ABSTRACT

Pittaj Mutrakrucha is well described in Ayurveda which can be easily correlated with Mutraghata and Mutrakrichha separately described by Acharya Sushruta in Uttar-tantra. In urinary tract infections, it is described as dukkan or kruchenmentapravuti, i.e. very painful micturition. UTI Commonly encountered with Escheria coli account for about 80% of community acquired. The methodology was clinical study of Mutavahasrotodushti Mutrakrichha, the prakupita Pitta Dosha and Vata (Apana Vayu) on reaching Basti (bladder) affects the Mutravaha Srotas giving rise to Pittaj Mutrakrucha. Difficulty in micturition along with symptoms like Peeta mutrata, Sarakta mutrata, Sadaha mutrata, Saruja mutrata and Muhur-muhur mutrata are common clinical features. All these symptoms resemble closely with UTI (urinary tract infections) mainly urethritis and cystitis. Therefore, in present article attempt has been made to define Mutrakrichha on scientific grounds vis-a-vis urinary tract infection.

Keywords: Mutrakrichha, Shool, Mutraghata, Peeta Mutrata, Urinary Tract Infection.

1. INTRODUCTION

As per Ayurveda, Sharir is made from doshas, dhatu and mala. It means they help in maintaining the structural and functional integrity of the body. Among these Mala are specifically means for elimination of waste product out of the body. Also known as kledvahan. Due to vitiation by initiated doshas they in turn vitiate their margha or srotas which is known as Mutravasrotodushti. Patient of pittaj mutrakruch complains as shulyukta, dahayukt and muhurmuhur mutraprvruti.

Pittaj mutrakrucha is equivalent to UTI where dysuria, burning micturition and increase frequency of micturition. In our classical texts the urinary disorders are described in the form of 8 types of Mutrakrichha, 13 types of Mutraghata and 4 types of Mutrashmari. However, for anatomical reasons female lower urinary tract is more susceptible. Predisposing factors for recurrent UTI include female sex, age below 6 months, obstructive uropathy, severe vesico-ureteric reflux, constipation and poor hygienic conditions and environment or repeated catheterization. Illiteracy and lower socioeconomic conditions also contribute to the increasing prevalence of UTI. 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 also one of the main causes of gram-negative sepsis. 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, Fungi, Yeast and Viruses produce urinary tract infections Among which bacteria are commonplace. 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. Isolated UTI in adult is not infrequent and is more common in women.

2. METHODS
In present article, literary aspects regarding Pittaj Mutrakrichha and UTI are compared discussed with the help of available Ayurveda and Modern literature.

3. CONCEPTUAL REVIEW
3.1. Ayurvedic Perspective
As per Ayurveda, Sharir is made from doshas, dhatu and mala. It means they help in Mutra is an outcome product digestion of food and metabolism in the body it is passes through urethra. In both Mutraghata and Mutrakrichha, Kruchata (dysuria) and Mutra-vibandhta are simultaneously present but in Mutrakrichha there is predominance of Kruchata (dysuria).

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

3.1.2. Nidana
Vyayama, ruksha seven, adhyashan, yana gamana are causative factors for vata prakopa. Tikshna, amla sevana causes pitta prakop and Anupa mamsa sevana, vyayama, adhyashan causes kapha prakopa. So, these Nidanas cause vitiation of Doshas alongwith Strotodushti of Mutravaha strotas. Strotodusti will cause kha-vaigunya in Mutravaha srotas. These factor leads to Mutrakriccha.

3.1.3. Partantra Nidana
- Kaphaja arsha
- Ajirna

3.1.4. Chikitsa (Management)
Shamana chikitsa: It includes Mutravishodhaniya, mutra-virechaniya,

Shodhana chikitsa: It includes Mutral dravyas & uttara vasti. These increases frequency and quantity of Mutra which helps to flush out various infective agents.

Bahirparimarjana chikitsa: These are the medicines used locally (externally) in the form of fomentation, showers, potalis and ointment etc.

3.1.5. Specific Management (Pittaja Mutrakrichha chikitsa)
Bahirparimarjana chikitsa
Sheeta Parisheka, Avagahana in cold water, pralepana with chandan and karpur.

Antahparimarjana chikitsa
Treatment is given as per dominance of vitiation of doshas.

Shodhana
Virechana with tikta evam madhur kashaya, Uttara vasti. If kapha is predominant then vama, if pitta is predominant then virechana and if vata is predominant then vasti karma should be performed.

Shamana
Shatatvaryadi kwatha (Ch.), Haritakyadi kwatha, Trinapanchmula kwatha(Y.R.), Trinapanchamula churna(Su.),ervaru beeja,yashtimadhu,devdaru with tandul dhavan

Pashanbhedadi yoga, Brihatyadi kwatha, Gudadugdha yoga, dhatryadi yoga.

