

Evaluation of the Therapeutic Efficacy of Gudaamalaki Kashayam in the Management of Urinary Tract Infection - A Case Report

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Abstract: *Mutrakrichhram is a common urological disorder characterised by pain, a burning sensation, difficulty, and increased frequency of urination. Urinary tract infection is one of the most common bacterial infections worldwide. Globally, about 150 million people develop UTI every year. In Ayurveda, UTI closely correlates with Mutrakrichhram, especially Pittaja Mutrakrichhram. Pittaja Mutrakrichhram manifests predominantly with Daha, Pita-Varna Mutrata and Trsna, closely resembling lower urinary tract infection in contemporary medicine. Ayurveda emphasises Pittashamana and Mutrala drugs for their Pittahara, Sheethaveerya, Dahahara and Mutrala properties. In this a 55-year-old male was suffering from burning and painful micturition for 2 weeks and increased frequency during nighttime. Gudaamalaki Kashayam was administered for 15 days and found to be a reduction in all of his symptoms. Gudaamalaki Kashayam possesses Tikta Kashaya Rasa, Laghu Ruksha Guna, Sheeta Veerya and Madhura Vipaka, and it effectively pacifies the aggravated Pita by reducing burning micturition and yellowish discolouration of urine.*

Keywords: Mutrakrichhram, Urinary Tract Infection, Pittaja Mutrakrichhram, Gudaamalaki Kashayam, Ayurvedic management

1. Introduction

Maintaining internal equilibrium and eliminating metabolic garbage depend mostly on the urinary system. Among its illnesses, urinary tract infections (UTIs) are the most prevalent, particularly in women due to anatomical variations. Microbial intrusions of the urinary tract cause UTIs, whose symptoms include urgency, frequency, lower abdominal discomfort, and occasionally fever, as well as burning during urination.

The World Health Organisation (WHO) and the Centres for Disease Control and Prevention (CDC) estimate that around 50–60% of women experience at least one urinary tract infection (UTI) in their lifetime, with a recurrence rate of 20–30%. With a prevalence of 25% to 30% among women, UTIs are a major burden in outpatient and inpatient units in India. Rising antimicrobial resistance makes therapy even more challenging and causes recurring and chronic infections to be rather frequent, worry^{2,3}.

Ayurveda groups such symptoms under the heading *Mutrakricchram*, which denotes agony and urination problems. Among its varieties, *Pittaja Mutrakricchram* has a clinical presentation and *Dosha*-based pathogenic similarity to UTI. Classical writings, including *Charaka Samhita* (Ch. Chi. 26/37) and *Sushruta Samhita* (Su. Ut.. 58/10), define *Pittaja Mutrakricchram* as exhibiting *Sadaha* (burning), *Peeta Mutra* (yellowish urine), *Sarakta Mutra* (blood-tinged urine), and *Jwara* (fever) all of which are classical indications

of urinary infection^{4,5}.

Pathology (*Samprapti*) is primarily found in the *Basti* (urinary bladder) and in the *Pitta Dosha*, which affects *Rakta* and *Mutra* as *Dushya*, in addition to the *Mutravaha Srotas*. Spicy foods, too much sun exposure, and the suppression of natural impulses (*Vegavidharana*) all constitute *Pittavardhaka Nidana*. Treatment of the limitations of conventional therapies and meeting the growing need for all-encompassing, *Dosha*-specific care are possible with ayurvedic formulations. Two strong Ayurvedic medicines, *Gudaamalaki Kashayam* and *Atibala Kashayam*, were chosen for this study because of their *Rasayana*, *Mutrala*, and *Pittahara* characteristics in order to treat the underlying source and relieve symptoms. *Gudaamalaki Kashayam*, made with *Amalaki* (*Emblica officinalis*) and *Jaggery* (*Guda*), is known for its *Tridosahara*, *Pittashamana*, *Mutravirechaka*, and *Raktaprasadaka* properties.

