



A Case Report on UTI w.s.r. *Mutrakriccha* in Children

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Article received on- 7 Jan.
 Article send to reviewer- 10 Jan.
 Article send back to author- 12 Jan.
 Article again received after correction- 17 jan.

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Abstract-

Urinary tract infection (UTI) is one of the most common paediatric infections that distresses the child and concerns the parents. It occurs in 1% of boys and 3-8 % of girls, however incidence varies with age. *E. coli* is the most prevalent etiological agent followed by *Klebsiella* spp. and *Proteus* spp. UTI comes under the broad term of *Mutrakriccha* as both have similar characteristic features like Dysuria (*Sarujamutrta*), Yellow discolouration of urine (*Peetamutrta*), Hematuria (*Saraktamutrta*), Burning micturition (*Sadahamutrta*), Urgency and frequency (*Muhurmuhur Mutrta*). The present case report deals with UTI in an 8 years old female child. She was treated with *Ayurvedic* formulations mentioned in classical texts for

Mutrakriccha. Marked reduction in the symptoms was observed after 15 days of treatment. The patient was in regular follow up with no re-admission for repeat UTI.

Key words: Urinary tract infection, *E. coli*, *Mutrakriccha*, *Ayurveda*

INTRODUCTION

A urinary tract infection is the infection of bladder (Cystitis) or kidneys (Pyelonephritis). 75-90% of all cases are caused by *E. coli*, followed by Klebsiella spp, Proteus spp, Enterobacter spp, Staphylococcus spp. and Enterococcus spp. In general bacterial count of $\geq 100,000$ cfu/ml in the midstream sample of urine is considered positive for urinary tract infection. The prevalence of UTI varies with age. During the first year of life, the male and female ratio is 2.8-5.4:1. Beyond 1-2 years, there is the preponderance, with a male:female ratio of 1:10. UTI is more common in uncircumcised boys especially in the first year of life. In girls first UTI usually occurs by the age of 5 years with peaks during infancy and toilet training. Nearly all UTI are ascending infections. The bacteria arise from the fecal flora colonize the perineum, enter the bladder through urethra and disseminate throughout the mucosa causing tissue damage. The ascending of bacteria to kidneys causes pyelonephritis. In Ayurveda UTI can be understood as *Mutrakriccha* due to similar characteristic features like Dysuria (*Sarujamutrta*), yellow discoloration of urine (*Peetamutrta*), Hematuria (*Saraktamutrta*), Burning Micturition (*Sadahamutrta*), Urgency and frequency (*Muhurmuhur Mutrta*). The classically indicated medicines for *Mutrakriccha*

possess *Dosha* pacifying (*Doshashamak*), diuretic (*Mutral*), anti-inflammatory (*Dahanashak*), digestive (*Aampachak*) and anti-microbial actions .

CASE REPORT

An 8 years old female child was brought to the OPD of Kaumarbhritya-Balroga, by her mother at R.G.G P.G.Ayu. College and Hospital, with the following chief complaints-

- Difficulty in passing urine (Dysuria)
- Frequent micturition
- Burning micturition
- Supra pubic pain

Mother revealed that her child had these entire problems since 5 days along with mild fever and decreased appetite. Past history was unremarkable and she was on no medications.

O/E

Built=Moderate

Nutrition=Well nourished

Pulse=90/min

Temp=99⁰ F

P/A =Supra pubic tenderness⁺

The rest of examination was uneventful.

