

Homoeopathy approach in the management of urinary tract infection: a systemic review

Enfoque homeopático en el tratamiento de la infección urinaria: una reseña sistémica

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ABSTRACT

Background: Urinary tract infection (UTI) is a common, distressing, and occasionally life-threatening condition. UTI may be defined as a condition in which bacteria enter, persist and multiply within the urinary tract. The infection is mostly caused by Gram-negative bacteria such as Escherichia coli, Klebsiella, Enterobacter, Pseudomonas and Proteus. The incidence of UTI is 0.5 to 0.7 episodes per person per year in females of whom 25% of them have recurrences.

Aim and Objective: The aim of the study was to summarize and review the available literature on effectiveness of homoeopathic medicines and their therapeutics for the treatment of Urinary Tract Infections.

Material and Methods: All the available literature in the form of book and scientific data from various databases such as PubMed, Google Scholar, Medline and Science Direct are used for the review.

Conclusion: The available literature suggests that homoeopathic approach has been effective in treating the cases of Urinary Tract Infection. More work should be done to increase the evidence for those homoeopathic management that are not commonly used for daily practice for Urinary Tract Infections through large and well documented RCT designed studies.

Keywords: Urinary Tract Infections, Lower Urinary tract infections, Homoeopathy, Cystitis

RESUMEN

Antecedentes: la infección del tracto urinario (ITU) es una enfermedad frecuente, molesta y, en ocasiones, potencialmente mortal. La ITU puede definirse como una enfermedad en la que las bacterias entran, persisten y se multiplican en el tracto urinario. La infección está causada principalmente por bacterias Gram negativas como *Escherichia coli*, *Klebsiella*, *Enterobacter*, *Pseudomonas* y *Proteus*. La incidencia de la ITU en mujeres es de 0,5 a 0,7 brotes por persona y año, de los cuales el 25% son recurrentes.

Objetivo y finalidad: el objetivo del estudio fue resumir y revisar la literatura disponible sobre la eficacia de los medicamentos homeopáticos y su terapia para el tratamiento de las infecciones del tracto urinario.

Material y métodos: para la revisión se ha utilizado toda la bibliografía disponible en forma de libro y datos científicos de diversas bases de datos como PubMed, Google Scholar, Medline y Science Direct.

Conclusión: la literatura disponible sugiere que el enfoque homeopático ha sido eficaz en el tratamiento de los casos de infección del tracto urinario. Deberían realizarse más trabajos para aumentar la evidencia de aquellos tratamientos homeopáticos que no se utilizan habitualmente en la práctica diaria para las infecciones urinarias mediante estudios amplios y bien documentados con diseño de ECA.

Palabras clave: infecciones del tracto urinario, enfermedades del tracto urinario inferior, homeopatía, cistitis

INTRODUCTION

Urinary tract infection (UTI) is a common, distressing, and occasionally life-threatening condition. UTI may be defined as a condition in which bacteria enter, persist and multiply within the urinary tract. The clinical features, diagnosis, treatment, complications, and long-term sequelae depend on the site of the infection and the presence of any structural abnormality. The infection is mostly caused by Gram-negative bacteria such as *Escherichia coli*, *Klebsiella*, *Enterobacter*, *Pseudomonas* and *Proteus*. *E coli* is the most common causative organism for UTI. Fastidious organisms, anaerobic bacteria and fungi like *Candida* may occasionally be responsible for hospital-acquired UTI. The incidence of UTI is 0.5 to 0.7 episodes per person per year in females of whom 25% of them have recurrences. (1). UTI is associated with multiplication of organisms in the urinary tract and is defined by the presence of more than 10⁵ organisms/mL in the midstream sample of urine (MSU).

UTI may be anatomically subdivided into:

Lower tract infections

- rethritis

- p
rostatitis, and
- c
ystitis

Upper tract infections

- P
yelonephritis
- p
erinephric abscess

The clinical presentation of UTI:

- Fever with chills and rigors,
- Frequency of micturition
- Dysuria or scalding micturition
- Urgency
- Haematuria
- Suprapubic pain resulting from cystitis
- Strangury results from cystitis
- Urine is cloudy with an unpleasant odour

Host Factors Predisposing to Urinary Tract Infection

Anatomical factors

- Posterior urethral valve
- Vesico-ureteric reflux
- Urethral stricture
- Benign prostatic hypertrophy

Functional factors

- Neurogenic bladder

Other factors

Males and females

- Diabetes mellitus
- Immunosuppression (post-transplant)
- Calculi
- Congenital abnormalities

Foreign bodies:

- catheters,
- stents

Females

- Post-menopausal state (oestrogen deficiency)
- Voiding habits
- Spermicidal jelly
- Vaginal douching
- Perineal hygiene

Diagnosis is made primarily by history. In women with dysuria and frequency, in the absence of vaginitis, the diagnosis is UTI 80% of the time. Microscopic examination of urine is the crucial first step in confirming UTI. Homeopathy is the second largest treatment used by peoples around the world. Homeopathy principle is based on concept of individualization where medicines are given based on totality of symptoms. Urinary Tract Infections can be treated effectively with homeopathy as well as improved the quality of life of the patients.

