CANNABIS SATIVA HOMOEOPATHIC MEDICINE IN THE MANAGEMENT OF UTI: A CASE SERIES

Shishir Mathur¹, Rajesh K. Meena*², Rajesh K. Kumawat², Juhee Jain³

¹Professor & Vice-Principal, ²Assistant Professor, ³PG Scholar

Dr. M. P. K. Homoeopathic Medical College, Hospital & Research Centre,
A constituent college of Homoeopathy University, Saipura, Sanganer, Jaipur, Rajasthan, India-302029

Abstract:
Background- Urinary tract infection (UTI) is a common bacterial infection in humans, both in the community and hospital settings and has been reported in all age groups and in both sexes. In India, UTI is more prevalent in rural areas, due to poor personal hygiene, life style, malnutrition and environmental conditions. The detection of bacteria in a urine culture is the diagnostic "gold standard" for UTI.

Aim of the study is to find out the effectiveness of Cannabis sativa in the cases of UTI. Cannabis sativa (common name- Hemp) is also known as Marijuana. It is often indicated in infections of the urinary bladder, urethra and kidneys.

Material & Methods- This case series comprises of 6 patients (3 males and 3 females) with recurrent UTI. Every patient was asked to report weekly for 3 weeks. Pre-/ Post- routine and culture examination of urine were used for assessment of improvement as evidence. The common pathogens found were Escherichia Coli (n=4) and Klebsiella (n=2).

Result- Out of six patients, two reported that their general wellbeing got improved with homoeopathic treatment. All the patients did not develop further attacks of UTI. Another homoeopathic medicine Cantharis was given in 2 cases based upon the symptomatology, which also yielded good results.

Keywords: Urinary tract infection (UTI), Homoeopathy, Cannabis sativa, Organopathic prescribing, Escherichia Coli, Klebsiella.

*Corresponding author:
Rajesh Kumar Meena,
Assistant Professor,
Department of Homoeopathic Pharmacy,
Dr. M. P. K. Homoeopathic Medical College,
Hospital & Research Centre,
A constituent college of Homoeopathy University, Saipura, Sanganer, Jaipur, Rajasthan, India-302029
E-mail- raju.raju4@gmail.com
(M) 91+9468536417

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INTRODUCTION:
Urinary tract infection (UTI) is a common and painful illness that is rapidly responsive to modern antibiotic therapy [1]. It is one of the most prevalent bacterial infectious diseases, causing substantial financial burden on society, both in the community and hospital settings and have been reported in all age groups, in both sexes. About 150 million people are diagnosed with UTI each year [2]. Women are more likely to develop UTIs than men, due to anatomical differences. Atleast 50% of women, experience UTI once during their lifetime with 25% of those having the recurrent infection within the following six months. This occurs most frequently in the age group of 16 to 35 years in females while in males, it is unusual under the age of 50 and if present, indicates some sort of obstruction in the urinary tract. Almost 10% of the pregnant women suffer from urinary tract infection. UTI increases the risk of pyelonephritis, premature delivery, and fetal mortality among pregnant women [1].

The term UTI denotes symptomatic disease: cystitis, symptomatic infection of the bladder; and pyelonephritis, symptomatic infection of the kidneys. Uncomplicated UTI refers to acute cystitis or pyelonephritis in non-pregnant outpatient women without anatomic abnormalities or instrumentation of the urinary tract. The term complicated UTI encompasses all other type of UTI. Recurrent UTI is not necessarily complicated; individual episodes can be uncomplicated and treated. As such, catheter-associated bacteraemia can be either symptomatic (CAUTI) or asymptomatic [1].

In India, UTI is more prevalent in rural areas, due to poor personal hygiene, life style, malnutrition and environmental conditions [3].

In a study conducted at a tertiary care hospital at Jaipur, Rajasthan, India, the results showed that 17.19% of urine samples from patients attending the outpatient clinics at hospital showed significant number of pathogens. The demographic data indicates that women of the reproductive age formed the main group of adult patients with UTI coming to the outpatient clinics; 42.34% of all UTI detected in women were in age group of 21-50 years. UTIs were reported in 62.42% of females and in 37.67% of males. Elderly (61 years or more) males had a higher incidence of UTI (49.23%) compared to the elderly females [4].

