WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
Coden USA: WJPRAP Impact Factor 8.63
Volume 15, Issue 14, 894-902. Case Study ISSN 2277–7105

INTEGRATIVE UROLOGY: ROLE OF *UTTARABASTI* IN ACUTE BACTERIAL CYSTITIS CARE

[1]*Dr. Jigna Patel, [2]Dr. Pranit R. Nachan, [3]Dr. Urvisha C. Vasoya, [4]Dr. Dhaneshwar S.

[1]Lecturer, Shalyatantra Department, Government Akhandanand Ayurveda College and hospital, Ahmedabad, Gujarat, India.

[2,3,4]PG Scholar, Shalyatantra Department, Government Akhandanand Ayurveda College and hospital, Ahmedabad, Gujarat, India.

Article Received on 12 June 2026,
Article Revised on 03 July 2026,
Article Published on 16 July 2026,

https://doi.org/10.5281/zenodo.21368165

***Corresponding Author**

Dr. Jigna Patel

Lecturer, Shalyatantra Department, Government Akhandanand Ayurveda College and hospital, Ahmedabad, Gujarat, India.

How to cite this Article: [1]*Dr. Jigna Patel, [2]Dr. Pranit R. Nachan, [3]Dr. Urvisha C. Vasoya, 4Dr. Dhaneshwar S. (2026). Integrative Urology: Role of Uttarabasti In Acute Bacterial Cystitis Care. World Journal of Pharmaceutical Research, 15(14), 894–902.

ABSTRACT

Acute bacterial cystitis (ABC) is a highly prevalent infection of the lower urinary tract, significantly impacting patients social and psychological well-being. In *Ayurveda*, its clinical presentation mirrors *Pittaja Mutrakruccha*, where vitiated *Pitta* and *Vata* affect the *Bastisthan* (bladder). This case study evaluates the efficacy *of Trunapanchamula Kwath Uttarbasti* in a 45-year-old male patient presenting with Urgency, Frequency, and Burning micturition. Following three consecutive days of intra-vesical treatment with oral *Gokshuradi guggulu*, the patient showed significant clinical improvement, corroborated by negative urine reports and normal USG findings. This study suggests that *Uttarbasti* is an effective local drug delivery method for managing cystitis.

KEYWORDS: Acute Bacterial Cystitis, *Pittaja Mutrakruccha*, *Uttarbasti*, *Trunapanchamula Kwath*, Intravesical drug treatment.

INTRODUCTION

According to *Ayurveda*, a person is considered *Swastha* when his *Doshas*, *Agni*, *Dhatus*, and *Malas* are in a balanced state (*samadosha*, *samagni*, *samadhatu-mala-kriya*), and when they experience mental and spiritual well-being characterized by calmness, bliss, and happiness emphasizes the preservation of health and the management of diseases through specialized

branches.[1] Among them, *Shalyatantra* is prominent for its management of *Bastigata Rogas* (Bladder disorders). In the same way proper excretion of mala is of equal importance. One among *Trimala- Mutra* is responsible for *Bastipoorna* and *Kledavhanam* i.e. Elimination of waste product out of the body.[2] When this physiology is hampered, it leads to *Mutravaha Sroto Dushti Vikaras.* Acute bacterial cystitis is characterized by the infection and inflammation of the bladder lining. Globally, it accounts for millions of outpatient visits, with Uropathogenic Escherichia coli (UPEC) being the causative agent in nearly 95% of cases. The symptoms may include urinary frequency, urgency and burning pain, often associated with other symptoms perceived to originate from the urinary bladder. These can include a sudden strong urge to void, increased frequency of urination and nocturia.[3]

UPEC bacteria utilize P-fimbriae to adhere to the urothelium, eventually forming Intracellular Bacterial Communities (IBCs) or Biofilms. These biofilms protect bacteria from systemic antibiotics and the host's immune response. Bacteria break down Nitrates in urine into Nitrites, which serves as a key diagnostic marker.[4]

In Ayurvedic classics, this condition is correlated with *Pittaja Mutrakruccha*. *Acharya Sushruta* describes Vitiated *Pitta* along with *Vata* causes *Patients of Pittaja Mutrakrichhra complaints- Raktayukta, Shulayukta, Dahayukta, Krichh-Muhurmuhur Mutrapravartti.*[5] While oral medications are common, *Uttarbasti* (intra-vesical drug delivery) is indicated for localized bladder pathologies to achieve higher bioavailability and faster relief.