AIM AND OBJECTIVE

The aim of this review was to summarize and review the available literature on the effectiveness of homeopathy and its therapeutics for the treatment of Urinary Tract Infections. The objective is to know the clinical evidence and its homeopathic treatment for the most common and problematic disease Urinary Tract Infections and to find way for new research.

MATERIAL AND METHODS

1.1 Search Strategy –

1.2 All the related literature search were conducted in various electronic databases such as Google Scholar, PubMed, Research Gate, Medline , Science Direct . The search term used were Urinary Tract Infections, Cystitis, Homeopathy, complementary and Alternative Medicine. Various book was referred regarding sign and symptoms of Urinary Tract Infections.

1.3 Inclusion criteria

Studies related with homoeopathic intervention, animal experimentation with homoeopathic medicines, clinical trials as add on therapies, studies on sign and symptoms of urinary tract infections were included.

1.4 Exclusion criteria

Studies not related to homoeopathic intervention were excluded.

REVIEW OF LITERATURE

Antibiotics and symptomatic treatments make up the traditional UTI treatment. These medications also cause GIT disruptions, raised liver enzyme levels, elevated serum creatinine, skin rashes, aseptic meningitis, haematological issues, nausea, vomiting, heartburn, and other side effects. Additionally, there is a chance that the infectious agent will develop a resistance to this antibiotic therapy, increasing the likelihood of recurrent infections as a result. The numerous uropathogens, which can encode a wide variety of virulence factors, as well as the development of antimicrobial resistance, pose a threat to the only available effective treatment option, antibiotics.

Practitioners must frequently or continuously administer broad-spectrum antibacterial drugs which results in the eradication of the commensal intestinal and vaginal flora, which may cause recurrent infections or harm to the urinary system. The development of a novel strategy other than the administration of antibiotic prophylaxis against RUTIs in women is therefore necessary, especially considering the increasingly virulent bacterial strains.

A Homeopathic medicine will enhance resistance to infection by stimulating our immune system so that the illness can be resolved as rapidly and with as little discomfort as possible. Homeopathic medicines work on an entirely different principle; it doesn't interfere with the natural immune response but works alongside it by enhancing one's ability to fight an infection. Based on the classical approach of Homeopathy a Homeopathic practitioner looks at the person holistically, that is mind, body and emotion together and not just at the symptoms of the illness.

Homeopathy can give solutions for a lifetime if we take medicines regularly and follow preventive measures. There are many drugs in Homeopathy which can act like catheters bring out the urine freely from the bladder without any surgical intervention. Homeopathic remedies offer an alternative to traditional medications that can not only help to alleviate the symptoms of UTIs but can do so effectively and with no side effects. Homeopathy cures stubborn cases of urinary tract infections miraculously.

PREVIOUS RESEARCH AND ARTICLES

The articles on homoeopathy related to UTI involved clinical case series, case studies, case reports, clinical trial, and invitro.

Randomised Double-Blind placebo-controlled trial of cantharis vesicatoria in the management of UTI was carried out in 30 outpatients with urinary tract infections. Both male and female participants between the ages of 25 and 65 were included. A total of 30 patients were split into two groups, a therapy group, and a placebo control group, each with 15 patients. The treatment group received cantharis vesicatoria mother tincture and control group received Placebo mother tincture. With the use of cantharis, patients responded well in nearly all cases, and the patient not only was free of the primary UTI complaints but also from the complaints that were related to the restoration of health. (3)

One case report was a case of four-month-old male baby who had symptoms like frequent weeping, especially before and during urination, irritability, and complete loss of appetite. Urine routine inspection and microscopic analysis revealed a large number of leucocytes, and urine culture revealed a large number of E. coli growth with more than 100,000 CFU/ml. The parents first went to an allopathic paediatrician, who ordered antibiotics and instructed them to begin using them right away. However, the parents were unwilling to give their four-month-old infant antibiotics, so they went and asked for homoeopathic treatment. Cantharis 30CH was chosen after careful case taking and analysis, and it was suggested that one globule be dissolved in breast milk and administered three times per day. Within three days, there was a noticeable improvement in the symptoms. After taking the homoeopathic medicine, a urine test revealed a drop in leucocytes, and all symptoms vanished completely within six days. (4)

