



RESEARCH ARTICLE

CLINICAL EFFICACY OF SHATAVARYADI KASHAYA IN PAITTIK MOOTRAKRICHHRA  
(WITH REFERENCE TO LOWER URINARY TRACT INFECTIONS)

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ABSTRACT

Urinary tract infections are one of the most common problem faced in today's era. The chief presentation is with distressing symptoms like burning, pain, frequency on urination etc. that ensures one's attention towards the routine quality of life. Various primary and secondary causes had illustrated in ayurvedic classics under mootravaha srotodushti as krichhramootrata. Antibiotics – the main stay of treatment may also limited their prolonged and frequent use due to resistance development/reinfection/relapses etc. The purpose of this study was to evaluate the efficacy of Shatavaryadi Kashaya as a potential drug for Paittik Mootrakrichhra/lower UTI.

**Study Design:** The study done on 60 patients, selected randomly with classical features with graded category undertaken for weekly assessment subjectively and for objective parameters, assessment done before and after therapy. Among 60, 2 were drop outs. So, complete trial done over 58 subjects. The trial period is of 21 days followed by 2 follow ups after therapy. Shatavaryadi Kashaya had administered in the dose of 40 ml BD after meal with 5 ml madhu & 5 gm misri. Result – A significant improvement assessed during and after completion of trial without any complication/adverse effect exploring the total effect of therapy, out of 58 patients, 94.82% were relieved, 1.72% patients were moderately improved 1.72% were mildly improved and 1.72% remain unchanged. Interpretation & Conclusion – The trial drug proved effective and nearly sure shot arrow in the management of distressing symptoms of UTIs. This study needs to be done on a large scale and for a longer time.

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INTRODUCTION

Ayurveda is a science of life with a practical approach and scientific research in the field of life provide us ground to reach the truth, to know the spheres and its limitations and finally to know its applied aspect. Both theoretical and practical knowledge are incomplete in their separate form and union of both these knowledge led to new invention and discovery acts. The world as well as India's population is increasing at a rapid rate with the result more of the people are living in unhygienic condition (i.e, lack of sanitation) due to which great majority of people do not pay attention to their sanitation. As a result of which diseases of urinary tract are more common, out of which *Mootrakrichhra* is one of them. *Mootrakrichhra* is very well described under the disorder of mootravaha srotas. *Vagbhatta* has mentioned that *Krichhrta* and *Vibandhata* are present in *Mootrakrichhra* but *Vijayrakshit*

in his commentary *Madhukosh* on *Madhav Nidan* has cleared this controversy by citing that both the features are found in *Mootrakrichhra* but *Krichhrta* predominates (Ma.Ni. 31/1) (Madhavkara, 2010).

ew=L; d`PN<sup>3</sup>s.k egrk nq%[ksu izo`fRrA\*<sup>1</sup>/<sub>4</sub>e/kqdkk"l<sup>1</sup>/<sub>2</sub>

Therefore, it can be alluded that *Mootrakrichhra* is a disorder of mootravaha srotas, which includes those forms of urinary disorders where *krichhrta* is the cardinal feature. On the contrary, Charak has classified *Mootrakrichhra* into 8 types i.e, Vataja, Pittaja, Kaphaja, Sannipataja, Shukraja, Ashmarija, Sarkraja and Raktaja *Mootrakrichhra* (Charaka et al., 2009). Out of which *Paittik Mootrakrichhrais* most common type found in society. In *Paittik Mootrakrichhra*, the vitiated pitta dosha along with vata i.e, apan vayu on reaching the vasti afflicts the mootravaha srotas due to which the patient feels difficulty in micturition (*Krichhra mootrata*), Peet mootrata, Sarakta mootrata, Sadaha mootrata, Saruja mootrata & Muhurmuhur mootrata (Charaka et al., 2009; Charaka, 2009).

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Clinical presentation of Paittik Mootrakrichhra shows close resemblance to UTI as described in modern texts especially the Lower Urinary Tract Infections i.e. *urethritis* and *cystitis* (Harrison's, 2008). Therefore, present study has an attempt to define Paittik Mootrakrichhra on scientific grounds viz-a-viz urinary tract infection. *E.Coli* is the most common causative organism to cause UTI but other bacteria like *Staphylococcus*, *Klebsiella* are the most common invading organism but fungi, yeast and viruses may also invade and cause UTI (Harrison's, 2008). The infectious process may involve the kidney, renal pelvis, ureters, bladder and urethra as well as adjacent structures such as perinephric fascia, prostate and epididymis. Thus urinary tract infection is potentially a serious condition and failure to manage it may lead to serious complications like renal failure. With the advent of effective antibiotics these complications can be avoided but antibiotics and analgesics, themselves have their limitations and side effects. Simultaneously, increasing incidence & resistance and high cost of therapy make it worse.