*Escherichia coli* are the predominant uropathogen (80%) for UTI followed by *Staphylococcus saprophyticus* (10% to 15%); *Klebsiella, Enterobacter* and *Proteus* species and *Enterococci* infrequently cause uncomplicated cystitis and pyelonephritis. Other common uropathogens include *Pseudomonas* and *Proteus mirabilis*. The aetiology of UTI is also affected by underlying host factors that complicate UTI, such as age, diabetes, spinal cord injury or catherization [1].

Urine microscopy reveals pyuria in nearly all cases of cystitis and haematuria in 30% of cases. It overburdens by high numbers of dysmorphic red blood cells, white blood cells, or crystals; in general, counts of bacteria are less accurate than are counts of red and white blood cells. The detection of bacteria in a urine culture is the diagnostic "gold standard" for UTI; unfortunately, Studies of women with symptoms of cystitis have found that a colony count threshold of >10^5 bacteria/mL is more sensitive (95%) and specific (85%) than a threshold of 10^3/mL for the diagnosis of acute cystitis in women. In men, the minimal level indicating infection appears to be 10^3/mL.

In the guidelines of the European Association of Urology (EAU) on neurogenic lower urinary tract dysfunction, prophylaxis of UTI is not mentioned. These guidelines on UTI cover prophylactic measures merely for uncomplicated UTI. With increased antibiotic resistance and less prospects of new antibiotics in the near future, alternative measures to tackle recurrent UTI are necessary [5].

The aim of the study was to find out the effectiveness of *Cannabis sativa* in the cases of UTI. However, no literature on Homoeopathy research concerning the usefulness of *Cannabis sativa* in the cases of UTI is available. *Cannabis sativa* (common name- Hemp) is also known as Marijuana. It is often indicated in infections of the urinary bladder, urethra and kidneys. It has a variety of urinary symptoms, such as: sharp pricking pain, like needles in urethra; burning pain during micturation, extending to bladder, urine scalding. Zigzag pain along the urethra. There is stinging, biting and there is difficult urination with obstinate urging to urinate, Stoppage of urinary ducts by mucus and pus. Stream of water scattered [6, 7]. Incontinence of urine, urine turbid, white or reddish and as if mixed with blood and pus. There is scanty urine passed drop by drop with burning in the urethra before during and especially after urination. Some pathological conditions cured by George Vithoulkas with *Cannabis sativa* are urethritis with burning, biting or scalding pain extending backwards to the bladder when urinating, but worse after urination, with frequent urging to urinate (every 15 or 20
minutes); very painful spasmodic closure of the sphincter of the bladder [8]. According to F. Schroyens, Cannabis sativa covers highest marks in repertory under rubric Urethra - pain - during, which gives important indication for prescription [9]. Other useful remedy in the cases of UTI is Cantharis also known as Spanish fly, Blister-beetle. Its main action is upon urinary organs. The keynote of this remedy is an excessive burning sensation before, during and after micturition [6-8].

MATERIAL AND METHODS:
Case studies
The patients presented were reported at Homoeopathy Clinic, 2 CHH2, Jawahar Nagar, Jaipur, Rajasthan, India with different presentations of UTI, seeking homoeopathic treatment. This case series comprises of 6 patients (3 males and 3 females) with recurrent UTI.

The detailed case taking of all the participants was done followed by routine examination of urine and culture for establishment of the diagnosis. Patients were asked to report every week for follow ups for 3 subsequent weeks. Pre-/ Post- routine and culture examination of urine were used for assessment of improvement as evidence. Homoeopathic medicine Cannabis sativa was prescribed to all the patients included in this case series.

Organopathic prescriptions have a great role in acute as well as chronic conditions, where there are paucity of symptoms and time constraint for case taking, to find out the simillimum. Under these circumstances such prescriptions have a great value in managing the cases effectively [10].

