

**MANAGEMENT OF CHRONIC CYSTITIS ( *MUTRAKRICHRA* ) IN CHILDREN - A  
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**ABSTRACT**

Urinary tract infections (UTIs) are common and conclusively severe bacterial infections in the paediatric age group. It can cause distress for both children and their parents. It affects 1% of male children and 3-8% of female children. However, the prevalence varies by age (1). During the first year of life, male children are more likely to experience it (3.7%) than girls (2%). This incidence begins to change, with females having a higher prevalence in children aged two years and above. E.coli Klebsiella and Proteus species are the most common etiological causes. According to modern antibiotic therapy, treatment is effective but has limitations, side effects, chances of resistance and the possibility of recurrence even after long-term treatment.

In Ayurveda, the symptoms of UTIs come under *Mutrakricchra* (Difficulty in micturition). These symptoms are similar to those of UTIs (Urinary Tract Infections), primarily cystitis and urethritis.

In this case study, a six-year-old female child diagnosed with Chronic cystitis ( *Mutrakricchra* ) has been treated with oral Ayurvedic medication and dietary restrictions to cure the clinical signs and symptoms of the child and reduce recurrence.

**Keywords:** Mutrakricchra, UTI (urinary tract infections), micturition.

## INTRODUCTION

Urinary tract infection is one of the most common infections in children. The incidence of UTI is challenging to estimate because it varies depending on different variables, such as age. In the first year of life, it is more common in boys (3.7%) than girls (2%). This incidence starts to shift, and in children two years and older, females have a two to four times higher prevalence of UTI than males.<sup>(2)</sup>

The etiologic agent that most frequently causes UTI is *Escherichia coli*, corresponding to 80–90% of cases in children. Other gram-negative uropathogens are *Klebsiella*, *Proteus*, *Pseudomonas*, *Enterobacter* and *Citrobacter* spp. Within the gram-positive pathogens, we find *Staphylococcus epidermidis*, *Enterococcus* species and, with very low frequency, *Staphylococcus aureus*. Most pathogens originate in the faecal flora ascending to the urethra and bladder from the perineum<sup>(3)</sup>

When evaluating a patient with suspected urinary infection, predisposing factors for UTI in children should be considered, such as Age, Gender, Circumcision, Genetics, Obstructive Urinary Pathology, Vesicoureteral Reflux, Bladder, Bowel Dysfunction and Instrumentation of the Urinary Tract, Sexual Activity<sup>(4)</sup> and the Factors that are susceptible to recurrence of UTI include females, younger than six months, Urinary tract disease, severe vesicoureteral reflux, constipation, poor sanitation and environmental conditions, or repeated catheterisation. Illiteracy and low socioeconomic conditions also increase the prevalence of urinary tract infections due to lack of hygiene. In infancy, toilet training can cause voluntary retention and stasis of the bladder, which promotes urinary tract infections<sup>(5)</sup>

Incidence and degree of morbidity and mortality from infections are greater with those in the urinary tract than with those in the upper respiratory tract. Bacteria, fungi, yeasts and viruses can cause urinary tract infections, which are more commonly found easily. Therefore, UTIs are common but can become serious if left untreated, and this may lead to the development of severe chronic pyelonephritis and chronic renal failure.

With the introduction of effective antibiotics, the problem has been solved to a certain extent, but the use of in addition; antibiotics have limitations, such as side effects, the possibility of recurrent infection and recurrence even after long-term treatment. Simultaneous increases in resistance and high treatment costs are common problems—the use of antibiotics to be regulated due to antibiotic resistance. The guidelines are inconclusive about imaging indications and treatment duration. So, there is a definitive need for Ayurvedic formulations and antibiotics to resolve complaints, improve symptoms, and reduce recurrence.

As per Ayurveda, Sharir is made from doshas, dhatu and mala. This means that they help maintain the body's structural and factional integrity. Among these, *Mala* is intended explicitly to eliminate waste products from the body, also known as *kledavahana*. Due to the changes introduced in doshas, they changed their *margas* or *srotas*, called *mutravahastrotodushti*. In Ayurveda, dysuria is described as eight types of *Mutrakrichra*, 13 kinds of *Mutraghata*, and four types of *Mootrashmari*<sup>[6]</sup>. Acharya Kashyapa also described the signs and symptoms of *Mutrakrichra* in *Vednaadhyaya*.<sup>(7)</sup> symptoms of *Mutrakrichra* are *Muhur-muhur mutrata* (Urgency and frequency), *Peeta mutrata* (yellow discolouration of urine ) *Sarakta mutrata* (hematuria) *Sadaha Mutrata* (Burning Micturition) *Saruja Mutrata* (Dysuria).

### Case presentation :

A 6-year-old female patient came to OPD with complaints of increased frequency of micturition (every 15-20 min in the time), repeated urge of urination for one month with mild burning sensation, bedwetting at night, and mild lower abdominal tenderness.

History of present illness: The patient was healthy for one month, and gradually, she started the above complaints. For the above complaints, she took allopathic medications, but she didn't get much relief. So, the patient came to our hospital for further management, complaints of increased frequency of micturition (every 15-20 minutes in the daytime) and repeated urge to urinate.

Birth history - FTNVD/CIAB/FCH/2.6kg/AGA

There was no H/O of NICU Stay.

History of past illness: Not significant.

Personal history

- Appetite-normal
- Sleep-disturbed
- Bowel-Normal
- Micturition - Increased frequency of micturition every 20-30 min, urgency and pain during micturition, repeated urge of urination.

General examinations

Height-114cm, Weight- 22kg BP- 100/70mm of Hg  
Pulse -88/min, regular Temp.-Afebrile(97.3f)

Systemic examinations

- CNS-conscious and well oriented
- RS-AE=BS, clear
- CVS-S1 and S2 are normal, and no abnormal sound was heard.
- P/A- mild tenderness in the hypogastric region.

