

**AYURVEDA UNDERSTANDING AND MANAGEMENT OF INTERSTITIAL CYSTITIS –  
A CASE REPORT**

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**ABSTRACT**

The term Interstitial Cystitis (IC)/Painful bladder Syndrome has defined as the supra public pain related to bladder filing, accompanied with urinary symptoms such as urinary frequency in the absence of established urinary infection or obvious pathology. In this study, we are reporting a patient presenting with Supra public pain which is not radiating and spasmodic in nature increased after micturition, increased frequency and burning micturition since 2 weeks successfully treated with Ayurvedic formulations. Diagnosis was done through clinical presentation, laboratory findings and Sonographic studies. By understanding the nature of disease presentation and pathogenesis the formulations mentioned in the context of Mutraghata called Dhatri. Mix along with Candraprabha vati which brings Apana Vata anuloma and pacifying deranged Vata and Pitta were judiciously opted in the Patient to resolve the Pathogenesis.

Patient reported a drastic improved in her presented symptoms which were assessed with sonographic studies and VAS scale with a total treatment period of 45days. Periodical observations were done once in 15days. Principle treatment of Ayurveda is to make the environment antagonist to the ailment, so drugs that having targeted action in rectifying the pathogenesis were sensibly selected. Considering the complications of medical and surgical management, Dhatri Mix and Chandraprabha vati is definitely a better option to maximise treatment outcomes early in the course of the disease, thus improving the quality of life of patient.

**KEYWORDS:** Interstitial Cystitis, *mūtrāghāta*, *mūtrakruchra*, *dhātri Mix*, *candraprabha vati*

**INTRODUCTION**

The term Interstitial Cystitis (IC) / painful bladder Syndrome has defined as the sterile disorder of urinary bladder having suprapubic pain related to bladder filling, accompanied with raised daytime and night time frequency, in the absence of established urinary infection or possible apparent pathology<sup>1</sup>. The explicit etiology of IC is still obscure. Multimodal factors which

could be accountable for triggering the inflammatory response include chronic or subclinical infection, genetic susceptibility and autoimmunity<sup>2</sup>. According to European Society for the Study of Interstitial Cystitis (ESSIC), IC is delineated as chronic pelvic pain, pressure, or discomfort perceived to the urinary bladder followed by urinary symptoms such as urinary frequency and

noted that tests such as biopsy or cystoscopy with hydro-distention are not fundamental for the diagnosis of IC, but may aids in classifying the types of IC<sup>3</sup>. Diagnosis for IC/PBS is often difficult and delayed as its presentation is similar to a number of other urological and gynaecological conditions.

Considering the varying presentations treatment must be tailored to each specific patient. Treatment guidelines incorporates Lifestyle modifications, proper counselling, physical, pharmacological, and ultimately surgical therapies for those that fail the less invasive therapies<sup>4</sup>. Well-designed treatment strategy is essential for the effective management of IC as the competency of several conservative treatments being studied are ambiguous. In this study, we are reporting a patient presenting with IC successfully treated with Ayurvedic formulations.

#### **Patient Information**

A 47year old female patient presented to the OPD of Amrita School of Ayurveda on 28/11/2019 complaining of Supra pubic pain which is not radiating and spasmodic in nature increased after micturition, increased frequency and burning micturition since 2 weeks. Her daytime urinary frequency ranged from 15 to 20 times with nocturia about six to eight times.

#### **Clinical Findings**

Suprapubic pain was 5/10 in intensity and fluctuated quite markedly in Visual Analogue Scale. Related symptoms such as fever, appetite changes, altered bowel habits, weight loss and antecedent infection were not associated. Past medical history

revealed, she was diagnosed with Vaginal Candidiasis and Pelvic Inflammatory disease. Her past surgical and family history was unremarkable, and she had no smoking and illicit drug history. Gynaecological and Obstetrics history revealed gravida 2 and last menstrual period was two weeks ago, with history of Menorrhagia. She was in a monogamous relationship and no exceptional pelvic pain during sexual intercourse was reported. Systemic examination was unremarkable except for suprapubic tenderness.

#### **Diagnostic Assessment**

Diagnosis of IC is based on the presence of classical urinary symptoms and suprapubic pain after excluding other common alternative diagnoses including Urolithiasis, Urinary tract Infections and Endometriosis. The investigations performed to reach a definite diagnosis are urinalysis, urine culture and pelvic ultrasound on next follow. Laboratory results are within normal limits and found insignificant. USG revealed cystitis, Intra-Uterine and Intramural fibroid, mild free fluid in POD with possibility of Pelvic inflammatory disease and mild fatty liver. IC is a chronic condition that most often tracks a inconstant course categorized by intermittent periods of exacerbations and remissions. Usually, the patients with uncomplicated cystitis typically have improvement of symptoms within 3days after initiation of antibiotic therapy. Recurrent cystitis occurs in 25% of women within 6 months after the first UTI and rate increases in women with more than one prior history of UTI.