Another case series on homoeopathy studies was that of RUTI in one infant and two adult's women. Infant was 1 year female suffering from UTI for past 4 months. She was given homoeopathic medicines Phosphorus. Second patient was of a 36-year-old woman with a history of a thyroid nodule, dyspareunia, erythematous rosacea, and melasma presented with glossodynia and dysuria that had been present for four years. On the tongue, cultures for *Candida Albicans* and *Escherichia coli* were both positive. She received homoeopathic medicines of *collibacillinum*, *candida albicans*, and *platinum metallicum*. She became better and the culture became negative. Third Patients was of 54-year-old female with three prior RUTIs caused by *Klebsiella spp* and Patient was treated with multiple antibiotics but failed to work throughout that time. She was given homoeopathic medicines *Eupatropium*, *Causticum*, and *Cantharis*. As a result of the treatment, the patient's cultures improved. (5)

Two case report which was integrated treatment with a non-conventional and tailor-made homeopathy regimen were used in each of two women with R-UTI addressing multiple levels of disease simultaneously, for prevention of recurrence of disease as well as treatment. Case 1 was of woman with chronic multi-morbid conditions, including R-UTI which had become multi-drug resistant. Her antibiotic use reduced, her diabetic profile improved with regular homeopathic treatment, and she did not need prophylactic antibiotics later. Case 2 was of woman despite following all conventional advice for treatment and prophylaxis suffered from R-UTI with post-coital cystitis and burning sensation. Her quality of life improved with addition of homoeopathy and prevented relapses. The Modified Naranjo Criteria total score were used in both cases. (6)

Another clinical study was of Efficacy of Sulphur 30 with hygienic measures in Urinary Tract Infection. Out of fifteen patients with urinary tract infection symptoms was chosen randomly, One UTI case was selected for further investigation. The patient was a 21-year-old girl who had been complaining for the previous three days of lower abdomen pain and burning urination. Her complaint grows worse during and after micturition, and a urine analysis was performed to check for the presence of epithelial cells and pus cells. Based on the similarities in her symptoms—acute totality—homoeopathic medicine Sulphur 30 was given to her, and a week of follow-up care was conducted. She was instructed to practise good cleanliness throughout the procedure. She showed considerable improvement with single homoeopathy medicine with proper health hygiene. (7)

Another case series contain 7 cases of UTI of which 5 are females and 2 are males. Patient were offered additional homoeopathic care as an add on to urological care which include adequate fluid intake and maintenance of hygiene. Repertory of the Urinary Organs and Prostate Gland includings Condylomata compiled by A R Morgan was used to find out appropriate homoeopathic medicine in treatment of patient with UTI. Six patients did not develop further attack of UTI while one patient get reduced of UTI rate. Also, one patient free of renal calculi after homeopathic treatment. (8)

In Vitro study on Effect of Homoeopathic Drugs on cultured Escherichia coli study, patients with Neurogenic lower urinary tract dysfunction were included and from urine samples analysis with considerable leukocyturia (> 90 leukocytes/L) and severe E. coli bacteriuria (> 105 cfu/mL), E. coli bacteria were then extracted from 28 separate urine cultures. Two testing were done i.e., Standard antibiotic resistance testing and simultaneous resistance testing to homeopathic drugs in high (C30) potency Regardless of the population's sensitivity to antibiotic treatment, no tested homoeopathic medications were found to have any discernible inhibitory effect on any E. coli population. Study concluded that the results of homoeopathic treatment for UTI are dependent on host effects, such as immune system activation, rather than impacts on bacteria, and are not based on direct bactericidal or bacteriostatic effects. (9)

One article was on miasmatic approach. Miasmatic base in this study consisted of the Psoro-Sycotic - 12 cases, or 40%; Psoro-Syco-Syphilitic - 8 cases, or 26.67%; and Psoric - 10 cases, or 33.33%. The study found that using the miasmatic approach and choosing the right potency to treat recurrent lower urinary tract infections were very effective which aids in removing the underlying source of the illness, hence reducing recurrence. (10)

Another study was Homoeopathic medicines with alteration of diet and regimen. 15 cases of UTI were included in Study Urine analysis were done before and after medication. Homoeopathic medicines were given on based of acute totality along with proper diet and regimen. It showed that role od diet and regimen along with homoeopathic medicines were found to be effective in management of UTI. (11)

In this study, homoeopathic and isopathic treatments were used to see what effects they had on a strain of Ur pathogenic Escherichia coli (UPEC) that was recovered from a snow leopard that had died from septicaemia secondary to necro-haemorrhagic cystitis. The homoeopathic remedies Cantharis vesicatoria (for urinary tract infection affinity), Mercurius solubilis (from symptoms analysis), and nosode prepared from the actual strain, all in dilution 12cH, were incubated with UPEC after it was isolated from heart blood and previously typified for

virulence factors. It was observed that in relation to the quality of the nutrients in the culture medium, two patterns of bacterial growth were seen. First, in a rich-nutrient medium, the nosode of E. coli 12cH had a substantial inhibitory effect. Secondly, in a poor-nutrient medium, Merc 12cH had a major inhibitory effect. It has been suggested that the prokaryote systems prior circumstances may have an impact on how well homoeopathic and isopathic treatments work in vitro.

