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A Literature Review on *Ayurvedic* Management of *Pittaj Mutrakruccha* in Children

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Abstract: *Mutrakruchhra* causes discomfort and difficulties during urinating. *Muhurmuhu Mutrapravrutti*, *Sadaha*, and *Saruja* are its primary characteristics. *Pittaja Mutra Kruchhra* is one of the several varieties of *Mutrakruchhra* that are formed due to *Vatadi doshas*. In contemporary science, *Pittaj Mutrakruchhra* is comparable to a lower urinary tract infection. A frequent medical issue in youngsters is urinary tract infection (UTI), which affects 1% to 3% of males and 3% to 10% of girls. The urinary disorders are under two broader heading in *Ayurveda* *Mutrakruchhra* and *Mutraghata*. The difference in two clinical scenarios is based on the intensity of obstruction. Painful micturition is being predominant symptom in UTI, it can be correlated with *Mutrakruchhra*, more preciously with *Pittaj Mutra kruchhra* that occurs due to vitiation of *doshas* which reach urinary bladder are compressing the urinary tract leading to difficulty in urination and give rise to following features burning sensation, yellow colored urine, dysuria while micturition. Various drugs have been described in *Ayurvedic* texts to treat urinary tract infection (*Pitta Mutrakruchhra*) like *Amalaki*, *Gokshura*, *Laghu panchmula gana*, *Shatavari*, *Trin panchmula gana* etc. to be given in various combination with proper *Anupana* (adjuvant or vehicle) and in appropriate forms i.e. *Kwatha* (Decoction), *Heem* etc.

Keywords: *Muhurmhu mutrapravarti*, *UTI*, *Mutraghata*, *Micturation*, *Dysuria*, *Laghu panchamula gana*, *Kwath*, *Heem*.

I. INTRODUCTION

Urinary system is one of them which is frequently affected showing signs and symptoms like dysuria, burning urination, continence, hesitancy, dribbling micturition etc. Urinary system affected by ascending infections and common symptom is burning micturition. It is generally common in obstructive uropathy.

Ayurveda claims that several *strotasa's* *Vyadhi* are dependent upon them, and *Mutrakruchhra* of the *Mutravaha strotasa* is one of them. According to *Acharyas*, *Doshas* are triggered by their own etiological elements, which can reach *Basti*^[1] and *Strotasa Mutramarga* alone or together, resulting in the illness *Mutrakruchhra*.

Sadaha, *Saruja*, *Muhurmuhu*, and *Haridra*—*raktavarna Mutrapravrutti*^[2]—are its defining characteristics. Treatments for the condition include *Shamana* and *Shodhana* therapy, which include *Vyadhi pratyanka Chikitsa*. It comprises of the *Shamana yogas*. *Avagaha*, *Parisheka*, and *Pradeha* are a few of the methods that have been documented. *Mutrakruchhra* has characteristics with other disorders such as *Mutraghata* and *Mutrashmari*.

Pittaj Mutrakruchhra can be compared with urinary tract infection (UTI) in modern science. As clinical presentation of *Mutrakruchhra* resemble with that of lower Urinary tract infection. Lower urinary tract infection (LUTI) is a disease condition which includes *Urethritis* and *Cystitis* and is often superficial infection.

One of the prevalent conditions among the pediatric population is *mutrakruchhra*. Age and sex have an impact on illness's incidence and prevalence. UTIs, or urinary tract infections, are also prevalent in people of young age. There are several predisposing factors that contribute to children's susceptibility to urinary tract infections, including immune system deficiencies, hormonal shifts and genitourinary system abnormalities. Because UTIs can result in immediate morbidity as well as long-term consequences including hypertension and chronic renal insufficiency, they require medical attention. Three to five percent of girls and one percent of boys get UTIs. It peaks in infancy and happens by the time a female is five years old. Within 18 months following their initial UTI, 60% to 80% of females will get another UTI. Uncircumcised boys have UTIs far more frequently^[3].

A frequent medical issue in youngsters is urinary tract infection (UTI), which affects 1% - 3% of males and 3% - 10% of females. They frequently induce renal injury in conjunction with vesico-ureteric reflux and are a significant cause of morbidity^[4].

Although some have questioned the significance of UTI as an individual risk factor, given that only 2% of children with renal insufficiency have a history of UTI. UTIs have been identified as a risk factor for the development of renal insufficiency or end stage renal disease in children.