The *Nidana* (etiology) involves *Pitta-Vardhaka* diets leading to the accumulation of *Ushna* and *Tikshna* gunas in the *Basti*. This causes inflammation of the *Srotas* (channels). *Trunapanchamula* possesses *Madhura Rasa* and *Sheeta Virya*, which acts as a *Pitta-shamaka* and *Ropana* (healing agent) for the bladder mucosa.

The "First-line" treatment in modern medicine is a course of oral antibiotics (such as Nitrofurantoin, Trimethoprim-sulfamethoxazole, or Ciprofloxacin). The aim is to achieve a "Minimum Inhibitory Concentration" (MIC) of the drug in the urine to kill the bacteria. But the problem is that the drug must travel through the digestive system and the bloodstream before it finally reaches the bladder.

Uropathogenic *E. coli* (UPEC) invade the bladder lining and form "Intracellular Bacterial Communities" (IBCs) or biofilms.[6] These act as a physical shield, making it nearly

impossible for systemic (oral) antibiotics to penetrate and reach the dormant bacteria hiding inside. In order to break this film, *Acharya Sushruta* mentioned drugs of *Trinpanchamula group, Utopladi* group, *Kakolyadi* and *Nyogrodhadhi* group in the form of *Ghrita* and *Taila* for oral and *Basti* purpose in the management of *Pittaja Mutrakrichhra.*[7]

Here this case study was considered with the aim to describe the potentiality of ayurvedic treatment modality in the management of Acute bacterial cystitis.

CASE REPORT

Paitent details

- Name – ABC
- Age – 45 years
- Sex – Female
- Religion – Hindu
- OPD no. 1874

Chief Complaints

- Increased frequency of micturition.
- Urgency and strangury (painful, drop-by-drop voiding).
- Severe burning sensation (*Daha*).
- Suprapubic tenderness.

History of present illness

A 45-year-old female patient was having above mentioned complaints since 2 days presented to the *Shalyatantra* OPD of Government Akhandanand Ayurveda Hospital, Ahmedabad.

Past history

No past history of DM or HTN.

Personal history

- Nadi – 76/min
- Malpravritti – 1 time/ day
- Mutrapravritti – 12 to 14 times/day with Daha and ruja
- Ahar – Mixed
- Nidra – Madhyama

General examination

- Blood pressure – 132/84 mm/Hg
- Pulse rate - 75/min
- Respiratory rate – 17/min
- Weight – 75 kg
- Agni – Mandagni
- Akruti – madhyama
- Bala – madhyama

Systemic examination

- CNS- conscious, well oriented.
- RS – BLAE clear
- CVS – S1S2 hear
- PA- soft and symmetrical

Diagnosis: The diagnosis was confirmed via Mid-stream Urine (MSU) analysis, which showed the presence of Nitrites and Leucocytes. USG of the KUB region revealed bladder wall thickening indicative of cystitis.

MATERIALS AND METHODS

Sr.No	Treatment	Dose	Duration
1	Trunapanchamula Kwath	50ml	3 days
2	Gokshuradi guggulu	2 TDS	7 days

The patient was treated on an IPD basis under strict aseptic precautions.

- **Drug:** *Trunapanchamula Kwath* (Decoction of *Kusha, Kasha, Shara, Darbha, Ikshu*).[8]
- **Procedure:** *Uttarbasti* was administered once daily for 3 consecutive days.
- **Dose:** 50 ml at each sitting.
- **Technique**

The procedure was conducted in the minor Operation Theatre (OT) of the *Shalyatantra* Department, following strict aseptic protocols to prevent cross-contamination.

A detailed written informed consent was obtained after explaining the procedure, its benefits, and potential risks.

Fresh *Trunapanchamula Kwath* was prepared and filtered multiple times through a sterile cloth to ensure no particulate matter remained, which could irritate the bladder mucosa.

The patient was advised to void urine naturally before the procedure to empty the bladder.

The patient was placed in a comfortable supine position on the procedure table.

Under all aseptic precautions, the urethral orifice was lubricated with 2% Lignocaine jelly (which also acts as a mild local anesthetic).

A sterile 8 Fr infant feeding tube was gently inserted into the urethra until it reached the bladder.

A sterile 20 ml syringe was used to draw the lukewarm *(Sukhoshna) Trunapanchamula Kwath*.

The syringe was connected and the medicine was instilled into the bladder with slow, steady pressure to avoid sudden distention or spasms.