2. Case History

A 55-year-old male patient who is a daily wage worker visited the OPD of Kayachikitsa of Sri Jayendra Saraswathi Ayurveda College and Hospital, Nazarethpet, Chennai, India, with complaints of burning micturition, along with painful micturition and increased frequency during nighttime (i.e 4-6 times) associated with itching over the genital area and urgency of micturition for since 2 weeks.

History of Present illness:

The patient was well before 2 weeks, suddenly he developed yellowish urine with increased burning micturition along with dysuria and increased frequency and urgency during nighttime, associated with itching over the genital area.

History of Past illness: Patient had a history of RUTI (Recurrent urinary tract infection) for 6 months, and he was on antibiotics for this.

Family History: No relevant family history

Medical History: He was on antibiotics for the same reason for 4 months.

Psycho Social History: Nothing specific

Surgical History: Nothing specific

Personal history:

- DIET: Mixed
- APPETITE: Moderate
- SLEEP: Disturbed (Due to Urgency and Frequency)
- BOWELS: Regular
- MICTURATION: Burning micturition along with Dysuria
- HABIT: Tea thrice a day
- ADDICTION: Smoking

General examination:

- BP: 110/80mmHg
- Pulse rate: 75bpm
- Respiration Rate: 18rpm
- Weight: 55kg
- Temperature: 35.9 degrees Celsius

Systemic examinations:

- CVS: S1S2 heard
- RS: NVBS positive
- CNS: Conscious & Oriented
- ABDOMEN: Pain in the lower abdomen and Suprapubic pain.

Urine Examination:

- Colour of Urine: Reddish
- Frequency: 7 times/day, 4 times at night
- Urgency of urine: Present
- Hesitancy: Present
- Flow of urine: Slow stream
- Dribbling of Urine: Present
- Odour of Urine: Foul
- Volume of Urine: Normal
- Burning micturition: Present
- Appearance: Cloudy
- Urine Concentration: Acidic
- Incontinence of Urine: Present

Investigation:

LABORATORY

Name: Mr. N. Marigagan Referred by: Dr. Narendran Reddy

Age: 35 Yrs Sex: M Date: 17/03/2021

Clinical Pathology Test Result

URINE ANALYSIS

Color: Yellowish

Appearance: Cloudy

Specific Gravity: 1.020

Reaction: 6.5

pH: 6.0

Sugar: Nil

Bile: Absent

Mucopus: Negative

Cells: Present

HEALTHY DATA

Hb: Nil

Pct: 0.0%

WBC: 12.0 x 10⁹/L

Platelets: Nil

CRP: Nil

ESR: Nil

Figure 1: Before Treatment

LABORATORY

Name: Mr. N. Marigagan Referred by: Dr. Narendran Reddy

Age: 35 Yrs Sex: M Date: 18/03/2021

Clinical Pathology Test Result

URINE ANALYSIS

Color: Pale Yellow

Appearance: Clear

Specific Gravity: 1.015

Reaction: 6.5

pH: 6.0

Sugar: Nil

Bile: Absent

Mucopus: Negative

Cells: Negative

HEALTHY DATA

Hb: Nil

Pct: 0.0%

WBC: 1.2 x 10⁹/L

Platelets: Nil

CRP: Nil

ESR: Nil

Figure 2: After Treatment

Ashtavidha Pareeksha:

- Nadi: VataKapha
- Mootram: Kruchhram
- Malam: Samyak
- Jihwa: Liptam
- Sabda: Madhyama
- Sparsha: Anushnasheeta
- Drik: Avara
- Aakruti: Madhyama

Dasavidha Pareeksha:

- Prakruti: Vata
- Vikruti:
 - Dosha: Pitta.
 - Dhātu:
 - Mala: Mootram
- Sara: Sarva
- Samhana: Pravara
- Pramana: Avara
- Satmya: Sarvarasa
- Satva: Madhyama
- Aharasakthi: Avara
- Vyayamasakthi: Avara
- Vayas: Madhyama

Samprapti Ghatakam:

- Dosa: PitaVata.
- Dushya: Mutra, Rakta, Mamsa, Medas, Ambu.
- Srotas: Mootravaha Srotas.
- Srotodushti: Sanga, Atipravritti, Sravana.