In addition to treating immediate issues, early detection, diagnosis, and appropriate treatment are crucial for avoiding long-term complications. Antibiotics are the only treatments available in modern medicine for urinary tract infections. Modern science explains why there are so many antibiotics, diuretics, antipyretics, and other medications, yet each one has its own adverse effects. Therefore, finding an inexpensive, safe and preventative medication made from natural materials is necessary for *Mutrakruchhra* Chikitsa.

II. AIM AND OBJECTIVE

- 1) To study the detail literature review on *Pittaj mutrakruchhra*.
- 2) To the principles of management of *pittaj mutrakruchhra* according to *Ayurved*.

III. MATERIALS AND METHODS

Numerous *Ayurvedic* books, such as *Sushruta Samhita*, *Ashtanga Sangrah*, *Ashtanga Hridya*, *Chakraditta*, *Sharangadhara Samhita*, *Kashyapa Samhita*, *Yogratnakar*, *Bhavpraksha*, and *Madhav nidana*, were thoroughly reviewed by the researchers. This review's objective was to thoroughly examine *mutrakruchhra* and their *Ayurvedic* treatment.

In ancient *Ayurvedic* classic literatures, description of urinary system in scattered form. After studying different classic texts of *Ayurveda*, urinary system along with anatomy and physiology are compiled here. According to *Ayurveda*, the anatomical structures related to urinary system (*mutravaha strotas*) are *Vrukka*, *Gavini*, *Basti*, *Mutrapraseka*, *Nadi*, *Sira* and *Dhamani*^[5].

A. *Vyutpatti*

The words *Mutra* and *Kruchhra* come together and forms word *Mutrakruchhra*.

According to *Amarkosh*, the word *Mutra* is formed by adding *Ghana pratyaya* to *mutrasravane Dhatu*. It means urine which is a type of fluid is stored in bladder.

Adding "*Ruka*" *pratyaya* and "*chaa*" to "*Kruti Chedana*" *Dhatu*, the word "*kruchhra*" is formed. The word *Kruchhra* is meaning of difficulty, painful.

B. *Nirukti*

The commentator of *Charak*, *Sushruta*, *Madhav Nidana* has stated the *nirukti* of *Mutrakruchhra*, as follows *Chakrapani* Stated^[6],

"यन्मुत्रकृच्छ्रे मुत्रं कृच्छ्रेण वहति ।"

Dalhana Stated^[7],

"मुत्रकृच्छ्रे दुःखेन मुत्रप्रवृत्ति ।"

Madhava stated^[8]

"मुत्रकृच्छ्रेनिति मुत्रस्य कृच्छ्रेण दुःखेन प्रवृत्तिः ।"

Niruktis mentioned above, *Mutrakruchhra* means that the *Rugna* (patient) passes urine with difficulty or with pain.

C. *Paribhasha*^[9]:

"मुत्रस्य कृच्छ्रेण महता दुःखेन प्रवृत्तिः समूत्रकृच्छः।"

Mutrakruchhra is a disease (*Vyadhi*) of *Mutravaha Strotasa* which is characterized by painful and difficulty in urination.

D. *Paryaya*

Kruchhra mutrata, *Jalamaya*, *Krichhram*, *Mutropaghata*.

E. Bheda^[10,11,12]:

According to all *acharyas*, depending upon *nidaan* and *dosha of vyadhi*. There are 8 types of *Mutrakruchhra* but *Acharya Vagbhat* mentioned 20 types of *Mutraghata* which also has 4 types of *Mutrakruchhra*.

Charak	Sushrura	Madhav Nidan
1)Vataj	1)Vataj	1)Vataj
2)Pittaj	2)Pittaj	2)Pittaj
3)Kaphaj	3)Kaphaj	3)Kaphaj
4)Sannipataj	4)Sannipataj	4)Sannipataj
5)Ashmarijanya	5)Ashmarijanya	5)Ashmarijanya
6)SharkaraJanya	6)SharkaraJanya	6)ShukraJanya
7)ShukraJanya	7)Purishaj	7)Purishaj
8)Shonita	8)Abhighata	8)ShalyaJanya

Acharya Vagbhata has described mainly two types, *Mutra Apravruttijanya* and *Mutra Atipravrutti janya of Mutravaha Strotasa* in nineteenth *adhyay of nidan sthana*. *Mutrakruchhra* is included in *Mutra Apravruttijanya Vikar*.

