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CASE REPORT OPEN ACCESS

MANAGEMENT OF *MUTRAKRICCHA*(UTI) DUE TO CHRONIC CYSTITIS - CASE REPORT HETAL VYAS^{1*}, KINJAL SHERASIA²

¹*Assistant Professor, ²PG Scholar Department of *Kayachikitsa*, Institute of Teaching and Research in Ayurveda (ITRA), Institute of National Importance (INI), Ministry of Ayush, Gov. of India, Gujarat, Jamnagar.

Corresponding Author Email: wyashetal1979@gmail.com Access this article online: https://jahm.co.in

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ABSTRACT:

Mutrakriccha, a condition resembling chronic cystitis, was successfully applied in a 64-year-old male presenting with recurrent fever, dysuria, and leg edema. Mutrakriccha, characterized by urinary symptoms akin to urinary tract infections in Ayurvedic medicine, manifested with increased frequency, urgency, and painful urination. Diagnostic tests revealed elevated pus cells, creatinine, and blood urea levels, indicative of renal dysfunction. Treatment over two months included Musta Churna, Sudarshana Churna, and Chandra-Prabha Vati, complemented by Gokshuradi Guggulu, Punarnava, and Varunadi Kwatha to alleviate symptoms and promote urinary health. Dietary modifications and lifestyle adjustments were integral components of the therapeutic regimen. Follow-up showed significant improvement in fever, dysuria resolution, and reduced edema and backache severity. This case highlights the efficacy of Ayurvedic interventions in managing Mutrakricchainduced UTI symptoms, suggesting their potential as alternative treatment options. Further research is needed to validate these findings and explore broader applications in clinical practice.

Keywords- Mutrakruchha, cystitis, UTI, Punarnavastak kwath, Varunadi Kwatha, Gokshuradi Guggulu, and Rasayan churna.

INTRODUCTION

The term Mutrakrichra originates from "Mutra" and "Kriccha," indicating difficulty in urinary voiding. Its symptoms parallel those of urinary tract infections in Avurvedia.[1] Mutrakrichchha affects the Basti and Mutra Marga (urinary passage). Other disorders of the mutravaha srotas (urinary channels) include Mutraghata obstruction), Prameha (urinary (Diabetes Mellitus), and Nephrolithiasis (kidney stone). Treatment for injuries to the Mutravaha Srotas involves Mutrakrichchhra Chikitsa,[2] Patients typically present with increased frequency, urgency, hesitancy, dysuria, painful micturition, discoloration.[3] and urine Despite availability of various modern pharmaceuticals, efficacy may be limited due to antibiotic resistance, metabolic side effects, and immune system dysregulation, necessitating exploration of alternative management strategies. Ayurvedic medicines have demonstrated efficacy in treating Mutrakricchra. Chronic cystitis shares with similarities Pittaja Mutrakriccha, characterized by severe pelvic and bladder pain, frequent urination with scant urine output, and a burning sensation.[4]

CASE REPORT:

A 64-year-old male of middle-class socioeconomic status, employed as a worker, presented to the *Kayachikitsa* OPD at ITRA, Jamnagar on December 14, 2023, with a multifaceted clinical history. He reported experiencing recurrent episodes of rigor accompanied by low-grade fever persisting over

the past year, occurring monthly. Additionally, he complained of pain and burning sensation during urination, which has been ongoing for the past 2 to 3 months. His urine has exhibited a foul odour and appeared red in colour during this period. Furthermore, the patient noted swelling in both lower legs, characterized by non-pitting oedema and associated with Vata-Pittaja characteristics, which developed recently over the past week. For the past year, he had also been troubled by persistent backache and generalized weakness. progressively worsening in tandem with his other symptoms. Initially asymptomatic, his condition deteriorated gradually following selfadministration of Paracetamol for fever relief, which coincided with the onset of urinary symptoms and leg swelling. Given this constellation of symptoms, the patient sought medical evaluation, necessitating а comprehensive assessment and management plan to address his current health concerns effectively.

Past History: He has a history of chronic cystitis and nephrolithiasis. There is no history of diabetes mellitus, hypertension, ischemic heart disease, hypo- or hyperthyroidism. He has undergone surgery for an inguinal hernia.

Family History: There is no reported history of similar illnesses among his family members.

General Examination: On examination, he appeared moderately built and nourished. His temperature was recorded at 99°F, respiratory rate at 20 breaths per minute, pulse rate at 82

beats per minute, and blood pressure at 120/70 mmHg. His height was 160 cm, weight 60 kg, with a BMI of 23.44. Physical findings revealed no pallor, but there was periorbital oedema noted. There were no signs of clubbing, cyanosis, jaundice, lymphadenopathy, and his tongue appeared uncoated.

Auscultation revealed normal heart sounds (S1 and S2). The patient was alert, oriented, and conscious throughout the assessment. Lung auscultation indicated normal vesicular breathing without any added sounds.

