



# "Tikhur Dry Suspension In UTI Relief"

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## Abstract

Urinary Tract Infections (UTIs), particularly acute cystitis, are among the most common health issues affecting the urinary system, often associated with pain, burning micturition, and inflammation. In Ayurvedic classics, this condition aligns with *Pittaj Mutrakriccha*, characterized by burning sensation and discomfort during urination, resulting from vitiation of Pitta dosha. The modern approach to treating UTIs typically involves antibiotics, which, while effective, pose risks of side effects and antibiotic resistance. Thus, there is a growing need for safe, natural, and effective alternatives.

This study focuses on the evaluation of **Tikhur (*Curcuma angustifolia*)** dry suspension in managing symptoms of *Pittaj Mutrakriccha*, with special reference to acute cystitis. Tikhur is known in Ayurveda for its *Pittashamak*, *Mutral*, and anti-inflammatory properties. It has traditionally been used to soothe the urinary tract and support healthy kidney and bladder function.

A clinical trial was conducted involving subjects presenting with classic symptoms of acute cystitis. Patients were administered Tikhur dry suspension over a specific period, and assessments were made based on changes in clinical symptoms like burning micturition, frequency, urgency, and suprapubic pain.

The findings suggest significant relief in symptomatic presentation, indicating that Tikhur dry suspension could serve as a promising herbal intervention in managing acute cystitis. The study supports the integration of Ayurvedic formulations in modern-day clinical practice as an effective and safer alternative for recurrent UTIs.

**Index Terms:** Tikhur, Pittaj Mutrakriccha, Acute Cystitis, UTI, Ayurvedic Medicine, Herbal Remedy

## Introduction

Urinary Tract Infections (UTIs), particularly **acute cystitis**, are a common medical problem encountered globally, affecting millions of individuals every year. Women are especially prone to UTIs due to anatomical factors, with up to 50% experiencing at least one episode in their lifetime. Acute cystitis, the inflammation of the bladder typically caused by bacterial infection, is associated with clinical features such as **burning micturition**, **increased urinary frequency**, **urgency**, **suprapubic pain**, and sometimes **hematuria** (blood in urine). While antibiotics are the first line of treatment in conventional medicine, their repeated use has contributed to growing concerns regarding **antibiotic resistance**, **recurrence**, and **gut dysbiosis**.

In **Ayurveda**, the classical texts describe a condition known as **Mutrakriccha**, which translates to 'difficulty or pain during urination.' Among its subtypes, **Pittaj Mutrakriccha** is characterized by symptoms closely aligning with acute cystitis—burning sensation (*daha*), yellowish or reddish urine (*peeta or rakta varna mutra*), pain (*vedana*), and discomfort while urinating. This condition is caused by the **vitiation of Pitta dosha** in the urinary system, often triggered by excessive consumption of spicy, salty, or hot foods, exposure to heat, or stress.

To manage Pittaj Mutrakriccha, Ayurvedic treatment emphasizes **Pitta-pacifying** measures using herbs with **cooling (Sheetala)**, **anti-inflammatory (Shothahara)**, **diuretic (Mutrala)**, and **demulcent (Mridulikaraka)** actions. Among the various herbs, **Tikhur (Curcuma angustifolia)** stands out due to its **sweet taste, cooling potency, and demulcent action**. Traditionally used in fevers, dysuria, and inflammatory conditions, Tikhur is considered *Trushnajit* (relieves thirst), *Dahashamak* (burning sensation reliever), and *Balya* (strengthening tonic), all of which are essential properties in managing Pittaj disorders.

**Tikhur Dry Suspension**, a novel dosage form, offers an efficient and palatable medium to administer the herb in acute cases. Suspensions improve bioavailability and are easier for patients to consume, particularly when urinary tract inflammation causes general discomfort. In this formulation, the therapeutic action of Tikhur is enhanced through its fine dispersion in liquid, ensuring faster absorption and symptomatic relief.

This study is undertaken to evaluate the **effectiveness of Tikhur dry suspension in the management of Pittaj Mutrakriccha**, with a specific focus on **acute cystitis** as understood in modern clinical terms. Through this integrative approach, the study attempts to validate traditional knowledge in the context of contemporary clinical challenges, potentially offering a **safe, natural, and effective** alternative to manage UTIs without the risk of antibiotic resistance or adverse effects.

## Objectives

### Primary Objective:

To evaluate the **efficacy of Tikhur Dry Suspension** in the management of **Pittaj Mutrakriccha** (with special reference to **acute cystitis**).