### Investigations

Urine routine analysis

- Physical examination
- Quantity – 20 ml
- Colour - pale yellow
- Appearance - slightly turbid
- Reaction – acidic
- Specific gravity - 1.025

CHEMICAL EXAMINATION

- Protein -absent
- Sugar - absent
- Urobilinogen -normal
- Bile salts -absent

- Bile pigments - absent
- Ketone - absent
- Leucocyte esterase - absent
- Nitrate – absent

MICROSCOPIC EXAMINATION

- Pus cells – 1-2
- Epithelial cells - occasional
- Casts - absent
- Crystals - absent
- Parasites - absent
- Bacteria - absent

➤ URINE CULTURE & SENSITIVITY –

- Specimen source – urine
- Appearance -- 20 cc, pale yellow, slightly turbid.
- Organism -- no growth in aerobic bacterial culture after 48 hours of incubation.

➤ USG( Abdomen and Pelvis)

- Findings show diffuse bladder wall thickening, which measures 4.8mm with multiple internal echoes.
- Impression:- Cystitis changes in urinary bladder rest parameters are normal.

➤ *Astavidha pariksha*

- *Nadi=Vata-Pitta*
- *Mala=Sama*
- *Mutra=Pravritti Muhur-muhur ,saruja .*
- *Jihwa = Niram*
- *Shabda=spashta*
- *Sparsha= anushna*
- *Druk= prakrut*
- *Akruti=Madhyam*

## Treatment given –

On the first visit --

Sr no.	Treatment	Dose	Frequency	Duration
1	Varunadi kwath	5 ml	Three times a day	Seven days
2	Chandraprabha Vati	½ tablet	Two times	Seven days

- On 1<sup>st</sup>, Follow up after three days. The above medicines are continued for another four days.
- On the 2nd follow-up after 7, the Above medicines are continued along with tab neo for 15 days -
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1.	Tablet Neo. ( Charak Pharma)	One tab.	Two times	15 DAYS
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## DISCUSSION

On the 1<sup>st</sup>, Follow up after three days of treatment with Varunadi Kwath and Chandra Prabha Vati for three days. The frequency of urination decreased from every 20-30 minutes to 1 to 1:30 hours after three days; reduction in other symptoms of the repeated urge of urination with mild burning sensation and episodes of bedwetting at night reduced.

Varunadi kwath containing active Ayurvedic ingredients –

Varuna (*Crataeva nurvala*), and Pashanabheda (*Bergenia lingulata*) have diuretic properties. Because of its Tridosha-pacifying and Mutrala (diuretic) properties, pashanabheda increases urine output and relieves painful micturition<sup>(8)</sup>

Gokshura with dominant anti-inflammatory and diuretic traits, Gokshura is a potent remedy for treating urinary disorders like painful micturition, [urinary incontinence](#), and burning sensation while urinating<sup>(9)</sup>

Chandraprabha vati is a classically indicated medicine for Mutrakricchra (urinary tract infection)<sup>10, 11</sup>. It is sheeta veerya and has rasayana, tridoshaghna, Mutrala and deepana-pachana properties. It helps correct the agni by overcoming the pathogenesis of Mutrakrichra. The primary ingredients are Shilajit (*Asphaltum*), Sweta Parpati, Moolikshara (extract of the ashes of radish), Sarjikshara, Punarnava (*Boerhavia diffusa*), Gokshura (*Tribulus terrestris*), Varuna (*Crataeva nurvala*), Pashana Bheda (*Bergenia lingulata*),

Ikshumoola (*Saccharum officinarum*), Kulatha (*Dolichos biflorus*) are mainly acts on Mutravaha Srotas and alkaline in nature<sup>13</sup>. Other ingredients like guggulu, loha bhasma and swarnamakshika bhasma are sheeta veerya<sup>14</sup>, Deepaniya<sup>15</sup>, Vatashamaka<sup>16</sup> and rasayana<sup>17</sup>. These properties help reduce burning micturition.

After three days of treatment with Varunadi Kwath and Chandraprabha Vati, the Frequency of urination decreased from every 20-30 minutes to 1 to 1:30 hours, and other symptoms of the repeated urge of urination with mild burning sensation, episodes of bedwetting at night reduced so treatment is continued for four more days,

After seven days of treatment .

On the second follow-up after seven days, the frequency of urination decreased from 1 to 1:30 hrs to 5 to 6 times a day.

Then after seven days of starting of the treatment, Tab neo ( Charak pharma ), given for 15 days which contains Shatavari, acts on pittaj Mutrakrichra explained in Charak Samhita ( m); Vanga Bhasma improves urine output and eases the symptoms of UTI such as [dysuria](#), and burning micturition, owing to its Pitta pacifying action. <sup>(18)</sup> Kapikacchu, having the methanolic extract of a whole plant, had antimicrobial properties against gram +ve and gram -ve organisms. This extract is mainly effective against Escherichia coli, Salmonella typhi, Bacillus subtilis and Shigella Salmonella typhi, Bacillus subtilis and Shigella dysenteriae<sup>(19)</sup> and muktashukti Bhasma having Rujahar and

dahaghna property which improves the symptoms of Mutrakrichra<sup>(20)</sup>

## CONCLUSION

Chronic cystitis in children can significantly impact their quality of life, causing recurrent pain, urinary frequency, and emotional distress. This case study shows that modern treatment and Ayurvedic remedies show better symptomatic improvements with lesser side effects, avoiding the risk of antibiotic resistance and reducing recurrence in managing chronic Cystitis (Mutrakricchra).

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