F. Hetu

Nidana (Hetu) is mentioned for *Mutrakruchhra vikar* in *Ayurvedic* classical references. Etiological factors of *Mutravaha Strotas Dushti* can be taken as *Hetu of Mutrakruchhra Roga*. *Nidanas* are classified according to which *Dosha* is involved to cause *Mutrakruchhra*.

1) Samanya Hetu^[13]

Hetu of Mutrakruchhra are *mutra Vegadharan, Kshina, Kshata*.

- a) *Mutra Vegadharana*: *Mutra vegadharana* is directly lead to *Mutrakruchhra Vyadhi* 2, The suppression of urination leads to various problems of *mutravaha strotasa* by vitiation of *Apan Vayu*. *Acharya Sushrut, Lakshanas* of *mutra Vegadharan* are person passes urine with painful, difficulty and decrease in volume of urine. It causes pain at *Basti, Nabhi, Vankshana and Medhra Pradesha*. Pain at *Medhra Pradesha* indicates *Pratiloma Gati*.
- b) *Kshina*: *Kshina* means a person who is undernourished. Such kind of person has lost his strength. It is due to long standing diseases like *Rajayakshama*. It is state in which the immunity decreased. *Vrukka* is made up *Rakta and meda dhatu*. *Kshaya* of these two *Dhatus* lead to structural and functional inability of *vrukka* resulting in *Mutrakruchhra*.
- c) *Abhikshata*: Any trauma to the organ related to *Mutravaha Strotas* causes various diseases like *Mutrakruchhra*. The injury to *Mutravaha Strotasa* can lead to *Mutra Dushti*.

2) Vishishta Hetu

Vishishta Dosha causes particular type of *Mutrakruchhra Roga* produces symptoms of that *Dosha*. *Acharya Sushrtua* and *Vagbhata* have not mentioned *Hetu* while *Bhavaprakasha, Yogratnakar and Vangasena* have mentioned similar *Hetus* for *Mutrakruchhra* as that of *Acharya Charaka*. According to different *acharays, hetu* are as follows Table No. 1 -

<i>Nidana</i>	C.S. ^[14]	Y.R. ^[15]	K.S. ^[16]	B.P. ^[17]
<i>Ruksha ahara</i>	√	√	-	√
<i>Tikshna aushadha</i>	√	√	-	√
<i>Vyayam</i>	√	√	-	√
<i>Nitya drutprushtayana</i>	√	√	-	√
<i>Madya prashana</i>	√	√	-	√
<i>Anup Matsya sevana</i>	√	√	-	√
<i>Adhyashana</i>	√	√	-	√
<i>Ajirna</i>	√	√	-	√
<i>Katiskandha bharvahana</i>	-	-	√	-

G. Purvarupa

Textual references for *purvarupa* in the *Mutrakruchhra* state that a disease's *lakshana*, whether in its mild or incomplete form, qualifies as *purvarupa*. This is according to *Chakrapani*. Acute onset urinary tract infections occur. At this point, it is difficult to distinguish *purvarupa*. The illness appears before *Vyadhi Vyaktavasta's* following stage or progresses through it.

H. Rupa

Pittaja Mutrakruchhra

The *Pratyatma lakshana of Pittaja Mutrakruchhra* are *Sadaha, Saruja, Haridravarni and Raktavarni Mutra Pravrutti*. Some additional symptoms like *Varmavarena and Pidayukta mutrapravrutti* are mentioned by *Acharya Charaka*. *Lakshana of Pittaja Mutrakruchhra* in different classicis given in tabulated form. (Table no. 4)

Table no. 2 *Lakshanas of Pittaja Mutrakruchhra* according to different *Acharyas*.

Symptoms	C.S. ^[18]	S.S. ^[19]	K.S. ^[20]	A.H. ^[21]	M.N. ^[22] /B.P. ^[23]	Y.R. ^[24]
<i>Daha</i>	√	√	√	√	√	√
<i>Ryja</i>	√	-	√	√	√	√
<i>Pitamutrata</i>	√	√	√	√	√	√
<i>Sarkta mutrata</i>	√	√	-	√	√	√
<i>Muhur muhur mutrapravrutti</i>	√	-	-	-	√	√
<i>Ushna mutrapravrutti</i>	-	√	√	-	-	-
<i>Swidyaman mukha</i>	-	-	√	-	-	-

Acharya Sushruta and Acharya Kashyapa are mentioned *ushna Mutrata* only. *Acharya Kashyapa* has added one more symptom *Swidyaman Mukha*.