Mootrakrichhra is a vyadhi where difficulty in micturition is pradhan lakshan, affecting daily activities of life, it is having its impact upon physical, mental, spiritual health of persons causing person very distressed and annoying. As Mootrakrichhra involves vasti which is pradhan sthana of vata and also it is one of the trimarma which has to be protected. *Paittik Mootrakrichhra* can be successfully treated with shaman chikitsa i.e. drugs having sheeta virya and madhur vipak have been used to cure the disease (Charaka, 2009). Considering the etiopathogenesis of disease the classical drug *Shatavaryadi Kashaya* as illustrated in *CharakChikitsa Sthana Trimarmiyachikitsaadhyaya* had been taken (Charaka, 2009), in which all the drugs possess the properties of sheet virya, madhur vipak, guru-snigdha guna (Sri Bhav Misra, 2016) that helps in eliminating sanga and correcting the vitiated affect of vata along with daha prashmana via sheet virya properties.

'krkojh dk'k dq'k 'ona"Vk<sup>a</sup>fonkfj'kkyh {kqdl:dk.kke~A  
DokFka lq'khra e/kq'kdZjkH;ka ;qDra ficsr~ iSfRrd  
ew=d'PN<sup>a</sup>hAA¼p-fp 26@50½

Considering all the above facts & figures we had designed a scientific study under the title "*A Clinical Study To Evaluate The Efficacy Of Shatavaryadi Kashaya In Cases Of Paittik Mootrakrichhra (w.s.r. to Lower UTI)*".

## MATERIAL AND METHODS

### Selection of sample

A total of 60 patients were registered from OPD & IPD of State Ayurvedic Hospital and referred cases from other hospitals irrespective to their caste, sex or religion depending upon inclusion (age 18-60, diagnostic criteria as per classical symptoms & signs), exclusion (patients with other systemic disease, calculus, stricture, any anatomical/neurological pathology and pregnant women) criteria, and pre designed proforma. The patient on registration had to sign the consent and may also withdraw from trial on aggravation of complaints, personal matters and if patient not following the guidelines of trial. Out of 60 registered patients, 2 remained drop outs.

So, 58 patients undergone complete trial. The work had been approved by the Ethical Committee of State Ayurvedic College & Hospital, Lucknow on 15/12/15.

### Collection & Preparation of Medicine

The constituent drugs of Shatavaryadi Kashaya (Shatavari, Kusha, Kasha, Ikshu, Shali dhanya, Kaseruka, Gokshura, Vidarikanda) were collected from central drug store and near by market Lucknow. Identification of drugs was carried out in the department of Dravyaguna, Faculty of Ayurveda, State Ayurvedic College, Turiyaganj, Lucknow. All the constituent drugs were grinded into coarse form for decoction (kashaya) in Ras Sastra Department Ayurvedic Pharmacy of State Ayurvedic College Lucknow.

### Clinical Study

The present study includes 60 registered patients and after 2 drop outs, remaining 58 patients completed the trial. Shatavaryadi Kashaya was provided in dried form in packets and 40 ml kashaya given with 5 ml madhu and 5 gms misri BD after meal for 21 days. To assess the effects, enrolled patients were followed weekly during trial and twice after completion of trial at interval of 7 days. At every follow up changes in clinical features were noted and investigations were repeated before and after treatment. Patients were also advised for adequate water intake, fruits containing high water content, avoid over sexual indulgence, use of spermicides, diaphragms, douching in females, suppression of natural urges, hot-spicy meals etc.

### Assessment of improvement in condition

Assessment was made on following criteria during follow-up

- Change in clinical features/subjective features
- Finding in objective essentials – TLC, ESR
- Findings in urine – R & M, urine culture

### Statistical Analysis

Subjective and objective analysis presented on mean±SD. Significance is assessed at 5% level of significance. Results shown in % and data were analyzed by Kendal's tau test, paired t-test. Result assessment and significance done by Wilcoxin Rank Sum test.