- Agni: Pachaka Pitta, Dhatvagni.
- Rogamarga: Abhyantara.
- Sancharasthana: Basti.
- Udbhavasthana: Pakwashaya.
- Vyaktasthana: Mootramarga.
- Adisthana: Basti, Mootramarga.
- Vyadhi Swabhava: Bahudosha, Ashukari.

Treatment Plan:

1) Guda Amalaki Kashaya Choornam.

Follow Up and Outcome:**Table 1:** Follow-up and Outcome

	Before Treatment	After Treatment
APPEARANCE	Cloudy	Clear
COLOUR	Reddish	Pale yellow
pH VALUE	6.6	6.5
NITRITES	Present	Absent
BACTERIA	Present	Absent
PUS CELLS	Numerous	Nil
EPITHELIAL CELLS	10-12 CELLS	Nil
SPECIFIC GRAVITY	1.025	1.015

3. Discussion**Table 2:** Ingredients of *Guda Amalaki Kashayam*

Drug	Botanical Name	Family	Part Used
Amalaki	<i>Embilica officinalis</i>	Euphorbiaceae	Fruit
Guda	-	-	-

Gudamalaki Kashayam is a classical formulation composed primarily of Amalaki (*Embilica officinalis*) and *Gudam* (Jaggery), both of which offer significant therapeutic benefits in the management of *Pittaja Mutrakrichhram* said in *Cakradatta*.

Amalaki (*Embilica officinalis*): *Amalaki* is a potent *Pittahara* and *Dahashamana Dravya* making it highly suitable for conditions characterized by increased *Pitta*, such as *Pittaja Mutrakrichhram*. It exhibits *Sheeta Veerya* and *Madhura Vipaka* which help pacify aggravated *Pitta* and relieve burning micturition, a key symptom in *Pittaja Mutrakrichhram*^{1,2}.

RASA PANCHAKAM:**AMALAKI:**

- **Rasa:** *Amla, Madhura, Kashaya*
- **Guna:** *Laghu, Ruksha*
- **Veerya:** *Sheeta Veerya*
- **Vipaka:** *Madhura*
- **Prabhava:** *Rasayana, Tridosahara (Pitta Shamana esp.)*

GUDAM:

- **Rasa:** *Madhura*
- **Guna:** *Guru, Snigdha*
- **Veerya:** *Ushna*
- **Vipaka:** *Madhura*
- **Prabhava:** *Vata Pitta Shamaka, Balya*

GUDA AMALAKI:

- **Rasa:** *Madhura, Amla*
- **Guna:** *Laghu, Guru, Snigdha*.
- **Veerya:** *Slightly Ushna*
- **Vipaka:** *Madhura*
- **Prabhava:** *Vatapitta Shamaka, Rasayana*.

Pharmacologically, *Amalaki* possesses a wide range of actions including^{3,4,5}:

- Antibacterial
- Anti-fungal
- Antioxidant
- Anti-inflammatory
- Analgesic
- Antimicrobial
- Immunomodulatory

These actions support the prevention and management of urinary tract infections and inflammation, often associated with *Pittaja* conditions.

Gudam (Jaggery)

Gudam, derived from the *Ikshvaku Varga*, is characterised by *Madhura Rasa*, *Guru* and *Kshara-yukta Guna*, *Ushna Veerya*, and *Madhura Vipaka*. It is known to be *Kapha-Vata Shamaka* and exhibits *Mutravirechaneeya* (diuretic) properties. Although *Gudam* has *Ushna Veerya*, when combined with *Amalaki's Sheetta Veerya*, it balances the formulation, making it effective without aggravating *Pitta*. It supports proper urinary flow and detoxification, further aiding in the management of urinary disorders^{6,7,8,9,10}.