ASTVIDHA PARIKSHA

Nadi= Vata-Pitta

Mala=Vibandh
Mutra=Pravritti-
muhurmuhur,saruja,sadaha, alpa
Jihwa=Saam
Shabda=Anushna
Druk=Aarakta
Akruti=Madhayam

- Urine examination-
- ✓ Colour = yellow
- ✓ Reaction =Acidic
- ✓ RBC/ALBUMIN/SUGAR=Nil
- ✓ Pus cell=13-14 /hpf
- ✓ Epithelial cells=4- 5 /hpf
- ✓ Urine Culture&Sensitivity
=>1,00,000 cfu/ml of E.coli

INVESTIGATIONS

- Hemoglobin=10.6 gm%
- TLC=6800/cumm
- ESR= 12 mm fall in first hour

DIAGNOSIS= UTITREATMENT GIVEN

Sr. No.	Name of drug	Dose	Duration	Anupana
1.	<i>Dadimashtak Churna</i> <i>Godanti Bhasma</i> <i>Shankh Bhasma</i>	1 gm 250mg 250 mg	Thrice a day	<i>Koshnajala</i> (Luke warm water)
2.	<i>Chandraprabha vati</i>	125 mg	Thrice a day	Water
3.	Syrup. Neeri (Aimil pharmacuticals)	5 ml	Thrice a day	With equal amount of water
4.	<i>Trinpanchmool kwath</i>	5 ml	Twice a day	

RESULTS

- Changes in clinical features

Sr. No.	Feature	BT	AT
1.	Dysuria	Present	Not present
2.	Burning micturion	Present	Not present
3.	Fequent micturution	12 times/day	5 times/day
4.	Supra pubic pain	Present	Absent

- Changes in laboratory findings

Sr. No.	Urine Analysis	BT	AT
1.	Colour	Yellow	Clear
2.	Reaction	Acidic	Acidic
3.	Specific gravity	1.020	1.012
3.	RBC/ALBUMIN/SUGAR	Nil	Nil
4.	Pus cells	13-14/hpf	4-6/hpf
5.	Epithelial cells	5-7/hpf	2-4/hpf
6.	Urine Culture & Sensitivity	>1,00,000cfu /ml of <i>E.coli</i>	58,000cfu/ml of <i>E.coli</i>

DISCUSSION

Mutra kricchais a disease of *Mutravaha srotas* in which Painful and difficult voiding of urine.

Nidana:

Adhyashan, Rukshasevana, Yanagamana, Tikshnaousadha and *Anupamamsa sevana, Ajirnaetc.*

Samprapti & lakshana:

Due to Nidanasevana, Doshas individually or together get vitiated and localized in the *Basti* leading to *Paripeeda* of

Mutramarga.The vitiated *Doshas* along with the state of *Agnimandya (manda Agni)* invariably produce *Aama*. *Aama* mixes with the *Doshas* forming *Saamadosha*.These *Saamadosha* produces symptoms such as *Peetamutrata* (yellowish urine), *Sadaha mutra pravrutti* (burning micturition), *Basti & Mutrendriya gurutwa* (inflammation of bladder), *Shweta, Snigdha & picchilamutra* (turbid urine with the presence of leucocytes).In the present case presentation *Ayurvedic* formulations mentioned specifically for *Mutravaha srotas vikar* were used to break down the pathogenesis of disease.

Mode of action of formulations:

Sr. No.	Formulation	Mode of action
1.	<i>Dadimastaka Churna</i>	Apetizer, Carminative
2.	<i>Godanti Bhasma</i>	Antipyretic, Anti-inflammatory, Analgesic
3.	<i>Shankha Bhasma</i>	Antacid, Antispasmodic
4.	<i>Chandraprabha Vati</i>	<i>Sarvadoshahara, Rasayana,Diuretic,Anti inflammatory, Antiseptic, Alkalizer</i>
5.	Syrup Neeri	Anti- microbial action, Anti-urolithiatic agent
6.	Trina panchamula Kwath	<i>Mutrakrichhahaara, Bastivishodhana, Antimicrobial,</i>

CONCLUSION

The *Ayurveda* treatment protocol with *Dadimastaka churna*, *Godanti bhasma*, *Shankha bhasma*, *Trinapanchamoola*

Kwath, *Chandraprabha vati* and Syrup *Neeri* is effective in the management of *Mutrakriccha*. But as it is a single case study, further studies in more number of cases is needed for a definite conclusion.

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