



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY HEALTH SCIENCES

ISSN: 2394 9406

“AYURVEDIC DRUGS TO TREAT URINARY TRACT INFECTIONS- CASE REPORT”

**Dr. Pravin Somnath Khedkar ¹, Dr.Jyotsna Ahir² Dr. Sandip Patil³ , Dr
Masaudaalam Mujawar⁴ Dr. Nikhil Urunkar ⁵**

1. PG Scholar ,Kaumarbhritya Dept , Loknete Rajarambapu Patil Ayurvedic Medical College and Hospital ,Post graduate institute and research centre Islampur
2. Guide & HOD Kaumarbhritya Department, Loknete Rajarambapu Patil Ayurvedic Medical College and Hospital ,Post graduate institute and research centre Islampur
3. Associate Professor ,Kaumarbhritya Department, , Loknete Rajarambapu Patil Ayurvedic Medical College and Hospital ,Post graduate institute and research centre Islampur
4. Professor, Kaumarbhritya Department, , Loknete Rajarambapu Patil Ayurvedic Medical College and Hospital ,Post graduate institute and research centre Islampur
5. Professor, Kaumarbhritya Department, , Loknete Rajarambapu Patil Ayurvedic Medical College and Hospital ,Post graduate institute and research centre Islampur

Abstract:

Urinary tract infections (UTI) in all ages are related with high morbidity and long term difficulties. Use of Antibiotics is useful in cases of UTI, consequently opposition of pathogenic microorganisms to antibiotics is of high Clinical concern. According to Ayurveda drugs especially important components which have been utilized for the Treatment of various diseases. The review paper highlighted different clinical studies and scientific studies which are Useful to prove the adequacy of Ayurveda drugs against urinary tract infections. *Ayurvedic* drugs were reviewed in The current paper in the awake of evaluating their well being for the clinical condition like UTI. *Ayurvedic* Medications showed good anti bacterial properties against both gram positive and negative microscopic organisms Causing UTI. Other aspects are highlighted likewise mitigating, diuretic, cell reinforcement, nephroprotective and Antiurolithiatic properties helpful in the administration

of UTI and all medications are protected even in high dosages Subsequently can be adequately utilized for UTI conditions. In this paper an attempt is made to highlight the research Work of herbal drugs of Ayurveda which would be effective in the treatment of UTI.

Key Words: Ayurveda, UTI, Ayurvedic drugs, Antibacterial.

INTRODUCTION

Urinary tract infection (UTI) is one of the major Problem influencing individuals from all age groups. Including neonate to geriatric age. UTIs are among the Most clinical condition causing infections through ought The world with significant clinical and money related Burden(1). Consistently around 150 million individuals Are being determined to have urinary tract contamination Around the world. In an estimation, about 60% females And 13% males are suffered from UTI and other related Conditions (2). Clinically, UTI is classified into two classes, Uncomplicated and complicated. Uncomplicated UTI Generally influences a sound person with no basic or Neurological urinary tract anomalies, which incorporates Cystitis and pyelonephritis. Complicated UTI is an Important condition creating various disorders like renal Obstacles, may cause renal failure or even neurological Issues(3). Females are progressively defenseless to UTI When contrasted with males due to the short length of Urethra, nonappearance of prostatic emission,

causing UTI which represents up to 90% of Cases. Majority of UTI cases caused by the Escherichia Coli (5)., and rest by Klebsiella, Enterobacter, Proteus, Pseudomonas, Enterococcus, Staphylococcus and others Can likewise causes of UTI(6).Other bacteria are likewise Proteus mirabilis, Klebsiella species, pseudomonas Aeruginosa and Enterobacter species can cause less Infections. Gram-positive organisms are less basic which Incorporates Group B Streptococcus, Streptococcus Aureus, streptococcus, saprophyticus and streptococcus, Haemolyticus (7).UTI portrays microbial colonization and disease Of structures of the urinary tract. As per the modern Science the organs included in urinary system are Kidney, Ureter, Bladder and Urethra and UTI affected By the picture of pyelonephritis, cystitis and urethritis(8).A

Sign, symptoms and Clinical findings

Infants and Young Children

1. Fever
2. Vomiting
3. Poor feeding
4. Irritability

5. Failure to thrive
6. Abdominal pain or tenderness
7. Dysuria (painful urination)
8. Frequency (frequent urination)
9. Urgency (sudden need to urinate)
10. Suprapubic pain or tenderness
11. Hematuria (blood in urine)
12. Foul-smelling urine

Diagnostic Assessment for UTIs

1. Urinalysis
 - Leukocyte esterase test:
 - Microscopic examination: Looks for WBCs, red blood cells (RBCs), and bacteria
2. Urine Culture
 - Quantitative culture
3. Imaging Studies (may be necessary in certain cases)
 - Renal ultrasound: Evaluates kidney structure and detects abnormalities
 - Voiding cystourethrogram (VCUG): Assesses bladder function and detects vesicoureteral reflux
 - DMSA scan: Evaluates kidney function and detects scarring
 - Blood tests: May be done to assess for signs of infection or inflammation
 - Urodynamic studies: May be done to assess bladder functions
 - Symptomatic UTI: Presence of symptoms (e.g., dysuria, frequency) and a positive urine culture

Therapeutic Intervention *Moringa oleifera* (Shigru)