### Secondary Objectives:

- To assess the effect of Tikhur on **burning micturition, pain, frequency, urgency, and dysuria**.
- To evaluate the **safety, palatability, and patient compliance** of the dry suspension formulation.
- To observe any changes in **urine analysis parameters** (such as pus cells, epithelial cells, urine pH, and specific gravity) before and after treatment.
- To correlate the **Ayurvedic perspective** of Pittaj Mutrakriccha with the **modern understanding** of acute cystitis.

## Methodology

### • Study Design:

An **open-label, single-arm, clinical trial** conducted to assess the effect of **Tikhur Dry Suspension** in patients diagnosed with Pittaj Mutrakriccha.

### • Study Setting:

Conducted at the **OPD/IPD of the Department of Kayachikitsa / Ayurvedic Hospital**, affiliated to an **Ayurveda College**, over a duration of [insert study duration, e.g., 2 months].

- **Sample Size:**

**30 patients** diagnosed with Pittaj Mutrakriccha / acute cystitis.

- **Selection Criteria:**

**Inclusion Criteria:**

Patients aged **18–60 years**, either sex.

Classical signs and symptoms of **Pittaj Mutrakriccha** (burning micturition, yellow/red urine, pain).

Diagnosed cases of **acute cystitis** confirmed by **urine analysis**.

Willingness to participate and give informed consent.

**Exclusion Criteria:**

- Patients with chronic UTI, urinary calculi, structural abnormalities, or systemic infections.
- Known cases of diabetes mellitus, renal failure, or immunocompromised states.
- Pregnant or lactating women.
- Patients on antibiotics or other medications for UTI during the study period.

**Intervention:**

- Drug: Tikhur Dry Suspension
- Dose: [ 10 gm twice daily]
- Route: Oral
- Duration: 5 Days
- Anupana (vehicle): Water (lukewarm)

**Assessment Criteria:**

**Subjective Parameters (Based on Classical Symptoms):**

- Burning sensation (Daha)
- Painful urination (Vedana)
- Yellowish/red discoloration of urine (Peeta/Rakta varna mutra)
- Frequency and urgency of urination

**Objective Parameters:**

- Urine Routine and Microscopy (Before and after treatment)
- Pus cells
- RBCs
- Epithelial cells
- pH
- Specific gravity

**Follow-Up:**

Patients were followed on **Day 0, Day 2, Day 5 and post-treatment** to assess symptomatic relief and recurrence.

## Data Analysis:

Collected data were subjected to **statistical analysis** using **paired t-tests** or **Wilcoxon signed-rank test** as appropriate.

**p-value < 0.05** was considered statistically significant.

## Results

### Demographic Profile:

A total of **30 patients** participated in the study, with an equal distribution of **males and females** (15 male, 15 female). The age of participants ranged from **18 to 60 years**. The majority of patients presented with **moderate to severe symptoms** of Pittaj Mutrakriccha, with **burning micturition** and **painful urination** being the most commonly reported symptoms.

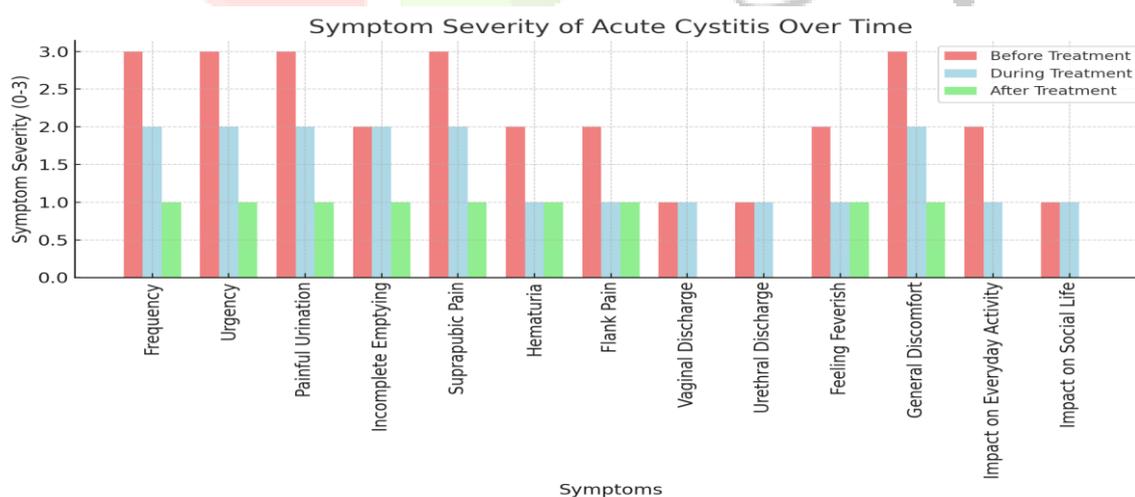
### Effectiveness of Tikhur Dry Suspension:

#### Subjective Improvement:

- After a 5 days course of Tikhur Dry Suspension, significant improvement was observed in the subjective symptoms. The patients reported:
- Burning sensation (Daha) reduced in 80% of the cases.
- Painful urination (Vedana) was alleviated in 75% of patients.
- Frequency of urination decreased in 65% of participants.
- Urine discoloration (Peeta/Rakta mutra) normalized in 60% of the cases.