### TIME LINE

DATE	FOLLOW UP DETAILS	MEDICINES	IMPRESSION
28/11/19	Advised : Urine and Blood Investigations	1. Dhātri Mix 2.Candraprabha vaṭi For 2 weeks	<ul style="list-style-type: none"> <li>✓ Patient complains of Suprapubic pain ,Burning sensation, Increased frequency and Painful micturition since 2 weeks</li> <li>✓ Cystitis, Intra-Uterine Intramural fibroid, Mild free fluid in POD, possibility of Pelvic inflammatory disease and mild fatty liver was revealed in USG</li> </ul>
29/11/19	Advice : Continue medicine & follow up after 2 weeks	1. Dhātri Mix 2.Candraprabha vaṭi For 2 weeks	<ul style="list-style-type: none"> <li>✓ Urine and blood reports were within normal limits.</li> <li>✓ No significant changes noted in clinical presentation except reduced burning sensation</li> </ul>
16/12/19	Advice : Continue medicine & follow up after 2 weeks	1. Dhātri Mix 2.Candraprabha vaṭi For 2 weeks	<ul style="list-style-type: none"> <li>✓ Suprapubic pain reduced</li> <li>✓ Burning sensation : Absent</li> <li>✓ Painful micturition : Absent</li> <li>✓ Frequency of micturition: Reduced</li> </ul>
30/12/19	Advice : Continue medicine & follow	1.Candraprabha vaṭi For 2 weeks	<ul style="list-style-type: none"> <li>✓ Suprapubic pain :</li> </ul>

	up after 2 weeks		Absent ✓ Burning sensation : Absent ✓ Painful micturition : Absent ✓ Normal frequency of micturition
14/01/2020	Advice: Follow up after 2 weeks and stop all medications	Nil	✓ Suprapubic pain : Absent ✓ Burning sensation : Absent ✓ Painful micturition : Absent ✓ Normal frequency of micturition
5/02/20	Came up for follow up	Nil	✓ USG on 1/02/2020 revealed only intrauterine intra mural fibroid and mild fatty liver. Cystitis was resolved

Chart 1: Timeline

### Therapeutic Intervention

The patient was managed by *Dhātri Mix*<sup>5</sup> an efficient herbal formulation mentioned in the context of Mūtrāghāta along with *Candraprabha vaṭi*<sup>6</sup>

SL NO	DRUG	Dose	Mode of administration	Total Days
1.	Dhātri Mix	3gm powder (twice daily)	3gm powder ,Boiled in 100ml Prepared solution make into luke warm and administered before food (Twice daily)	45
2.	Candraprabha vaṭi	2 Tablets bd	With warm water	45

Chart 2: Therapeutic Intervention

## Follow Up and Outcomes

Patient reported a drastic improvement in her presented symptoms with a total treatment period of 45 days. Periodical observations were done once in 15 days. Hypogastric Pain and burning sensation were reduced in first follow up. Further patient noticed a decrease in her urinary frequency and urgency. At her follow-up

visit, after one month, the patient's urinary symptoms were significantly reduced and the suprapubic pain was absent which was assessed with VAS Scale, and USG on 01/2/2020 showed mild fatty liver and Intrauterine, intra mural fibroids only, that revealed the absence of Cystitis which found out during initial assessment.