I. Mutravaha Strotodushti Lakshana^[25]

Atisrushtam: Increased output of urine.

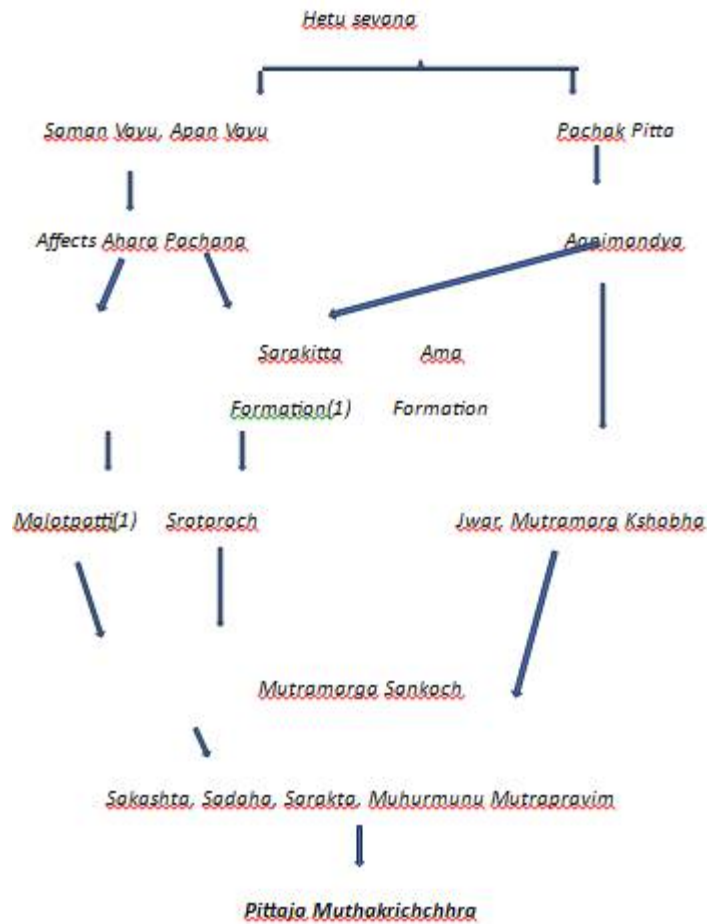
Atibaddham: Dribbling urination / drop by drop or complete suppression of urine.

Kupitam: Viguna mutra.

Bahalam: Concentrated urine.

Abhikshna: Painful urination.

J. Samprapti Of Mutrakruchhra By Acharya Charaka^[26]



Dosha - Vatapradhan Tridoshas

Dushya - mutra

Adhishthan – Basti

K. Upadrava

Acharya Kashyapa has described Upadrava of Mutrakruchhra, mentioning Sannipataja Mutrakruchhra^[27], as follows

- Bhrama (Giddiness)
- Murchcha (Fainting)
- Aruchi
- Karshya
- Trushna (Thirst)
- Anavasthita
- Hridpida (Chest pain)
- Ruja
- Pida
- Vishad

L. Sadhya-Asadhyata

According to Acharya Sushrut, it is a disease of basti which is one of Marmas. It is Madhyam Marga Roga. So, it is Vyadhi which is Kruchhra Sadhya^[28].

M. Chikitsa

1) Samanya Chikitsa

According to *Kashya Samhita*, Management of *mutrakruhra*, the *Sharamulani Kwatha* after cooling it with *Sharkara* or *Madhu*. Other preparation of *Kwatha* is *Madhuk*, *Sharmula*, *Triphala*, *Sinhal Pippali* with *Sharkara* or *Madhu*. One another *Kwatha* is *Trunpanchmul Kwatha* with *Sharkara* or *Madhu*. *Avaleha* of *Shatavari*, *Prushnaparni*, *Kulaththa*, *Badar* with *Sharkara* and *Madhu*. In *Mutrakruhra* treatment should be like opposite to treatment of *prameha*. It should be treated opposite to direction of *Prameha* of medicine, drinks, food and routine workup. *Mutrakruhra* should be treated by *snigdha* and *mrudu shodhana* (*Vamana*, *Virechana*)^[29].