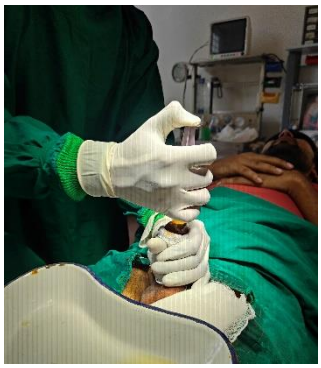
50 ml of the decoction was administered

The patient was instructed to remain in a supine position with the foot end slightly elevated

for 30 minutes.

This ensures maximum contact time between medicated *Kwath* and the inflamed urothelium.

The patient was advised to retain the medicine as long as possible (ideally until the first natural urge to void).



- **Pathya**

Following the procedure, the patient was advised to consume *Laghu* (light) and *Pitta-shamaka* diet (e.g., *Mudga Yusha*) and avoid *Vegadharana* (suppression of urges).

This cycle was repeated once daily for 3 consecutive days

OBSERVATION AND FOLLOW UP RESULT

Sr. No	Criteria / Symptoms	Before Treatment (Day 0)	During Treatment (Day 2)	After Treatment (Day 4)	Follow-up (Day 10)
1	**Urinary Frequency**	Very High (>15 times/day)	Moderate (6-8 times)	Normal (4-5 times)	Normal
2	**Urgency**	Severe (Incontinence risk)	Mild	Absent	Absent
3	**Burning Micturition**	Grade III (Severe)	Grade I (Mild)	Absent	Absent
4	**Pain (Strangury)**	Intense Suprapubic Pain	Occasional Discomfort	Absent	Absent
5	**Urine Appearance**	Cloudy / Turbid	Clearer	Clear	Clear
6	**Nitrites (Dipstick)**	Positive (+)	Negative (-)	Negative (-)	Negative (-)
7	**Leucocytes (MSU)**	Present (++)	Trace	Absent (Nil)	Absent
8	**USG KUB Findings**	Wall Thickening (>3mm)	-	Normal Wall	

Accession No	: 2026051301	Registered On	: 23/02/2025
Patient Name	: Mr. .	Reporting On	: 23/02/2025
Age / Sex	: 45 Year/Male	Sample Collected At	: Regular Report
Reffered by	: GAAH		

URINE ROUTINE EXAMINATION

Test Name	RESULTS	Unit	Reference Range
PHYSICAL EXAMINATIN			
VOLUME	10 ML		
COLOUR	PALE YELLOW		
APPERANCE	Slightly Turbid		
PROTEIN	Trace		
NITRITE	Trace		
GLUCOSE	Nil.		
KETONES	ABSENT		
UROBILINOGEN	ABSENT		
BILE SALT	ABSENT		
BILE PIGMENT	ABSENT		
BILIRUBIN	ABSENT		
MICROSCPIC EXAMINATION			
PUS CELL / LEUCOCYTES	10-12	/hpf/Leu/UL	
EPITHELIAL CELLS	4-5	/hpf	
BLOOD CELLS	ABSENT	/hpf/rbc/UL	
CASTS	4-5		
CRYSTALS	NOT DETECTED		
BACTERIA	E.coli		

Lab Technician

Accession No	: 2026051302	Registered On	: 27/02/2025
Patient Name	: Mr. .	Reporting On	: 27/02/2025
Age / Sex	: 45 Year/Male	Sample Collected At	: Regular Report
Reffered by	: GAAH		

URINE ROUTINE EXAMINATION

Test Name	RESULTS	Unit	Reference Range
PHYSICAL EXAMINATIN			
VOLUME	10 ML		
COLOUR	PALE YELLOW		
APPERANCE	CLEAR		
PROTEIN	ABSENT		
NITRITE	ABSENT		
GLUCOSE	Nil.		
KETONES	ABSENT		
UROBILINOGEN	ABSENT		
BILE SALT	ABSENT		
BILE PIGMENT	ABSENT		
BILIRUBIN	ABSENT		
MICROSCPIC EXAMINATION			
PUS CELL / LEUCOCYTES	1-2	/hpf/Leu/UL	
EPITHELIAL CELLS	3-4	/hpf	
BLOOD CELLS	ABSENT	/hpf/rbc/UL	
CASTS	ABSENT		
CRYSTALS	NOT DETECTED		
BACTERIA	NOT DETECTED		

Lab Technician

DISCUSSION

We made an effort to break the pathogenesis of the disease and the patient got remarkable relief with eradication of symptoms.