Ashthavidha Pariksha: His pulse rate (*Nadi*) was recorded at 82 beats per minute. Urinary frequency (*Mutra*) was noted as 3 to 4 times per day (*Alpa*). Bowel movements (*Mala*) occurred once daily. Tongue appearance (*Jihwa*) was

normal. Hearing ability (*Shabda*) was unremarkable. Skin sensation (*Sparsha*) was warm and normal. Visual examination (*Druk*) showed no abnormalities. His body constitution (*Aakruti*) was described as mesomorph.

Diagnostic assessment-

Urine routine & microscopic

16th of April 2024- Upon urine analysis, a high number of pus cells were detected (plenty/hpf). Additionally, elevated levels of creatinine (2.99 mg/dl) and blood urea (49 mg/dl) were observed, indicating renal dysfunction beyond normal thresholds. The ultrasound report revealed chronic cystitis and mild hydronephrosis. These findings collectively led to the diagnosis of Mutrakriccha (UTI).

Table no. 01 Investigations

Sr.	Date	Urine	Urine	Urine	Urine	Blood	Serum
No.		Albumin	Pus cells	RBC	Epithelial	Urea	Creatinine
					cells		
1	16/04/2024	Trace	Plenty/hpf	5-6/hpf	1-2/hpf	49	2.99

Samprapti Ghataka:

- Dosha- Pitta Pradhan Tridosha
- Dushya- Rasa, Rakta, Meda
- > Agni- Vishama
- Udhbhavsthana- Pakvashaya
- Vyaktasthana- Mutravaha srotas
- Srotasa- Rasavaha, Raktavaha, Mutravaha Srotas
- Srotasa prakara- Sanga, Vimargagamana
- Sadhyatva- Yapya

Differential diagnosis:

- Mutrakrucchha
- Mutraghat
- Piitaj Prameha

Final diagnosis: Pitta Pradhan Tridoshaj Mutrakruchha

Treatment Timeline & Therapeutic intervention

After evaluating the patient's condition for Ama-Pachana purposes, Musta Churna was administered. Sudarshana Churna was prescribed for antipyretic purposes,

accompanied by *Chandra-Prabha Vati* for a twomonth duration. During hospitalization, the patient received *Gokshuradi Guggulu*, Punarnava, and Varunadi kwatha, along with a blend of Musta, Sunthi, and Rasayana for one month.

Table no. 02 Treatment Timeline

Date	Purpose	Medicine	Dose & frequency	Duration
14/12/2023	Jwaraghna	Sudarshana churna	3gm/ 2times with Luke	7 days
	(Antipyretic)		warm water after food	
	Amapachak	Musta Churna	2gm/2times with Luke	7days
			warm water after food	
	Mutrala	Chandrprabha vati	2tab./3times with water	7days
			after food	
16/04/2024	Anti-infective and	Gokshuradi Guggulu	2tab/3times with water	1 month
	diuretic		after food	
	Anti-inflammatory	Punarnavastak kwatha	10gm/2times before	1month
	and diuretic	Varunadi Kwatha	food	
			10gm/2times before	
			food	
	Ampachak and	Musta+Shunthi+Rasayan	6gm/2times with water	1month
	Rasayana			

Pathya (Indicated Diet and Regimen): The recommended diet includes rice, Moong Dal (cooked without ghee, oil, coconut), and boiled vegetables prepared similarly. Spices initially without pungency, transitioning to Shunthi (dried ginger) after a week. Use Saindhava Lavana (rock salt) and engage in brisk walking (Shatapadagaman) 100 steps after meals.

Apathya (Contraindicated Diet and Regimen):
Avoid Snigdha (unctuous), Abhishyandi
(producing excessive secretions), Guru (heavy),
Vidahi (causing burning sensation), and
Pittakara (Pitta-increasing) foods such as fruits,
dry fruits, fermented foods, sour items, raw
vegetables, sprouted cereals, and pulses.

Refrain from afternoon naps, eating without appetite, suppressing natural urges, external application of oils/balms on painful areas, and exposure to cold food, water, and environment.

Follow up and outcomes- The patient's condition showed the following changes between 16/04/2024 and 16/05/2024: the fever decreased from 99.0-99.4°F to 98.6°F, pain and burning during urination resolved completely, although urinary frequency increased to 6-7 times during the day and once at night. Swelling in the lower legs improved moderately, backache severity decreased from 6 to 2 on the Vas scale, and there was mild improvement in weakness and sleep disturbances, with sleep

returning to normal. Also, in investigation report was found Urine Pus cells, Albumin, RBC

decreased and Blood Urea and serum creatinine decreased after treatment.

