



Review Article

Volume 9 Issue 3

July-Sept 2020

## PREVIEW OF MUTRAKRICHHA AND URINARY TRACT INFECTION (U.T.I)

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### ABSTRACT

The term Mutrakrichha comes under the disorders of Mutravaha Srotas, and mainly deals with shool (pain) and kricchrata (dysuria). Description of this disease in almost all-important classical texts reflects its prevalence in ancient period. Acharya Charaka has described eight types of Mutrakrichha. Charaka has also mentioned eight type of Mutragatha. Mutraghata and Mutrukrichha separately described by Acharya Sushruta in Uttar-Tantra. In Mutrakrichha, the vitiated Pitta Dosha along with Vata (mainly Apana Vayu) on reaching basti (bladder) afflicts the Mutravaha Srotas due to which the patient feels difficulty in micturition along with symptoms like Peeta mutruta, Sarakta mutrata, Sadaha mutrata, Saruja mutrata und Muhur-muhur mutrata. The above mentioned symptomatology has close resemblance with urinary tract infections, as described in modern texts specifically lower urinary tract infections (urethritis and cystitis). Therefore in present article attempt has been made to define Mutrakrichha on scientific grounds w.s.r to urinary tract infection.

**KEYWORDS:** Mutrakrichha. Shool, Mutraghata, Peeta Mutrata, Urinary Tract Infection.

## MATERIALS AND METHODS

As the disease Mutrakricchra has been described in Ayurveda, the conceptual study is subjected in Ayurvedic aspect and modern aspect. For Ayurvedic concepts of Mutrakricchra various classics were referred. For Modern Aspects of Lower urinary tract infection, various text books, journals, websites were referred.

## INTRODUCTION

In our classical text the urinary disorders are described in the form of 8 types of Mutrakrichha, 13 types of Mutraghatas," 4 types of Ashmaris and 20 types of Prameha. Acharya kashyapa had also described the sign and symptoms of Mutrakriccha in Vedna adhyaya. A healthy urinary tract is generally resistant to infections. However, for anatomical reasons female lower urinary tract is more susceptible. Predisposing factors for recurrent Urinary tract infection include female sex, age below 6 months, obstructive uropathy, severe vesicoureteric reflux, constipation and repeated and poor hygienic conditions environment, poverty and illiteracy also contribute to the increasing percentage of urinary tract infections. Urinary tract infections occur in 1% of boys and 1-3% of girls. These infections are the common complications during pregnancy, diabetes, polycystic renal disease and in other immune compromised patients. Urinary tract infections are the leading cause of gram-negative sepsis in hospitalized patients. They are important cause of morbidity and might result in renal damage, often in association with vesicoureteric reflux (VUR). Urinary tract infections are second in frequency after upper Respiratory tract infections." Incidence and degree of morbidity and mortality from infections are greater with those in the urinary tract than with those of the upper respiratory tract. Bacteria are by far the most common invading organisms but fungi, yeasts and viruses also produce urinary tract infections. Thus, urinary tract infection is potentially a serious condition and failure to realize that this may lead to development of serious chronic pyelonephritis and chronic renal failure. With the introduction of effective antibiotics problem has been solved to some extent but the use of, antibiotics have limitations like side effects, chances of re infection and relapse even after long-term therapy. Simultaneously increasing incidence of resistance and high cost of therapy are common problems.

## AYURVEDIC PERSPECTIVE

Mutra is an outcome product digestion of food and metabolism in the body it is passes through urethra. In both Mutraghata and Mutrakrichha, Krichhrata (dysuria) and Mutra-vibandhta are simultaneously present but in Mutrakrichha there is predominance of Krichhrata (dysuria).

The painful voiding of urine is known as Mutrakrichha. In this disease patient has urge to micturate, but he passes urine with pain.

**Samprapti :** It can be concluded that Vyayama, adhyashan, ruksha sevana, yana gamana are causative factors for vata prakopa Tikshna aushadha, amla sevana causes pitta prakopd" and Anupa mamsa adhyashan causes kapha prakopa" So these Nidanas cause vitiation along with Stroto-dushti of Mutrvaha strotas. Stroto-dusti will cause kha-vaigunya in Mutravaha strotas.