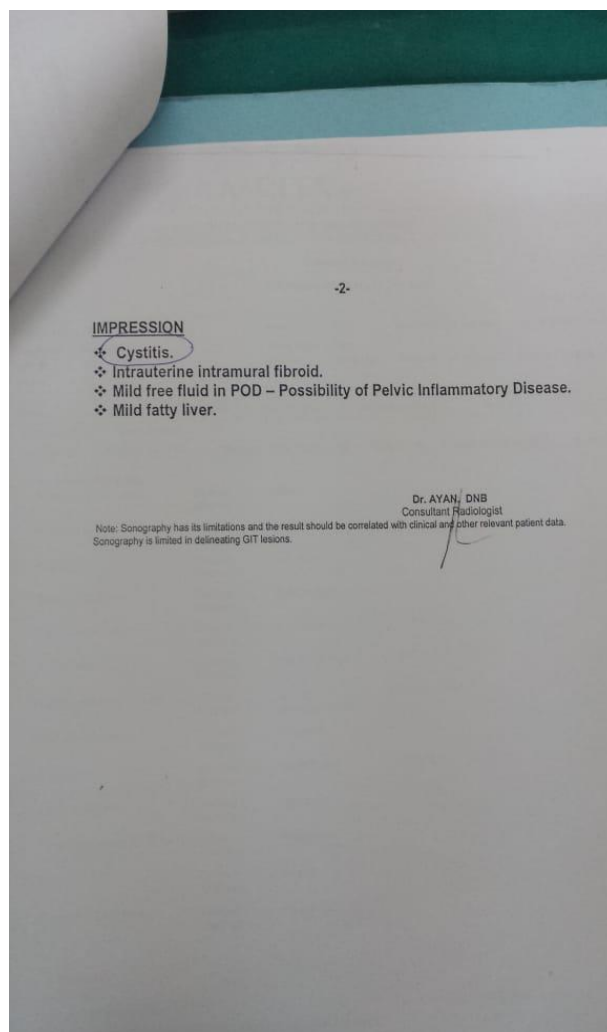
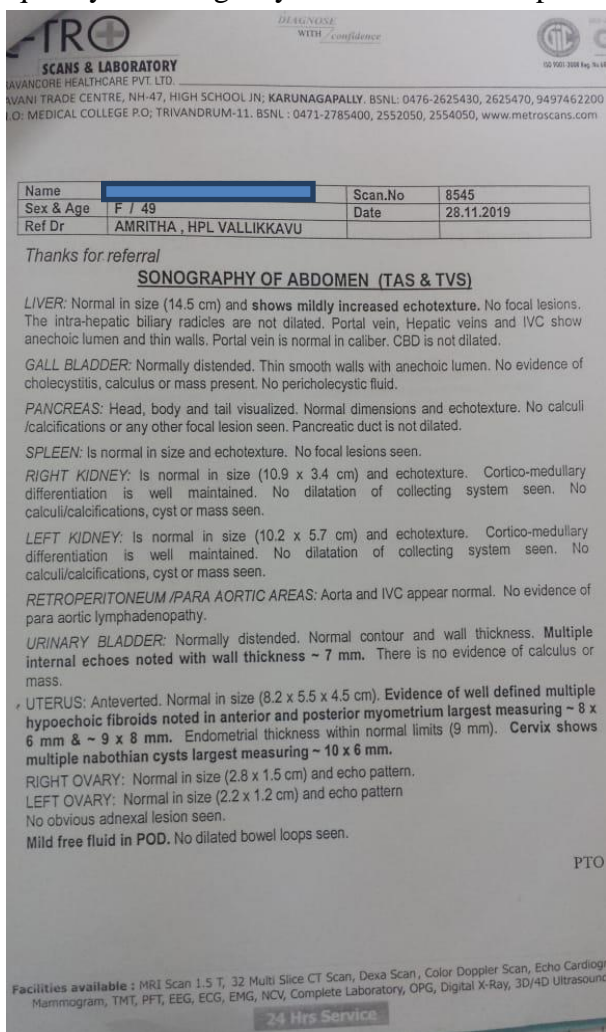


Fig 1 : USG Report on 28/11/19



Fig 2 : USG Report on 01/02/2020

SYMPTOMS	28/11/19	16/12/19	25/11/16	05/02/20
Supra Pubic pain	5	3	0	0
Pain during Micturition	4	0	0	0

Chart 3: Assessment using VAS Scale

## DISCUSSION

Interstitial Cystitis is a chronic symptom complex of the bladder characterized by pelvic pain that is exacerbated by bladder filling, and can be associated with a variety of lower urinary tract symptoms including frequency and urgency in the absence of urinary tract infections and its more prevalent in females. Comprehensive history taking and physical examination are essential to differentiate from other conditions that may present equivalently, such as urinary tract infections,

endometriosis, overactive bladder and vaginal candidiasis.

The precise mechanism of IC is still unknown. However, it is believed that inflammation plays a prime role in the pathogenesis of IC that result in the symptoms of irritative voiding and pain. Altered urothelial permeability, sensory nerve stimulation, and mast cell activation are closely related in pathogenesis. One of the proposed mechanisms in IC is the presence of increased urinary levels of leukotriene receptors in the detrusor muscle cells. Leukotriene E4 plays a role in the

activation of mast cells and eosinophils. Activated mast cells release vasoactive, inflammatory and nociceptive mediators, including kinin, leukotrienes, protease, prostaglandins, and nitric oxide, which are of utmost importance in chronic inflammatory disorders<sup>7</sup>. By considering the clinical manifestations such as pain and bladder symptoms, formulations and drugs possessing anti-inflammatory role by inhibiting leukotriene receptors present in the bladder, helps in preventing the activation of mast cells and those possessing nerve tonic action may aids in reducing the symptoms.

Introduction of pharmacological strategies should be done in parallel with continued conservative therapies including proper counselling, behavioural modification and stress control. More invasive treatments or surgical interventions may be necessary, if the patients continue to fail symptom control with a full course of pharmacological treatments. Due to the side effects in both conservative and surgical management researchers are trying to find alternatives to modern medicines.