According to ayurveda *uttarbasti* acts as a Local Drug Delivery System. A small fraction of orally administered drugs only acts on the desired site either due to poor absorption or due to metabolic loss for which systemic therapy in bladder diseases most often is not fruitful. *Uttarbasti* bypasses first-pass metabolism, ensuring high drug concentration at the site of infection. The *Kwath* must be *Sukhoshna* (lukewarm). If too cold, it causes bladder spasms; if too hot, it aggravates the existing *Pittaja* inflammation. Lukewarm temperature facilitates the "diffusion" of the herbal actives through the bladder's glycosaminoglycan (GAG) layer.

The *Madhura* residues in *Trunapanchamula* may act as decoy receptors for *E. coli*. Instead of binding to the bladder wall, bacteria bind to the medicated fluid and are washed out during voiding. As shown in the table, the conversion of Nitrites from Positive to Negative by Day 2 indicates that the intra-vesical decoction effectively disrupted the *E. coli* colonization. This supports the "Decoy Receptor" theory, where the bacteria bind to the *Madhura* (sweet) elements of the Kwath and are expelled.

The *Sheeta Virya* (cold potency) of the drugs immediately neutralized the *Vidagdha Pitta* (inflamed state) of the bladder mucosa, leading to the disappearance of the burning sensation (*Daha*) within 24 hours. The mechanical flushing and the antimicrobial properties of the herbs help in clearing colonized bacteria. The reduction in leucocytes confirms the anti-

inflammatory action of the treatment, preventing the progression of cystitis into a chronic state or ascending infection. Cystitis can lead to chronic complications if not managed effectively. The use of *Trunapanchamula* via the intra-vesical route effectively pacifies the local *Pitta* and flushes the bacterial load. No recurrence was observed during a one-month follow-up.

CONCLUSION

In this case study, *Trunapanchamula Kwath Uttarbasti* showed remarkable results in managing Acute Bacterial Cystitis. The primary enhancement here over modern therapy is the Contact Time. While oral antibiotics rely on kidney filtration, *Uttarbasti* bathes the bladder wall in a high concentration of *Madhura* and *Kashaya* resins. The mechanical act of instillation and subsequent voiding acts as a "washout" for Intracellular Bacterial Communities (IBCs). The chemical properties of the grasses (*Kusha, Kasha*, etc.) neutralize the *Tikshna* (acidic) environment created by the bacterial breakdown of nitrates into nitrites. It is a safe, rapid, and cost-effective alternative to systemic antibiotics, particularly for providing immediate symptomatic relief and preventing chronicity.

REFERENCE

1. Sushruta, Sushruta Samhita, Hindi commentary by Ambikadatta Shastri, Sutra Sthana, Chapter 15/48, Varanasi, Chaukambha Sanskrit Sansthana.
2. Editor Yadavji Trikamji, Sushruta Samhita with Nibandhasangraha Commentary of shri Dalhanacharaya, Sutrasthana, chapter 15/4, Chaukambha Surbharati Prakashan Varanasi, reprint, 2014.
3. Nickel JC. Interstitial cystitis- an elusive clinical target? *J. Urol.*, 2003; 170: 816–7.
4. Medina M., Castillo-Pino E. An introduction to the epidemiology and burden of urinary tract infections. Ther. Adv. Urol., 2019; 11: 1756287219832172. doi: 10.1177/1756287219832172. [DOI] [PMC free article] [PubMed] [Google Scholar]
5. Charak, Charak Samhita, Hindi commentary by Kashinath Shastri, Chikitsa Sthana Chapter 26/34, Varanasi, Chaukambha Bharti Academy.
6. Anderson G.G., Palermo J.J., Schilling J.D., Roth R., Heuser J., Hultgren S.J. Intracellular bacterial biofilm-like pods in urinary tract infections. Science., 2003; 301: 105–107. doi: 10.1126/science.1084550. [DOI] [PubMed] [Google Scholar]
7. Sushruta, Sushruta Samhita, Hindi commentary by Ambikadatta Shastri, Uttara Tantra Chapter 59/20- 21,Varanasi, Chaukambha Sanskrit Sansthana.

8. Chakradutta Svimarsha „Vaidhprabha‟ hindi commentary by Dr Indradev Tripathi, *Mutrakruccha Adhikar* 161 Chaukhambha Sanskrit Bhawan, Reprint, 2019.