Table 3: Combined action in *Pittaja Mutrakrichhram*:

Formulation	Ingredient	Active Components	Action in UTI
Gudaamalaki Kashayam	<i>Amalaki</i>	Vitamin C, Tannins, Gallic acid, ellagic acid, Flavanoids (quercetin, rutin)	Antimicrobial (inhibits E.coli), reduces burning, anti inflammatory, strengthens immunity.
	<i>Gudam</i> (Jaggery)	Minerals, Iron, Antioxidants	<i>Balya, Rasayana</i> , supports the healing of urinary mucosa

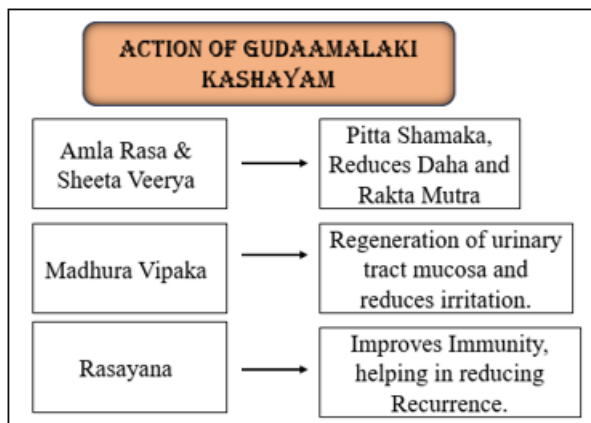


Figure 3: Action of *Gudaamalaki Kashayam*

4. Conclusion

In summary, *Gudamalaki Kashayam*, with its *Tridosahara* action, is particularly effective in pacifying *Pitta* and reducing *Kleda* and *Daha*, making it a suitable and evidence-supported formulation for the management of *Pittaja Mutrakrichhram*.

References

- [1] Bhavaprakasha Nighantu – Haritakyadi Varga, Amalaki & Gudam. Commentary by Bhavamishra. Chaukhamba Bharati Academy.
- [2] *Phytochemical and pharmacological properties of Emblica officinalis (Amalaki): A review.* – International Journal of Pharmaceutical Sciences and Research, 2012.
- [3] Sowmya M N, Nanjammanni N, An Phyto – Chemical Analysis of Seedless Amalaki Fruit (*Emblica Officinalis*) Churna (Assistant Professor, Dept of PG studies in Swasthavritta, JSS Ayurveda medical college and Hospital, Mysore) International Journal of Pharmaceutical Science Invention ISSN (Online): 2319 – 6718, ISSN (Print): 2319 – 670X Volume 6 (3) || March 2017 || P. 09-12.
- [4] Antimicrobial activity of *Emblica officinalis* extracts against urinary tract pathogens. – Journal of Ethnopharmacology, 2011. 1
- [5] Amla (*Emblica officinalis*) as a functional food for health benefits: A comprehensive review. – Food & Function, 2013.
- [6] Charaka Samhita – Sutra Sthana 4/12. Commentary by Chakrapani Datta. Chaukhamba Publications.
- [7] Ashtanga Hridaya – Sutra Sthana 6/13. Edited by Dr. Anna Moreshwar Kunte and Krishna Ramachandra Shastri Navre. Chaukhamba Sanskrit Sansthan.
- [8] Bhavaprakasha Nighantu – Haritakyadi Varga, Amalaki & Gudam. Commentary by Bhavamishra. Chaukhamba Bharati Academy
- [9] Role of jaggery in traditional Indian medicine and its potential as a functional food. – Journal of Ayurveda and Integrative Medicine, 2015.
- [10] *Evaluation of diuretic and anti-inflammatory effects of jaggery (Gudam) in experimental models.* – Ayurpharm International Journal of Ayurveda and Allied Sciences, 2016.