As per *Acharya Sushruta*, treatment of *Mutrashmari* should be done as per *Dosha Dushti* and *Snehadi Karma* should be done in *Mutrakruhra*.

2) Vishesha Chikitsa

Pittaja Mutrakruhra

In *Charaka Samhita*, *Chikitsasthana* 26th Adhyaya, *Chikitsa of Pittaj mutrakruhra*^[30] explained as follow,

- *Parisheka*: pouring of liquids like decoction (*Kwatha*) medicated milk
- *Avagaha*: *Sheeta Dravyas*.
- *Lepa*: *Pradeha Lepa* with *Sheeta Dravyas*. *Lepa* applied locally as per to symptoms.
- *Rutucharya*: *Grishma rutucharya* should be followed
- *Kshirapana*: *Kshira* or *Siddha Kshira* is used to drink.
- *Basti*: *Siddha Kshira Basti* and *Uttarbasti* is used.
- *Virechana*: it is *Shodhana Chikitsa for Pitta*. *Dravyas Ervarubeejadi yoga* and *Shatavryadi Kwatha* are explained by *Acharya Charaka*.
- Compound preparations used in *Pittaja Mutrakruhra*^[31]: - *Shatavaryadi Kwatha*, *Ervarubeejadi Drakhadi*, *Harikyadi*, *Urvaruka Beeja*, *Truna panchamuladi*, *Gokshura Guggul* etc.

Acharya Sushruta has described *chikitsa of Pittaj Mutrakruhra in Mutrakruhra Pratishedha Adhyaya of Uttartantra*. *Dravyas Utpaladi*, *Trunapanchamuladi Gana*, *Nyagrodhadi Gana*, *Kakolyadi Gana* are collected *Kwatha* (decoction) is prepared and medicated Ghee cooked. Milk is boiled with these *Aushadhi Dravyas*^[32], it is used in *Pittaj Mutrakruhra* by orally or *Uttarbasti* of these *Dravyas* can be given. Oll or Ghee prepared with same drug can be used for three types of *Basti* i.e. *Anuvasana*, *Niruha* and *Uttarbasti*. Purgatives or laxatives are along with juice of milk, sugarcane, *Draksha* is used for *Virechana*. According to *Acharya Vagbhat*, *Parisheka*, *Lepa* and *Avagaha* with *Sheetal Dravyas* is used for *Pittaj Mutrakruhra*^[33]. *Chakradutta*, *Yogratnakar*, *Bhaishajya Ratnavall*, *Bhavaprakash* etc. have discussed *Chikitsa of Pittaja Mutrakruhra* in detailed.

N. Pathyapathya^[34]:

1) Pathya

As described in *Yogratnakar Purana Yava*, *Purana Raktashali*, *Mudga*, *Jangala Pashupakshi Mansa*, *Patola*, *Tanduliya*, *Kushmanda*, *Kharjura*, *Haritaki*, *Aamalaki*, *Ela Madhur Ikshu*, *Dadhi*, *Ghrita*, *Takra*, *Kumara*, *Gokashura*, *Sheeta Vayu Sevana*. As described in *Kashyapa Samhita*, *Madhur Rasatmaka Ahara*, juice of sugarcain, *Ghrita*, *Dugdha*.

2) Apathya

According to *Acharya Charaka Vegasandharana*, *Ruksha-Shuksha Pishtanna Sevana*, *Vayu and Dhupa Sevana*, *Kaittha*, *Jambu* should be avoided in *Mutrakruhra*.

According to *Yogaratnakara Amla*, *Lavana*, *Virudhashana*, *Vidahi*, *Tila*, *Sarshapa*, *Masha*, *Pinakya*, *Mutravegadharana*.

IV. CONCLUSION

Pittakara and *Vatakara Nidana* are important factors in *Pittaja Mutrakruhra* expression, according to an analysis of literary references pertaining to the etiology of *Mutrakruhra*. It is determined that *Pittaja Mutrakruhra* is caused by any anomalies in *Vyana Vayu*, *Samana Vayu*, *Pachaka Pitta*, and *Apana Vayu* owing to *Aharaja*, *Viharaja*, and bacterial causes. From a traditional medical perspective, *Pittaja Mutrakruhra* and urinary tract infections (UTI) are comparable in terms of their respective symptoms and illnesses. *Ayurvedic* management with no adverse effect as per their dosha adhikya is very important for treatment.

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