LIST OF IMPORTANCE HOMOEOPATHIC REMEDIES AND THEIR INDICATIONS

Sl no.	Remedies name	Indications
1	Cantharis Vesicatoria	Constant urging to urinate, passing few drops at a time, sudden desire to urinate and intense itching in urethra. Intolerance urging, before, during and after urination; violent pain in bladder. Burning, cutting pains in urethra during micturition
2	Berberis Vulgaris	Burning pain. Sensation as if some urine remained after micturating. Pain in the bladder region. Pain in thigh and loins on micturating. Frequent micturition: urethra burns when not micturating.
3	Sarsaparilla	Severe pain at the conclusion of micturition. Urine dribbles while sitting. Bladder distended and tender. Child screams before and while passing urine. Renal colic and dysuria in infants. Pain from right kidney extends downward. Tenesmus of bladder; urine pass in a thin, feeble stream. Pain at meatus
4	Staphysagria	Urging to urinate, has to sit in urinal for hours; in young married women; after coition. Pressure upon the bladder; feels as if it did not empty. Sensation as if drop of urine was continuously rolling along channel. Burning in urethra during micturition. Prostatic problems; frequent micturition, burning in urethra when not micturating. Urging and pain after micturating.
5	Apis Mellifica	Incontinence of urine, with great irritation of the parts; can scarcely retain the urine a moment, and when passed scalds severely; frequent, painful, scanty, and bloody, Thirstlessness
6	Lycopodium Clavatum	Pain in back before urinating. Ceases after flow; slow in coming; must strain. Retention. Polyuria at night. Heavy red sediment, Child cries before micturating
7	Nux Vomica	Irritable bladder; from spasmodic sphincter. Frequent calls, little and often. Haematuria. Ineffectual urging, spasmodic and strangury. While micturating, itching in urethra and pain in the neck of bladder

8	Nitricum Acidum	Scanty, dark, offensive. Smells like horse urine. Cold on passing. Burning and stinging. Alternation of cloudy, phosphatic urine with profuse urinary secretion in old prostatic cases.
9	Natrium Muriaticum	Urine; involuntary while coughing, laughing; must wait for long while for urine to pass, if other is present, cutting in urethra after urination.
10	Sulphur	Frequent micturition, especially at night. Enuresis especially in scrofulous, untidy children. Burning in urethra during micturition, last long after (urethritis). Mucus and puse in urine, parts sore over when it passes. Must hurry, sudden call to urinate. Great quantities of colourless urine.
11	Pulsatilla Nigricans	Increased desire. Worse when lying down. Burning in urethral orifice, during and after micturition. Involuntary micturition at night, while coughing or passing flatus. After micturition, spasmodic pain in bladder. Thick yellowish discharge from urethra. Stricture, urine is passed only in drop, stream is interrupted. Acute proctitis. Pain and tenesmus during micturition, worse lying on the back.
12	Terebinthinae Oleum	Strangury with hematuria. Scanty, suppressed, odour of violets, Urethritis with painful erections. Nephritis following any acute disease. Constant tenesmus. Violent burning and drawing pain in kidneys, bladder, and urethra; cystitis and retention from atony of fundus.
13	Equisetum Hyemale	Principal action is on the bladder. A remedy for enuresis and dysuria. Severe, dull pain with feeling of fullness in the bladder, not relieved by micturating. Frequent urging with severe pain at the close of micturition. Urine flows only drop by drop. Sharp, burning, cutting pains in the urethra while micturating. Incontinence in children with dreams or nightmares when passing urine. Incontinence on old women, with involuntary stools. Retention and dysuria during pregnancy and after delivery.
14	Mercurius Solubilis	Frequent urging. Greenish discharge from the urethra; burning in the urethra when beginning to micturate. Urine dark, scanty, bloody, albuminous.
15	Sepia Officinalis	Red, adhesive, sand in urine. Enuresis, during first sleep. Chronic cystitis, slow micturition with bearing down sensation above the pubis.

CONCLUSION

In all the above articles and literature, homeopathy showed effectiveness in reducing symptoms of Urinary Tract Infection. But RCT, invitro study, case studies and reports were small study. However, it may form the basis for a larger study, which could provide evidence of the effect of homeopathy in the therapy of UTI. Repertories should be utilised to choose similimum and learn which repertories have been proven to be useful.

FINANCIAL SUPPORT

NIL

ACKNOWLEDGMENT

The author is thankful to his fellow colleagues and post graduate scholars of Department of Repertory.

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Received: 28th January 2023; Accepted: 30th January 2023; First distribution: 24th April 2023.