Case 1
Patient was a 58 years old man with a history of UTI for last 6 days. Despite prophylaxis with lots of water intake and antibiotics he had recurrent attacks of UTI. He was presented with severe stinging, biting and burning in urethra before, during and especially after urination with obstinate urging to urinate which was worse in evening and at night. Scalding and scanty urine passed drop by drop with sensation in penis and urethra with frequent calls to urinate. Urine examination and culture test were done in which Klebsiellae organism was found [Fig.1 (B)] with 15-20 pus cell, 8-10 epithelial cells [Fig.1 (A)] in urine. Thus he was prescribed Cannabis sativa 30 for 1 week three times a day and Cantharis Ø 10 drops B.D. on June 18, 2017. The remedy led to a reduced burning with ease to pass urine. There was no organism detected [Fig.2 (B)] and the pus cells (8-10) and epithelial cells (4-6) [Fig.2 (A)] were reduced. He again received Cannabis sativa 30 for 1 week three times a day. On June 25, 2017, he remained without burning and stinging in urethra, with improvement in urgency up to July 2, 2017. There was no abnormality detected in repeated Routine Urine Examination [Fig.2 (C)].
Case 2
A 42 years old man presented with a history of severe burning in micturation for last 7 days. He was medication free and had never received any form of treatment for UTI. He was presented with scanty urine with burning, biting or scalding pain before, during and especially after urination which was worse in evening and at night. Pain was extending backwards to the bladder when urinating but worse after, with frequent urging to urinate (every 20-25 minutes). In urine examination and culture test, *E. Coli* was found [Fig.3 (B)] with 14-26 pus cell, 2-3 epithelial cell, and number of RBCs in urine [Fig.3 (A)]. Thus he received *Cannabis sativa* 30 T.D.S. for 1 week on July 5, 2017. The remedy led to reduced burning, urging and pain. Now he can pass urine easily. There was no organism detected [Fig.4 (B)] and the pus cells (4-6) and epithelial cells (1-2) were reduced with (6-8) RBC’s [Fig.4 (A)]. He again received *Cannabis sativa* 30 B.D. for 1 week on July 12, 2017. He remained without burning, stinging and pain in urethra with no complaint of frequency up to July 19, 2017. Normal Urine Examination was reported on the same day [Fig.4 (C)].
Case 3
A woman aged 36 years presented with a history of symptoms of UTI for last 12-15 days. In January 2017, she presented to a physician with scanty and severe scalding urine passed drop by drop mixed with blood and unbearable urging with burning, biting or scalding pain before, during and especially after urination which was worse in evening and at night. The condition was neither reduced by long term antibiotics nor by increase up take of water. On urine examination and culture test, Klebsiellae organism was detected [Fig.5(B)] with 12-13 pus cell, 10-12 epithelial cell, and fulfilled RBC’s in urine [Fig.5(A)] on July 13, 2017. Cannabis sativa 30 three times a day for 1 week and Cantharis Ø 10 drops B.D. was prescribed on July 13, 2017. The remedy led to reduced burning, urging with no blood in urine. There was no organism detected [Fig.6 (B)] and the pus cells (3-5) and epithelial cells (6-8) were reduced with (4-6) RBCs [Fig.6 (A)]. She again received Cannabis sativa 30 three times a day for 1 week, and Cantharis 5 drops B.D. on July 21, 2017. She did not report any symptom up to July 29, 2017. No abnormality was detected on repetition of Urine Routine Examination on the same day.
Case 4
A 25 years old male patient presented with the complaints of dribbling of urine which was passing drop by drop and has to wait before the urine flow since 15 days. Frequency of urination was also increased. He also had excessive sexual desire and sexual thrill with painful erection. *E. coli* [Fig.7 (B)] was positive in his report with 8-10 pus cell, 2-3 epithelial cells [Fig.7 (A)]. Thus on the basis of presenting complaints, *Cannabis sativa* 30 three times a day for 1 week on June 2, 2017 was prescribed. The remedy led to relief in dribbling of urine and frequency and there was slight relief in pain during erection with no marked improvement in sexual desire. There was no organism detected [Fig.8 (B)], the pus cells (4-6) and epithelial cells (1-2) [Fig.8 (A)] on the subsequent urine examination. He again received *Cannabis sativa* 30 three times a day for 10 days on June 9, 2017. He remained without dribbling and the frequency of urination was reduced on June 16, 2017. Subsequent routine examination of urine shows normal study.
Figure 7: Routine Urine Examination (A) and Culture and Sensitivity (B) before treatment for case 4

Figure 8: Routine Urine Examination (A), (C) and Culture and Sensitivity (B) after treatment for case 4