Traditional system of medicines is using various Herbo-mineral formulations without any side effects and principles of Ayurvedic system of medicine are now validated, which popularizes the cost effective safe herbal drug practices. Ayurveda refers the condition Interstitial Cystitis to *Mūtrakruchra*, which is classified on the basis of the *dosha* (biohumor) that results in conditions to expresses itself differently like Supra pubic pain, burning sensation and other bladder symptoms. Derranged *Vata* and *Pitta* dosha are chiefly affected in this

scenario and more specifically *apana vata* seems to be more involved, results in supra pubic pain and altered bladder patterns. Other dosha mainly involved is pitta which can be identified with symptoms like burning sensation. Acharya Susruta opines that treatment adopted for *Mūtrāghāta* and *Ashmari* can be adopted in management of *Mūtrakruchra*,<sup>8</sup>. Principle treatment of Ayurveda is to make the environment antagonist to the ailment, so by understanding the nature of disease presentation, the formulations mentioned in the context of *Mūtrāghāta* like *Dhātri Mix* and *Candraprabha vaṭi* possessing *Apana vata anulomana* and *Vata Pitta hara* drugs were judiciously opted in this patient.

Drug Profile of Dhātri Mix, a herbal formulation comprised of *Amalaki* (*Embllica officinalis*), *Punarnava* (*Boerhavia diffusa*), *Guduchi* (*Tinospora cordifolia*), *Gokshura* (*Tribulus terrestris*) and *Hareetaki* (*Terminalia chebula*). *Amalaki* (*Embllica officinalis*) fruits are having potent analgesic activity and phenolic compounds of this potential herbs are working against acute and chronic inflammation due to their modulatory action of free radicals<sup>9</sup>. *Punarnava* (*Boerhavia diffusa*) have shown potential for anti-inflammatory-immunomodulatory activities and properties of BD extracts along with the isolation of a diuretic alkaloid and punarnavine are extensively used in urinary disorders<sup>10</sup>. Available extract of *Tinospora cordifolia* or *guduchi* was found to possess analgesic activity, and involves central (opioid receptors) as well as peripheral (inhibition of PG synthesis) mechanisms. Alkaloids, glycosides, flavonoids, steroids and

terpenoids in the *guduchi* is attributed to have analgesic properties by inhibiting the production of prostaglandins<sup>11</sup>. Hareetaki (*Terminalia chebula*), is also having the analgesic property and helps in inhibition of the enzyme cyclooxygenase leading to inhibition of prostaglandin synthesis thus possessing an anti-inflammatory action<sup>12</sup>. Gokshura (*Tribulus terrestris* Linn) is having the properties of best diuretic and vatahara in nature, by virtue of these properties Gokshura may antagonize the etipathogenesis of Interstitial cystitis . Ethanol extract of *Tribulus terrestris* inhibits the expression of mediators related to inflammation and expression of inflammatory cytokines, which has a beneficial effect on various inflammatory conditions<sup>13,14</sup>.

*These five drugs mentioned in the formulation Dhātri Mix* described as useful in *mutraghata and mūtrakruhra*, separately in the form of various formulations and found to have best results. It has been extensively shown that many plant-derived compounds present in the Dhātri mix possess substantial anti-inflammatory, Analgesic, Immunomodulatory and Diuretic effects. Moreover these drugs are *Vatahara, Balya, Rasayana* and *Mootrala* in nature. *Candraprabha vaṭi* is a herbo-mineral formulation, scientifically validated comprising of 37 ingredients consists of 28 herbs, 3 mineral salts, 2 alkali, 2 metal ashes, sucrose and Asphalt mineral pitch, which is effectively used in several urogenital and gastro intestinal ailments and practicing as a potential diuretic in the Ayurvedic system of medicine .

All these herbs are identified to know different type of phytoconstituents and show potential in the treatment of urinary disorders and could be alternative to etiopathogenesis of *Mūtrāghāta* and for attaining normalcy to deranged function of apana vayu .By analysing the patient and treatment outcome , combined efficacy of Dhātri Mix and Candraprabha vaṭi is a best treatment choice option for IC patients due to its analgesic and anti-inflammatory effect along with enhancement of altered bladder capacity .

### CONCLUSION

Interstitial Cystitis is a debilitating condition and its prevalence is increasing which lacks exact management guidelines for the complete cure. Considering the complications of medical and surgical management, *Dhātri Mix and Candraprabha vaṭi* helps in maximising treatment outcomes early in the course of the disease assessed with proper outcomes measures in a total follow up period of 45 days, thus improves the quality of life of patient. This case report provides a basis for a longitudinal study in large samples for further evaluation to substantiate its findings.

**Informed Consent:** Obtained

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