## RESULTS AND DISCUSSION

### Demographic Profile

The conducted study dealt with the higher prevalence of disease among younger age groups from 21-30 yrs. (48.33%) followed by 31-40 yrs. of age (23.33%). Females (73.30%) were the higher sufferers than males and maximum among them were housewives (46.60%). That's why married ones were remain the mainstay of disease exposure (75%). Fertile age group for both genders, genitor-urinary anatomical peculiarities of females – short urethra, opening of vaginal introitus beneath the urethral opening, antibacterial action of prostratic secretions, unhygienic sexual intercourse, use of contraception (diaphragms, spermicides etc.), all these modes facilitates the invasion of microbes either by altering the pH of vagina or by damaging the vaginal and periurethral flora (Harrison's, 2008).

**Table 1. Score for symptom assessment**

Score	Burning Micturition	Frequency of urination/24 hrs.	Yellowish discoloration of urine	Haematuria	Pain during micturition	Fever & frequency in 24 hrs
0	No burning	Normal	Pale yellow/straw color	No blood	No pain	No fever
1	Mild/at starting of act	6-10 times	Mild yellow	Smoky urine	Occasional	Mild (99-100°F) once
2	Moderate/tolerable	11-15 times	Yellow color	Reddish urine	Moderate/tolerable	Moderate (100-103°F) 2-3 times
3	Severe/untolerable	>15 times	Deep yellow	Frank blood	Severe/untolerable	High fever (>103°F) >3 times

**Table 2. showing result of urine examination before and after treatment**

Urine Examination	BT (%)	AT (%)
Pus Cells	93.10	5.17
RBCs	65.51	3.44
E.Coli	24.13	0
Staphylococcus aureus	3.44	1.72
Proteus Spp.	1.72	0
Gram positive Spp.	3.44	1.72
Sterile Urine on C&S	67.24	96.55

**Table 3. Showing distribution of different symptom scores before and after treatment**

	Score							
	0		1		2		3	
	BT	AT	BT	AT	BT	AT	BT	AT
Burning Micturition	0	94.80	20.68	0	51.72	3.44	27.58	1.72
Frequency	0	87.90	87.90	3.44	51.72	5.17	18.96	3.44
Yellowish Discoloration	13.79	93.10	20.69	0	51.72	5.17	13.79	1.72
Haematuria	87.93	98.27	6.89	0	5.17	1.72	0	0
Pain	17.24	94.82	34.48	0	39.65	1.72	8.62	3.44
Fever	17.24	94.82	58.62	0	20.68	3.44	3.44	1.72
Frequency fever/24 hrs	20.68	98.27	98.27	0	17.24	1.72	0	0

**Table 4. Showing therapeutic effect on different symptoms before and after treatment**

Clinical features	Before treatment	After treatment	Mean Change	Z-value	p-value <sup>1</sup>
Sadaha mootrata	2.07±0.70	0.12±0.53	1.88±0.17	6.98	<0.0001*
Muhurmuhur mootrata	1.90±0.69	0.24±0.71	1.66±0.02	5.46	<0.0001*
Peeta mootrata	1.66±0.89	0.16±0.59	1.50±0.30	4.79	<0.0001*
Saruja mootrata	1.40±0.88	0.14±0.60	1.26±0.28	4.12	<0.0001*
Sarakta mootra	0.17±0.50	0.03±0.26	0.14±0.24	3.20	<0.0001*
Fever with chills	1.10±0.72	0.12±0.53	0.98±0.19	3.80	<0.0001*
Frequency of fever	0.97±0.62	0.03±0.26	0.94±0.36	3.75	<0.0001*

Parameters	Before treatment	After Treatment	Mean change	z-value	P value <sup>1</sup>
Pus cells in urine	1.60±0.92	0.14±0.61	1.46±0.31	4.45	<0.0001*
RBCs in urine	0.95±0.96	0.13±0.60	0.82±0.36	3.70	<0.0001*

<sup>1</sup>Wilcoxin Rank Sum Test \* Significant

Biochemical parameters	Mean±SD		Mean change	
	Day 0	Day 21	Mean±SD	p-value <sup>1</sup>
TLC	12345.11±2323.11	10740.34±2231.55	1604.77±91.56	0.0001*
Neutrophil	75.55±4.66	66.58±2.00	8.96±4.30	0.0001*
ESR	28.17±6.54	17.52±5.03	10.65±4.65	0.0001*

