus of the bladder; haematuria also calls for Cantharis under certain conditions.

**Causticum-** In paralytic conditions about the bladder Causticum deserves first place. It is one of our great remedies in enuresis, and its characteristics are involuntary micturition at night in sleep, when coughing, sneezing or blowing the nose, showing a weakness of the sphincter. Another indication of this is the difficulty the patient has in passing the last few drops of urine; the fact that he has to wait a long time before it starts, and that during the act it is expelled very slowly, showing not only a weakness of the sphincter but a weakness of the whole muscular system of the bladder. Nocturnal wetting of the bed in children, occurring during the first sleep at night, calls for Causticum. Paralysis of the bladder after labor also calls for this remedy.

#### **CONCLUSION**

Urinary tract infections (UTI) are the most common cause of hospital admissions.

Though acute in presentation, it usually occurs due to bullying chronic diseases.

Mostly seen in women than in males. Also, more incidences in children and elderly people.

Many times, UTI can be asymptomatic and

can be accidentally diagnosed by investigations.

Homeopathic medicines work excellent in acute infections. Where remedy is prescribed on the basis of acute totality.

Also, constitutional remedy helps in cure when infection is related to the chronic disease and also in case of recurrent infections.

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