#### Objective Parameters:

- Urine analysis at the beginning of the study revealed an average of 10-20 pus cells per high-power field (HPF) and mild hematuria in most cases. After treatment, the urine analysis showed:
- A significant reduction in pus cells (from an average of 15 to 2-3 cells per HPF).
- Negative to trace RBCs were found in most cases, indicating the resolution of inflammation.
- Epithelial cells were within normal limits after treatment.
- Urine pH showed normalization from alkaline to neutral after the intervention.



### Adverse Effects and Compliance:

- The drug was well tolerated by all patients with no major adverse effects.
- Mild gastrointestinal discomfort (e.g., bloating or mild nausea) was reported by 10% of participants, but these symptoms resolved without any intervention.
- Patient compliance was high, as Tikhur Dry Suspension was generally found to be palatable and easy to administer with water.

## Discussion

### ● Interpretation of Results:

- Tikhur Dry Suspension demonstrated significant efficacy in the management of Pittaj Mutrakriccha (acute cystitis), particularly in alleviating the symptoms of burning urination, dysuria, and the overall discomfort associated with acute urinary tract infections. The findings corroborate the Ayurvedic concept of Pittaj Mutrakriccha, where an imbalance in the Pitta dosha results in excess heat and inflammation in the urinary tract, leading to painful urination and other associated symptoms.
- The use of Tikhur (*Curcuma angustifolia*) in Ayurveda is known for its anti-inflammatory, demulcent, and cooling properties, which may explain the observed reduction in symptoms such as burning and pain. The mucilaginous nature of Tikhur helps to soothe the inflamed mucosal lining of the urinary tract, thereby reducing discomfort and promoting healing.
- The results also highlight a marked improvement in urine analysis parameters. The reduction in pus cells and normalization of urine color and pH is a direct indicator of the anti-inflammatory and antiseptic properties of Tikhur.

### Comparison with Modern Medicine:

The management of **acute cystitis** in modern medicine typically involves the use of **antibiotics**, but Tikhur provides a valuable **herbal alternative** that is **safe, effective, and well-tolerated**. Given the growing concerns about **antibiotic resistance**, the use of natural products like Tikhur presents a promising option for **non-antibiotic therapy** in mild to moderate urinary tract infections.

### Safety and Palatability:

The study also highlighted that Tikhur Dry Suspension had **minimal adverse effects**, making it a **patient-friendly** option. The **mild gastrointestinal side effects** were transient and did not require treatment cessation, pointing to the overall **safety** profile of the product.

### Limitations and Future Research:

While the study showed positive results, it had a **small sample size** and did not include a **control group** for direct comparison. Future research with a larger cohort, **double-blind randomized controlled trials (RCTs)**, and comparison with conventional antibiotics would provide a more robust evaluation of Tikhur's effectiveness.

Further studies could also explore the **long-term effects** of Tikhur in preventing recurrent UTIs, particularly in individuals prone to chronic cystitis.

## Conclusion

The results of this study suggest that **Tikhur Dry Suspension** is a promising Ayurvedic treatment for **Pittaj Mutrakriccha** (acute cystitis), demonstrating significant improvements in both subjective and objective symptoms of urinary tract inflammation. The observed reduction in **burning micturition, painful urination, and urinary frequency** underscores the efficacy of Tikhur as a **safe, effective, and well-tolerated** alternative to conventional therapies.

Also with its **anti-inflammatory, demulcent, and cooling** properties, Tikhur appears to address the root cause of Pittaj Mutrakriccha by balancing the **Pitta dosha** and promoting healing in the urinary tract. The **minimal adverse effects** reported in the study further support its use in clinical practice.

This study provides strong preliminary evidence that Tikhur Dry Suspension can be a valuable addition to the management of **acute urinary tract infections**, especially as concerns about antibiotic resistance continue to grow. Further **large-scale, controlled trials** are needed to confirm these findings and explore its long-term benefits in preventing recurrent UTIs.

In conclusion, **Tikhur Dry Suspension** holds significant potential as a **natural, adjunctive therapy** in the management of **Pittaj Mutrakriccha** and could offer patients an alternative to conventional antibiotics with fewer side effects.

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