These factor leads to Mutrakriccha. These etiological factors can be summarized as:

**Aharaja Nidana\*** Adhyashana, \* Ajirna \* Ruksha anna sevana Tikshna aushadha \* Ruksha madya sevana

**Viharaja Nidana\*** Yana gamana \* Ativyayama \* Aghata

**Partantra Nidana** Kaphaja arsha\* Ajirna\* Basti vidradhi \* Gulma Udavartd

**Rupa (Symptomatology)** Pratyatma lakshana

*'Mutrasya krichchhena mahata dukhena pravriti'*

**Chikitsa( Management)**

1-Samana chikitsa

2-Shodhana chikitsa

3-Bahirparimarjana chikitsa

**Specific chikitsa**

### 1. Vataja Mutrakrichchha Chikitsa

a) **Bahirparimarjana chikitsa:** Abhyanga, swedana, upanaha, and vata shamaka dravyas like as dashamoola etc.

b) **Antahparimarjana chikitsa** Shodhana- Niruha basti, Utara basti with vata

shamak kwath like dashmoola kwath. • Shamana- Amritadi kwatha, Sthiradi aushadha, Shwadanshtra taila, traivritta taila( Su.). Mishraka sneha.

2. **Pittaja Mutrakrichra chikitsa** Bahirparimarjana chikitsa- Avagahana water.pralepana with chandan and karpur. Sheeta Parisheka,

**Antahparimarjana chikitsa** Shodhana- Virechana with tikta evam madhur kashaya, Uttara basti. Shamana- Shatavaryadi kwatha (Ch.), Haritakyadi kwatha, Trinapanchmula kwathal Y.R.), churna(Su, ervaru Trinapanchamula beeja,yashtimadhu, devdaru with tandul dhavan.

3. **Kaphaja Mutrakrichha chikitsa** Bahirparimarjana chikitsa: Svedana, Abhyanga with taila containing tikta ushna dravya, Antahparimarjana chikitsa Shodhana- Vamana, Niruha basti with kshara, tikshna and katu dravya. • Shamana- Vyoshadi churna praval bhasmal Ch.). shwadanshtradi kwatha, trikankantakadi ghrita,yava bhaksh,takra

4. **Sannipattaja Mutrakrichha chikitsa** In Sannipataja Mutrakrichra treatment should be done according to vata sthana. "The dosha which is more dominant is treated first" Antahparimarjana chikitsa \* Shodhana- If kapha is predominant then vamana, if pitta is predominant then virechana and if vata is predominant then basti karma should be performed. Shamana-Pashanabhedadi yoga Bribatyadi kwath

#### 5. **Raktaja mutrakrichha chikitsa;**

It should be manage as sadyovrana **Shakritajanya mutrakrichha chikitsa** Vatahara kriya is done in shakritajanya mutrakrichha**Pathya:** Purana shali, yava, kshara,takra, dugdha, dadhi, jangal mamsa, mudga yusha,, trapusha, nadeva jala, sharkara, kushmanda, patola patra, ardraka, gokshura, puga, narikela, laghu ela, karpura.

\* **Apathya:** Tambula, matsaya, lavana, pinyaka, hingu, tila, sarshapa, masha, karira, tikshna, vidahi, ruksha, amla dravya, virudhashana, vishamashana, Yana gamana, vega dharana.

#### **MODERN PERSPECTIVE**

Urinary tract infections have plagued mankind long before bacteria were recognized of disease and before urology became an established medical specialty.. Hippocrates

believed that disease was caused by disharmony of the accordingly diagnosed urinary disorders. Infection refers to both microbial colonization of the urine and tissue invasion of any structure of the tract. Bacteria the causative agents pathological four humors Urinary tract urinary are most commonly responsible, although yeast, fungi and viruses may produce urinary infection. Infants and young children with UTI may present with specific symptoms Older paediatric patients are more likely to have symptoms and findings attributable to an infection of urinary tract. Differentiating cystitis from pyelonephritis in the paediatric patient is not always possible, although children who appear ill or who present with fever should be presumed to have pyelonephritis they have evidence UTI. *Escherichia coli* are the most common causative organism of this disease causes approximately 80% of acute infections in patients without catheters. Other gram-negative bacilli, especially *Proteus* and *Klebsiella* and occasionally *Enterobacter*, account for a smaller proportion of uncomplicated infections. Gram-positive cocci play a lesser role in urinary tract infections, nonetheless *Staphylococcus saprophyticus*, *Enterococci*; *Staphylococcus aureus* are associated with acute urinary tract infection in young females and in-patient with renal stone or previous instrumentation. Definition Urinary tract infection is an infection that affects part the urinary tract. When it affects the lower urinary tract it is known as bladder infection (cystitis) and when it affects the urinary tract it is known as kidney infection (pyelonephritis). Symptoms from a lower urinary tract include pain with urination, frequent urination, and feeling the need to urinate despite having an empty bladder. B" Infections of the urethra and bladder are often of infections, considered superficial or pyelonephritis and renal suppuration signify tissue invasion. The 3 basic form of UTI are pyelonephritis, cystitis pyelonephritis and renal abscess are less from a microbiological perspective, urinary tract infection (mucosal) and asymptomatic bacteraemia. Focal (221 common. microorganisms are when pathogenic the urine, urethra, and kidney. Symptoms of exists detected in dysuria, urgency, and frequency unaccompanied by significant I bacteraemia nave been termed as acute urethral syndrome. Although widely used, this term lacks anatomic precision because many cases so designated are actually bladder infections. Moreover, since the causative agent can usually be identified in these patients, the term syndrome- implying unknown causation is inappropriate.