Karandikar GK et al Studied that Shigru Decoction is a compelling solution for symptomatic help In UTIs because of the antibacterial and calming Operators present in the plant(9). Dr B Akila et al and T Rastogi et al revealed that stem bark of *M. oleifera* Has been tried against an assortment of microorganisms Like *escherichia coli*, *staphylococcus aureus*, *bacillus.Cereus*, *pseudomonas aeruginosa*, and *proteus mirabilis*. It shows useful impact against *escherichia coli*(10). F. J. Vijayalakshmi, et al analyzed the antiurolithiatic Activity of aerial extracts of Shigru(11) . Chetia et al Observed that the effect of *Shigru* is good in urinary Tract infection(12) .M Gul et al studies the Cell Reinforcement activity of *shigru* (13). Observed that the bark is compelling against oxidative Stress created in UTI on account of phenolic Component(14). M. R. Kumbhare et al estimated the Of total phenolic content, cytotoxicity and invitro Antioxidant activity of stem bark of *Moringa oleifera*. It was found that it repress adherence of Microorganisms to the mass of the bladder by sloughing Them off in urine(15).

Discussion

Benefits of *Shigru* in UTI Management:

- Antimicrobial Effects: *Shigru*'s antimicrobial properties help eliminate bacteria causing UTIs.
- Anti-inflammatory Properties: *Shigru*'s anti-inflammatory compounds reduce inflammation and alleviate symptoms associated with UTIs.
- Antioxidant Activity: *Shigru*'s antioxidants protect cells from oxidative damage, promoting overall health and well-being.
 - More research is needed to determine the optimal dosage and duration of *Shigru* treatment for UTIs .

Conclusion

Shigru, also known as *Moringa oleifera*, shows potential in treating Urinary Tract Infections (UTIs). Its antimicrobial properties may help combat bacteria like *Escherichia coli*, a common cause of UTIs. Studies suggest that *Shigru* leaf extracts exhibit antimicrobial activity against various pathogens.

Shigru may be a valuable adjunct treatment for UTIs due to its antimicrobial, anti-inflammatory, and antioxidant properties. However, more research is necessary to fully understand its efficacy and optimal usage in UTI treatment

Acknowledgment

We are very grateful to L.R.P Ayurvedic Medical college ,Hospital & Post graduate

institute & research centre Islampur Sangli to provide research assistance and financial support

References

1. Ana L. Flores-Mireles, Jennifer N. Walker. Urinary Tract infections: epidemiology, mechanisms of Infection and treatment options. Nat Rev Microbiol. 2015;13(5):269–284.
2. Cardwell SM, Crandon JL, Nicolau DP, McClure MH, Nailor MD. Epidemiology and economics of Adult patients hospitalized with urinary tract Infections. Hosp Pract (1995) 2016;44:33-40
3. Singh Randhir K, Dewasy Bijoylakshmi. Prevalence Of antibiotic sensitivity pattern of uropathogens in Patients of different age-groups from western region Of Nepal. International Journal of Medical Research & Health Sciences. 2016;5(9):1-7.
4. Loh KY, Sivalingam N. Urinary Tract Infections in Pregnancy. Malaysian Family Physician 2007; Volume 2, Number 2.
5. Ejrnæs K. Bacterial characteristics of importance For recurrent urinary tract infections caused by *Escherichia coli*. Dan Med Bull 2011;58:B4187.

6. Nalini R, J Ezhil Ramya. Recent Sensitivity Pattern Of Escherichia Coli in Urinary Tract Infection. RRJMB. 2014; 3(3).
7. Gupta S, Kapur S, Padmavathi D. Comparative Prevalence of antimicrobial resistance in Community-acquired urinary tract infection cases From representative states of Northern and Southern India. J Clin Diagn Res 2014; 8: DC09-12.
8. Sawarkar GR. Anatomical study of mūtravaha Srotasa with special reference to mūtrakruhhra. Journal of Indian System of Medicine. 2013 Jan
9. Karandikar GK. Effect of some Ayurvedic remedies On the urine output in rats and dogs. Ind Jour Med Sciences 1960; 14: 585-9.
10. Akila B, Manickavasakam K. Oral acute and sub Acute toxicity studies of two siddha formulations Vedikara silasathu parpam (vsp) and nerunjil Kudineer (nk) in experimental rats. Int J Pharm Pharm Sci 2012; 4(2): 88- 90.
11. Rastogi T, Ghorpade DS, U. A. Deokate, and S. S. Khanabad, Studies on antimicrobial activity of Boswellia serrata, Moringa oleifera and Vitex Negundo: a comparison. Research Journal of Pharmacognosy and Phytochemistry 2009; 1(1): 75–77.
12. Vijayalakshmi FJ, M. C. S. Kumar, G. P. Kodancha, B. Adarsh, A. L. Udupa, and U. P. Rathnakar. Antiuro lithiatic activity of aqueous extract of bark Of Moringa oleifera (Lam.) in rats. Health 2010; 2(4): 352–5.
13. Chetia B and S. Gogoi. Antibacterial activity of the Methanolic extract of stem bark of Spondias Pinnata, Moringa oleifera and Alstonia scholaris. Asian Journal of Traditional Medicines 2011; 6(4): 163–7.
14. Gul M, E. Kurutas, P. Ciragil. Urinary tract infection Aggravates oxidative stress in diabetic patients. The Tohoku Journal of Experimental Medicine 2005; 206(1): 1–6.
15. Pinar, B. K. Ergul, G. Mustafa, K. Metin, A. Murat, And G. Alanur. The effects of oxidative stress in Urinary tract infection during pregnancy. Mediators Of Inflammation 2005; 5: 309–11.