Table no. 03 - Symptoms of Mutrakriccha

Sr. No.	B. T. (14/12/2023)	(16/04/2024)	A. T. (16/05/2024)
1	Anorexia	Mild improves	Improve Appetite
2	Riger with law grade fever	Riger with law grade fever	(Temp. 98.6° F)
	(Temp. 99 ^o to 99.4° ^F)	(Temp. 99 ⁰ to 99.4° ^F)	
3	Pain & Burning Micturition	ng Micturition Pain & Burning Micturition	
4	Passing small amount & Foul smell	Passing small amount & Foul	Absent
	with red colour Urine	smell with red colour Urine	Frequency-6to7 times/day
	Frequency - 3 to 4 times/day,	Frequency - 3 to 4 times/day,	1time/night
	1time/night	1time/night	
5	Swelling in both lower legs (Vata-	Swelling in both lower legs (Vata-	Moderate improvement
	Pittaj) not Pitting Oedema	Pittaj) not Pitting Oedema	
6	Backache Vas scale -2	Backache Vas scale -2	Vas scale- 2
7	Weakness	Weakness	Mild improvement
8	Disturb sleep	Disturb sleep	Normal sleep

Table no. 04 Investigations

Sr.	Date	Urine	Urine	Urine	Urine	Blood	Serum
No.		Albumin	Pus cells	RBC	Epithelial	Urea	Creatinine
					cells		
1	(Before treatment)	Trace	Plenty/hpf	5-6/hpf	1-2/hpf	49	2.99
	16/04/2024						
2	25/04/2024	Trace	60 to70/hpf	7-8/hpf	1-2/hpf	46	2.86
3	8/05/2024	Trace	32-35/hpf	7-8/hpf	1-2/hpf	45	2.77
4	(After Treatment)	Absent	6-8/hpf	Absent	1-2/hpf	43	2.75
	16/05/2024						

DISCUSSION:

The urinary bladder, considered the abode of *Apana Vayu* responsible for normal elimination of urine, stool, flatus, and sperm, is implicated in *Mutrakriccha* where *Apana Vayu* and *Pitta Dosha* are deranged. Pathologically, thickening and irregularity of the bladder wall result from

the *Khara* and dry *Ruksha* qualities of *Vayu*, while its mobile *Chala* quality manifests as increased frequency, scanty flow, and painful urination. *Pitta* aggravation contributes to burning sensations during micturition. Hence, the vitiation of *Vata* and *Pitta Doshas* underlies chronic cystitis, affecting the *Rasa*, *Rakta*, and

Mansa. This case, characterized by painful, burning urination, increased frequency, scanty urine flow, and thickened bladder musculature, aligns with Pittaja Mutrakriccha in Ayurvedic perspective. Sudarshana Churna^[5] known for its antipyretic properties and bitterness aiding in Ama digestion, addresses these symptoms. Gokshuradi Guggulu^[6] a renowned formulation for urinary disorders, acts as a Mutrala, reduces inflammation, and balances Vata and Pitta. Its Sheeta Virya soothes the urinary epithelium, while its Ama Pachana properties prevent waste accumulation. Punarnavastak Kwath^[7] containing Punarnava, Nimba, Patola Patra, Sunthi, Amrita, Daruharidra, Haritaki, and Katuki, serves to relieve dysuria and burning micturition. Punarnava's diuretic and antiinflammatory effects [8] decrease bladder wall

thickness, while ingredients like Patol, Nimba, and Guduchi, with their Tikta Rasa, aid Ama digestion and pacify Pitta Dosha, thereby clearing urinarv obstructions. Haritaki's Rasayana properties improve tissue function, while Katuki supports liver function and provides a laxative effect. Varunadi kwatha[9] with its Asmarihar, Mutrakricchahar, and Bastishula Har properties, alleviates Mutrakriccha symptoms. Rasayana Churna. comprising Guduchi, Gokshur, and Amla, offers rejuvenating, diuretic, and Pitta-pacifying benefits, reducing bladder inflammation. Musta [10] and Shunthi Churna[11] with their bitter taste, aid in ama digestion, relieve obstructions in the channels carrying Rasavaha and Swedavaha Srotas, and lower body temperature.

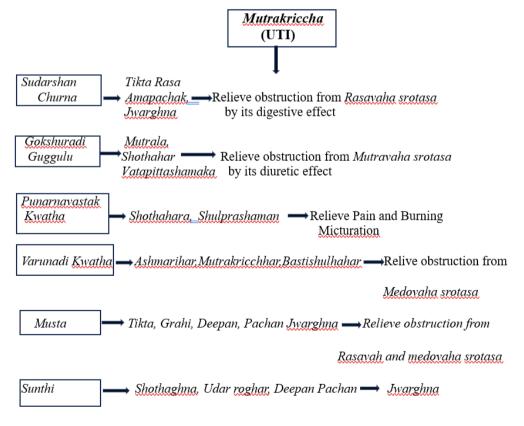


Image 1: Flowchart of mode of action of Drugs

Conclusion: This case study demonstrates the effective management of chronic cystitis-induced UTI using Ayurvedic intervention. Significant reduction in UTI symptoms was observed without any reported adverse drug effects or recurrence. Ayurvedic medications present a promising approach for *Mutrakriccha* management; however, further research involving larger sample sizes is necessary to substantiate these findings.

Declaration of the Patient consent

The authors confirm that they have obtained informed consent from the appropriate legal guardian to report images and clinical information in the journal. The patient's guardian acknowledges that the patient's identity will be protected by withholding their name and initials, although efforts will be made to ensure anonymity, it cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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