<sup>1</sup>Paired t-test, \*Significant

**Table 5. Showing result in total cases**

Effect of therapy	No.	%
Relieved	55	94.82
Moderately improved	1	1.72
Mild improvement	1	1.72
Unchanged	1	1.72

Majority cases were Hindus (76.60%) while Muslims remained 23.30% as circumcision reduces UTI incidences in them (Goldman, 1996). Rural cases (63.3%), illiterate cases (63.30%), labour class (33.30%) after housewives, lower class

(60%), unsatisfactory hygienic conditions – during menstruation, avoidance of frequent bladder voiding before and after intercourse (Harrison's, 2008), use of single closed toilets among joint families etc. (58.3%), dirty surroundings

near dwellings (60%) were recorded with higher incidences of diseases. Prevention is the primary means in getting rid off infection but before that education paved the ground to understand the modes of prevention and to remain healthy. Though government provided lot of support for personal urinals but still great proportion use sulabh sauchalaya/ open areas that emerged as one the threatening cause in conducted trial. Beside these, those cases who were addicted to ushna teekshna/pitta vardhak ahara like tea/coffee (33.33%) followed by smoking & alcoholics (23.33%), mixed diet (53.30%), vata-pittaja pradhan prakriti (33.33%) also analysed on counterpart of nidanas of mootrakrichhra.

In sequelae to this, drug history was also ruled out as 25% cases who undergone UTI treatment before and 16.66% had history of frequent antibiotics. Certain antibiotics/drugs increase the risk of UTI by altering the enteric flora (Harrison's, 2008). Clinical profile of the registered cases exhibited burning micturition (100%), difficulty in micturition (100%), frequent micturition (100%), yellowish discoloration of urine (86.20%), haematuria (12.06%), painfull micturition (82.75%), fever (82.75%), with frequency in 24 hrs. (79.31%). Regarding the graded severity, 20% cases recorded with disturbed sleep, 25% were of recurrent attacks and 46.60% cases had irregular bowel. Urine routine and microscopic examination of these cases before treatment revealed as 93.10% had pus cells in urine and 65.51% had RBCs in urine. By culture & sensitivity, E.Coli, was the commonest uropathogen responsible for UTI (24.13%) followed by staphylococcus aureus (3.44%) and proteus spp. (1.72%) and other gram positive species (3.44%). As per other objective parameters, 47.72% among females and 43.75% among males reported raised ESR along with 51.72% cases had higher ranges of TLC (8000-14000/mm<sup>3</sup>).

### Therapeutic Efficacy

In our study, drug proved to be highly efficacious in subsiding the symptoms and among them burning micturition responds best during follow ups. Drug also responds effectively in objective parameters but it didn't show satisfactory result over pathogens though E.Coli got completely eradicated but some pathogens from same group and other groups still persist after trial completion. So, the drug is effective in controlling the symptoms but not an effective antibiotic. In above table no. of cases in % are showing the response of trial drug BT & AT and a significant proportion of cases reported that reverted back to 0/normal grade in each symptom. So, from above data significant reduction in clinical symptoms along with objective parameters had shown that proves the therapeutic effect in controlling disease symptoms.

The above study had carried out in PG Department of Kayachikitsa, State Ayurvedic College, Turiyaganj, Lucknow and this study done over 58 cases in approximate 2 years duration. Finally, significant results came that encourages the use of Shatavaryadi Kashaya as safer remedy in cases of UTIs especially in rural areas, low socio-economic and among illiterate people who ever remain unaware about common causes of acute and as well as chronic ill health that sometimes proved life threatening. In classical texts also this medicine claimed to be effective against diseases of mootravaha srotodushti. By the various actions- anti inflammatory, anti microbial, demulscent, diuretic etc., decoction of shatavaryadi kashaya tested against number of microbes, among which it is

effective against eradicating E.Coli, most common pathogen of UTIs and also against some other microbes but not completely. However, clinical trial of longer duration with larger sample size should be carried out to assess further any adverse effects and commercialization of the drug.

### DISCUSSION

Paittik mootrakrichhra/Lower UTI has become an attention seeking problem in community depicting life threatening impact under the negligence of prompt treatment with in time. Though antibiotics from longer remain leading remedy in treating and avoidance of such complications but prolonged use reproduces its own adverse effects and also cost effective therapy. Herbal medications illustrated in ayurvedic classics proved to be safer, cheaper and effective for the management of mootravahasroto dushti. In present study, it was observed that the disease afflicted a great proportion of sexually active females especially housewives and also those who were illiterate, belong to lower class, addicted to ushna teekshna ahara (tea/coffee), residing in rural areas attributing to vata-pittaja prakriti subjects, maximum individuals exposed to unhygienic condition – usage of closed toilets/public urinals, dirty surroundings, unhygienic sexual indulgence etc. Use of antibiotics also emerged as one of the factor via treatment history regarding recurrent attacks in the present study.

The unaltered blood chemistry and liver-renal function parameters after therapy suggest and proved the long term safety of drug in management of paittik mootrakrichhra. The excellent symptomatic relief observed with shatavaryadi kashaya might be due to the synergistic action of its ingredients thus correcting the pratiloma gamana by clearing the sanga (obstruction) in urinary tract. The constituents inherits the properties – sheet virya, madhur vipaka, guru-snidha guna, tikta-kashaya rasa pradhana that helps in overriding obstruction and clearing the pathway to get anuloma gamana in respective srotas. As per action these ingredients acts as demulscents, diuretics, anti-microbial, anti-inflammatory that ultimately corrects the etiological factors.

### Conclusion

At the end of therapy, patient treated with shatavaryadi kashaya reported a significant relief from dysuria (krichhramootrata) and showed an overall improvement in their quality of life. The absence of adverse events and unalteration in blood parameters indicate the long safety of Shatavaryadi Kashaya. So, this drug is highly effective and safer in management of paittik mootrakrichhra/lower UTI.

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### Case Report – 1

Name: Sunita Gupta  
 Age: 37 yrs.  
 Sex: Female  
 Occupation: Housewife  
 Address: H. No. 218/40 D, Thana Sahadatganj, Sahadatganj, Lucknow.  
 O.P.D. No.: 2618/61115  
 Date of commencement of trial: 3/11/15  
 Date of completion of trial: 24/11/15

The patient had complaints of difficulty in micturition with burning and frequent, painful micturition with other associated complaints of yellowish discoloration of urine, pain at lower abdomen and fever with chills once in 24 hrs. especially in late night from the period of 4 days. On enquiry and detailed history, difficulty in micturition initially persist at beginning of the act but now it also remain partially during the rest of act of micturition with an intolerable burning in micturition throughout the act and also after voiding for a few minutes with an exceeding and sustained urge to void with a frequency of 10-15 times in whole day and 2-3 times during night.

The urine is scanty in quantity having deep yellowish discoloration and concentrated urine with a smell. Patient also feel a dull aching (tolerable) pain at lower abdomen during and at the beginning of act with a febrile feeling whole day and suffers from fever of significant intensity (100.4<sup>0</sup> F) with chills recorded once in 24 hrs. especially at late night.

The other complaints done by patient of dull feeling (malaise), uneasiness and unwillingness (desire) towards household activities. There was no past history of any chronic disease (DM II, HTN, Renal Calculi or any other associated systemic disease), drug allergy, drug history, no contraception usage, no

any previous treatment regarding symptoms etc. and no family history present. The patient is a housewife having low socio-economic status, illiterate (learn to write name in hindi) addicted to tea (>5 times/day) and hot spicy meals with amla-lavana pradhan rasa intake.

The diet pattern is irregular, vegetarian, normal appetite, regular bowel habit, disturbed sleep with no any abnormality regarding menstrual & obstetric history. Regarding specific about symptoms, O/E house is well-built (pakka), ventilated properly with crowded and dirty surroundings along with a open field at the back side of dwelling area where people used to dump their household and other kinds of garbages. The kind of toilet used by patient is of personal & closed type but the patient lives in joint family i.e, single toilet use by all the family members. On general examination, when patient approached to opd, looked fair with normal gait, healthy built and no any physical abnormality and systemic abnormality observed during examination.