Pathya:
Purana shali, yava, kshara,takra, dugdha, dadhi, jangal mamsa, mudga yusha., trapusha, nadeya jala, sharkara, kushmanda, patola patra, ardraka, gokshura, puga, narikela, laghu ela, karpura.
Apathya:
Tambula, matsaya, lavana, pinyaka, hingi, tila, sarshapa, masha, karira, tikshna, vidahi, ruksha, amla dravya, virudhashana, vi-shamashana, Yana gamana, vega dharana.

3.2. Modern Perspective

Inflammation of bladder gives rise to symptoms of frequency, urgency suprapubic, discomfort, dysuria. These symptoms are often known as cystitis. Lower UTI is more common in females than in males. Lower UTI is always present with Fever, loin pain, rigor and malaise. Incomplete emptying of the bladder, A calculus foreign body or neoplasms DM, Immunosuppression, Bacterial infection such as Escheria coli. Bacteria are most commonly responsible. Yeast, Fungi and Viruses are other microorganisms which produce urinary infection. Specific typical symptoms are present in UTI of infants and young children. Differential diagnosis of cystitis and pyelonephritis in the paediatric patients is critical task. In ill children, having fever or children who appear ill, proper examination should be carried out to rule out pyelonephritis, if they have UTI.

Most common causative organism is E. coli found in approximately 80% of acute infections in patients without catheters. Gram-negative bacilli viz. Commonly Proteus and Klebsiella and occasionally Enterobacter, cause UTI. Gram-positive cocci have comparatively much lesser role in causation of UTI. Staphylococcus saprophyticus, Enterococci, Staphylococcus aureus may cause acute UTI in patients having past surgical history, patients having renal calculus and in young females.

3.2.1. Definition

Infection of Urinary tract is termed as Urinary tract infection (UTI). Infection of the lower urinary tract is known as bladder infection (cystitis) or lower urinary tract infections. Infection of upper urinary tract is known as kidney infection (pyelonephritis).

3.2.2. Aetiology

The most common cause of UTI is Bacterial infection with E. coli being the most frequent pathogen, causing 75.90% of UTIs. Other bacteria include Klebsiella, Proteus, Enterococcus species, Staphylococcus, saprophyticus. Fungi (Candida species) is also causative organism for UTIs commonly after catherization or surgery. Adenovirus is a rare cause and it may be precipitated into haemorrhagic cystitis.

3.2.3. Treatment

Acute cystitis should be treated carefully. It is aimed to prevent possibility of further spread of infection and possible occurrence of pyelonephritis. In case of severe symptoms Culture sensitivity test (Bladder sample) should be carried out along with immediate start of treatment. In case mild or doubtful cases, we can wait to start the treatment until final diagnosis based on Culture results. For example, if a mid-stream culture grows between 10⁴ and 10⁵ colonies of a gram-negative organism, a second culture may be obtained by catheterization before treatment is initiated. Treatment with trimethoprim sulfamethoxazole (5 days) can be started before we get reports of the culture and sensitivite. It is effective against most strains of E. coli. Nitrofurantoin (5–7 mg/kg/24 hr in 3 to 4 divided doses) is active against Klebsiella-Enterobacter organisms. Amoxicillin (50 mg/kg/24 hr) can be started initially but less effective as compared to Sulphonamides or Nitrofurantoin.

Broad-spectrum antibiotics (10 to 14 days course) are preferred in acute febrile infections where possibility of pyelonephritis is more. Dehydrated children less than 1 month of age, with vomiting should be hospitalized and undergone through rehydration and IV medications. [Ceftriaxone (50–75 mg/kg/24 hr, not to exceed 2 gm) or Ampicillin (100 mg/kg/24 hr) with Gentamicin (3–5 mg/kg/24 hr in 1 to 3 divided doses)]. Alkalisation of urine with sodium bicarbonate increases their effectiveness in the urinary tract. Cefixime (3rd-generation cephalosporin) orally is almost as effective as IV Ceftriaxone. It is effective against gram-
negative organisms. In children with febrile UTI, Nitrofurantoin should not be preferred. Ciprofloxacin orally can be used as alternative. Fluoroquinolones may cause potential cartilage damage (observed in research with animals) hence their use in children should be restricted.

4. CONCLUSION

♦ Pittaj Mutrakrucha when viewed under the conventional medicine can be correlated with Cystitis (UTI). Both diseases having equal signs and symptoms.

♦ The ayurvedic drugs act as Mutral, vathamulomak, Lekhana, Mutrapajnan, Rasayana, Krishna, Ashmarinashak, Mut ravishodhani.

♦ Increasing prevalence of UTI is a global issue of concern due to associated long term compromise in the quality of life.

♦ 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 Tridosha disease involving Mutravaha Srotas with dushti of Mutra and Ambu.

♦ In both Ayurveda and modern management, primary prevention (Nidan privarjanam) strategy has been given priority.

♦ A girl with voiding dysfunction is at increased risk for recurrent UTI, because the reflux of urine lay down with bacteria from the distal urethra in to the bladder.

♦ UTI is caused by micro-organisms, so patient should maintain their proper hygiene.

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Cite this article as:

Source of Support: Nil;    Conflict of Interest: None declared.