## AETIOLOGY

Bacterial infection are the most common cause of UTI, with E.coli being the most frequent pathogen, causing 75-90% of UTIS, Other bacterial sources of UTI include Klebsiella, Proteus, Enterococcus species, Staphylococcus, saprophyticus especially among female adolescent Streptococcus group B especially among neonates. Fungi (Candida species) may also cause UTIS, especially after instrumentation of Urinary tract. Adenovirus is a rare cause of UTI and may cause hemorrhagic cystitis

## TREATMENT

Acute cystitis should be treated promptly to prevent possible progression to pyelonephritis. If the symptoms are severe, a specimen of bladder urine is obtained for culture, and treatment is started immediately. If the symptoms are mild or the diagnosis is treatment can be delayed until the results of culture are known, and is doubtful, culture can be repeated if the results are uncertain. For example, if a midstream culture grows between 10'and 10 colonies of organism, a second culture may be obtained by catheterization before treatment is initiated. If treatment is initiated before the results of a culture and sensitivities are available, a 3- to 5-day course of therapy with trimethoprim-sulfamethoxazole is effective against most strains of E. coli. Nitrofurantoin (5-7 mg/kg/24 hr. in 3 to divided doses) also is effective and has the advantage of being active organisms. Amoxicillin (50 mg/kg/24 hr.) also is effective as initial treatment but has no clear advantages over sulphonamides or nitrofurantoin. \* gram-negative against Klebsiella-Enterobacter In acute febrile infections suggestive of pyelonephritis, a 10- to 14-day course of broad-spectrum antibiotics capable reaching significant tissue levels is preferable. Children who are dehydrated, are vomiting, or are unable to drink fluids, are <1mo. of age, or in whom urosepsis is a possibility should be admitted to the hospital for intravenous rehydration and intravenous antibiotic therapy. Parenteral treatment with ceftriaxone (50-75 mg/kg/24 hr., not to exceed 2 g) or ampicillin (100mg/kg/24 hr.) with an aminoglycoside such as gentamicin (3-5 mg/kg/24 hr. in 1 to 3 divided doses) is preferable. Potential ototoxicity and nephrotoxicity of aminoglycosides should be considered, and serum creatinine and trough gentamicin levels must be obtained before initiating treatment, as well as daily thereafter Treatment with aminoglycosides is particularization of urine with long as treatment continues. Effective against Pseudomonas sodium bicarbonate increases their

effectiveness in the urinary tract. Oral 3rd-generation cephalosporin's such as cefixime are effective as parenteral ceftriaxone against variety of gram-negative organisms other than *Pseudomonas*, and these medications are considered by some authorities to be the treatment of choice for day, often is effective. Maybe also may Prophylaxis with amoxicillin cephalixin effective, but the risk of breakthrough UTI may higher because bacterial resistance may be Other indications for long-term prophylaxis (e.g. neurogenic bladder, urinary tract stasis and obstruction. reflux, calculi) are discussed in other chapters. There is interest in probiotic therapy, which replaces normal

## **DISCUSSION**

In this Study, an illustrative attempt has been made to point out the facts of conceptual and clinical Study.

## **CONCLUSION**

Increasing prevalence of UTI is a global issue of concern due to associated long term compromise in the quality of life. • Urinary Tract Infections mentioned in Modern Medicine resembles with Mutakrichha. This disease is an important cause of renal damage, school absentees and frequent visit of the paediatricians, clinics or hospital. • It is a Vata Predominant Tridoshaj disease involving Mutravaha Srotas with dushti of Mutra and Ambu. • In both Ayurveda and modern management, primary prevention (Nidanprivarjanam) strategy has been given priority. • Uncircumcised male infants appear to be increased risk of UTI in the first three months life. • A girl with voiding dysfunction is at increased risk for recurrent UTI, because the reflux of urine laden with bacteria from the distal urethra in to the bladder. • Boys with true phimosis without abnormal voiding showed high incidence of Urinary Tract Infection, particularly in the form of pyelonephritis, was noted UTIS to be high. Causes by micro-organism, so patient should maintain their proper hygiene. Caregivers can help in preventing the disease in children by teaching good hygiene, maintaining healthy hydration and by being aware your child's daily bathroom habits.

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