### Examination of Uro-genital system

On inspecting & percussion no anatomical anomaly present/other kind of abnormality found but on palpating moderate tenderness present at lower abdomen (suprapubic region) present. On examination as per dashavidha & ashtavidha pariksha, mootravaha sroto dushti lakshan recorded as mootra-atipravritti (frequent micturition), sashool (painful) mootrata and associated lakshan of vitiated pitta dosha in form of sadaha (burning) and jwara. The prakriti of patient is pitta-kaphaja and nadi of vata-pittaja pradhan.

### Daignosis: Paittik Mootrakrichhra

**Trial Group:** The patient enrolled in a single group and administered with Shatavaryadi Kashaya 40 ml BD, in cold form, with 5 ml madhu & 5 gm misri (sarkara) after meal intake for 21 days.

### Progress Report Ofvitals

Day	B.P. (mm Hg)	P/R (/min)	Temp. (° F)	R/R (/min.)
0	110/70	108	100.4	26
7	112/74	98	99.4	24
14	110/72	88	99.3	21
21	114/74	80	98.6	19

### Progress Report of Symptomatology

Symptoms	Day0/B T	Day 7	Day 14	Day 21	AT
Lknkg ew=rk (burning micturition)	3	2	1	0	0
egqewZg ew=rk (frequent micturition)	2	2	1	0	0
lkh ew=rk (yellowish discoloration)	3	2	1	0	0
l#tk ew=rk (painful micturition)	2	2	1	0	0
Fever with chills	2	1	1	0	0
Frequency of fever/24 hrs.	1	1	1	0	0

### Progress Report of Objective Parameters

Parameters	Day 0/BT	Day 7	Day 14	Day 21	AT
Pus Cells in urine	2	2	1	0	0
RBCs in urine	1	1	0	0	0

## Investigations

Investigations	Before Treatment	After Treatment
Hb gm%	11.5	11
T.L.C. (/mm <sup>3</sup> )	11,700	7200
D.L.C. Neutrophil	82%	64%
Lymphocyte	35%	34%
Eosinophil	1%	2%
Monocyte	0%	0%
Basophil	0%	0%
E.S.R. (Wintrobe Method)	34	20
Blood Sugar- Fasting (mg/dl)	80.24	82
- PP (mg/dl)	100.50	100
S. Bilirubin (mg/dl)	0.3	0.2
SGOT	18	20
SGPT	15	13
A. Phosphatase (Iu/L)	168	164
B. Urea (mg/dl)	25.50	23.50
S. Creatinine (mg/dl)	0.9	0.7
Urine - R & M Color	Deep yellow	pale
S.P.G.R	Qns	Qns
Transparency	Cloudy	Clear
Reaction	Acidic	Acidic

Chemical- Protien	Absent	Absent
Sugar	Absent	Absent
Bile Salt	Absent	Absent
Bile Pigment	Absent	Absent
Microscopic - Cell	Epi->5, Pus cells-15-20, RBCs- 5-7/hpf	Epi- nil, Pus cells- nil, RBCs - nil
Crystal	NAD	NAD
Cast	NAD	NAD
Urine Culture	E.Coli > 10 <sup>5</sup> after 48 hrs of aerobic incubation at 37 <sup>o</sup> c	Urine Culture is sterile after 48 hrs of incubation at 37 <sup>o</sup> c

## POST TRIAL EVALUATION

- Final result - Relieved
- Side affects - None

## CASE REPORT - 2

Name: Pooja  
 Age: 20 yrs  
 Sex: Female  
 Occupation: Student  
 Address: H. No. 154/20 near sarai bazaar, Katauli, Kakori Lucknow.  
 O.P.D No.: 707/11961  
 Date of commencement of trial: 27/2/16  
 Date of completion of trial: 20/3/16

The patient had complaints of difficulty in micturition with burning and frequent, painful micturition with other associated complaints of yellowish discoloration of urine, pain at lower abdomen with a febrile and uneasy feeling from the period of 3 days. On enquiry and detailed history, difficulty in micturition initially persist at beginning of the act but now it remain throughout the act of micturition with an intolerable burning in micturition throughout the act and also after voiding for a few minutes with an exceeding and sustained urge to void with a frequency of 5-10 times in whole day and 1/2 times during night. The urine is sometimes scanty in quantity having light/mild yellowish discoloration with no smell and discharge. Patient also feel a dull aching (tolerable) pain at lower abdomen during and at the beginning of act with a malaise feeling whole day and suffers from fever below 100<sup>o</sup>F with

chills sometimes recorded once in 24 hrs./48hrs especially at late night/early morning. The other complaints done by patient of dull feeling (malaise), uneasiness and unwillingness (desire) towards household activities. There was no past history of any chronic disease (DM II, HTN, Renal Calculi or any other associated systemic disease), drug allergy, drug history, no contraception usage, no any previous treatment regarding symptoms etc. and no family history present. The patient is a student, unmarried, belong to middle class socio-economic status, addicted to tea (>5 times/day) and fond of no specific rasa pradhan diet intake. The diet pattern is irregular, mixed, reduced appetite,ir regular bowel habit, disturbed sleep with no any abnormality regarding menstrual history.

Regarding specific about symptoms, O/E house is well-built (pakka), ventilated properly with crowded and clean surroundings. The kind of toilet used by patient is of personal & closed type but the patient lives in joint family i.e, single toilet use by all the family members. On general examination, when patient approached to opd, looked fair with normal gait, thin built and no any physical abnormality and systemic abnormality observed during examination.

## Examination of Uro-genital system

On inspecting & percussion no anatomical anomaly present/other kind of abnormality found but on palpating moderate tenderness present at lower abdomen (suprapubic region) present. On examination as per dashavidha & ashtavidha pariksha, mootravaha sroto dushti lakshan recorded as mootra-atipravritti (frequent micturition), sashool (painful) mootrata and associated lakshan of vitiated pitta dosha in form of sadaha (burning) and jwara. The prakriti of patient is vata-kaphaja and nadi of pitta-vataja pradhan.

## Daignosis: Paittik Mootrakrichhra

**Trial Group:** The patient enrolled in a single group and administered with Shatavaryadi Kashaya 40 ml BD, in cold form, with 5 ml madhu & 5 gm misri (sarkara) after meal intake for 21 days.

## Progress report of vitals

Day	B.P. (mm Hg)	P/R (/min)	Temp. (° F)	R/R (/min.)
0	100/70	92	99.6	24
7	104/78	88	99.4	22
14	100/78	88	99.0	21
21	110/76	80	98.4	20

## Progress Report of Symptomatology

Symptoms	Day0/ BT	Day 7	Day 14	Day 21	AT
Lknkg ew=rk (burning micturition)	3	2	1	0	0
eqqewZg ew=rk (frequent micturition)	1	1	0	0	0
l#tk ew=rk (yellowish discoloration)	1	0	0	0	0
l#tk ew=rk (painful micturition)	2	1	1	0	0
Fever with chills	1	1	0	0	0
Frequency of fever/24 hrs.	1	1	0	0	0

## Progress Report of Objective Parameters

Parameters	Day 0/BT	Day 7	Day 14	Day 21	AT
Pus Cells in urine	1	0	0	0	0
RBCs in urine	0	0	0	0	0

## Investigations

Investigations	Before Treatment	After Treatment
Hb gm%	11.0	11.5
T.L.C. (/mm <sup>3</sup> )	74,00	7200
D.L.C. Neutrophil	82%	64%
Lymphocyte	20%	17 %
Eosinophil	1%	1%
Monocyte	0%	0%
Basophil	0%	0%
E.S.R. (Wintrobe Method)	32	20
Blood Sugar-Fasting (mg/dl)	84.26	82
PP (mg/dl)	104.50	102
S. Bilirubin (mg/dl)	0.4	0.2
SGOT	24	23
SGPT	16	14
A. Phosphatase (Iu/L)	164	164
B.Urea (mg/dl)	25.50	23.50
S. Creatinine (mg/dl)	0.8	0.8
Urine – R & M Color	Light yellow	pale
S.P.G.R.	1010	Qns
Transparency	Clear	Clear
Reaction	Acidic	Acidic

Chemical- Protien	Absent	Absent
Sugar	Absent	Absent
Bile Salt	Absent	Absent
Bile Pigment	Absent	Absent
Microscopic – Cell	Epi->5, Pus cells-0-2, RBCs- 2-4/hpf	Epi- nil, Pus cells- nil, RBCs - nil
Crystal	NAD	NAD
Cast	NAD	NAD
Urine Culture	Urine culture is sterile after 48 hrs of incubation at 37 <sup>o</sup> c	Urine Culture is sterile after 48 hrs of incubation at 37 <sup>o</sup> c

## POST TRIAL EVALUATION

- Final result - Relieved
- Side affects - None