Case 5
A 57 year old married female reported complaints of UTI from last 8-10 days. She had recurrent UTI from the age of 55 when she had become depressed because of UTI and had been in frequent contact with urologist. She had received 8-10 courses of antibiotics for UTI, the most recent being 6 months prior to the treatment when she had high grade fever with UTI. She was presented with frequent urination (every half an hour) and scalding urine passed drop by drop, mixed with blood and pain in urethra before, during and after urination. *E. coli* was positive [Fig.9 (B)] with 7-9 pus cells, 4-6 epithelial cells and 6-8 RBCs in urine [Fig.9 (A)]. On the basis of presenting symptoms and recurrence, *Cannabis sativa* 30 B.D. for 1 week on August 25, 2017 was prescribed. The remedy gave a positive effect with decrease in the frequency of urination, in scalding urine and no blood was detected in urine. There was no organism detected in urine examination [Fig.10 (B)] and pus cells (4-6), RBCs (2-3) [Fig.10 (A)] were reduced.
along with no epithelial cells. She again received *Cannabis sativa* 30 B.D. for 1 week on August 2, 2017. She was relieved with pain in urethra, haematuria with no complaint of frequency of urination, with normal urine routine examination on August 9, 2017.

![Figure 9: Routine Urine Examination (A) and Culture and Sensitivity (B) before treatment for case 5](image)

Case 6
A female aged 18 years suffering from UTI for last 5-6 days was reported to the clinic. This was second attack of UTI since 7-8 months. She was presented with burning in urethra, has to wait some time before urine flows, blood in urine and pain in urethra before, during and after urination. She also complains of dullness and weakness of memory with anxiety about her health. On urine examination and culture test, *E. coli* was detected [Fig.11 (B)], with 12-15 pus cells, 8-10 epithelial cells and 1-2 RBCs in urine [Fig.11 (A)]. Thus she had given *Cannabis sativa* 30 B.D. for 1 week on May 25, 2017. On subsequent visit, there was decrease in the burning urination, no blood in urine, there was no organism detected [Fig.12 (B)], pus cells (2-3), epithelial cells (4-6) were reduced and RBCs were not found [Fig.12 (A)], and there was slight improvement in dullness of memory. She again received *Cannabis sativa* B.D.30 for 1 week on June 2, 2017. She was relieved with burning pain in urethra and doesn’t had to wait long before passing.

![Figure 10: Routine Urine Examination (A), (C) and Culture and Sensitivity (B) after treatment for case 5](image)
urine up to June 9, 2017, followed by normal urine routine examination [Fig.12 (C)].

Figure 11: Routine Urine Examination (A) and Culture and Sensitivity (B) before treatment for case 11

Figure 12: Routine Urine Examination (A), (C) and Culture and Sensitivity (B) after treatment for case 6

RESULT:
In this case series, homoeopathic management of UTI was found to be effective with organopathic treatment i.e., Cannabis sativa. It was found effective in the treatment of UTI, considering all the outcome measures, pre-/post-treatment urine routine examination and culture report and follow ups. The patients did not have recurrence during the period of 1 year on an average (mean duration) follows. The common pathogens found were Escherichia Coli (n=4) and Klebsiella (n=2). Out of six patients, two reported that their general wellbeing got improved with homoeopathic treatment. All the patients did not develop further attacks of UTI. Another homoeopathic medicine Cantharis was given in 2 cases based upon the symptomatology, which also yielded good results.

DISCUSSION:
Recurrent UTI is the most common reason for sepsicaemia and associated with an increased mortality affecting the quality of life of the patients. Until today, there is no evidence-based effective prophylactic treatment of UTI are available. Neither long-term antibiotics nor cranberry juice has demonstrated to be significantly superior to placebo treatment; the former, however, is associated with an increased number of resistant bacterial strains [11].

A case series (Pannek J. et al., 2014) mentioned the effectiveness of Homoeopathic medicines in UTI
based on totality of signs and symptoms of individual patients and exceeds the effect of other prophylactic measures [11].

The objective of this study was to answer one question: could Cannabis sativa be an effective treatment for UTI? The results of this case series provide preliminary evidence in favour of Cannabis sativa as organopathic treatment of UTI with no further attacks of UTI reported.

CONCLUSION:
This case series shows a potential effect of Cannabis sativa in the treatment UTI. However, a larger study should be taken up, which could provide better evidence in support of Homeopathy in the treatment of UTI. For future studies focus should be on evaluation on quality of life and more investigations to be recommended along with urine examination and culture.

Ethical issues
Patient’s consent for the reporting of the data has been obtained in interest of medical profession, however the patient’s privacy and integrity has been assured while reporting and publishing the data.

Conflict of interest
None declared

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Nil

REFERENCES: