



Original Research Article

Volume 10 Issue 02

March – April 2021

## AN EPIDEMIOLOGICAL STUDY OF *MUTRAKRICCHRA* TO EVALUATE THE *PRADHANIK NIDANA* (MAIN CAUSATIVE FACTOR) OF DISEASE

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### Abstract

The prevalence of infectious diseases commonly observe when immunity of suffer get affected and conditions become favorable for microbial invasion inside the host cells. Thus unhealthy immune system can be considered as main causative factor of microbial diseases. Ayurveda suggested balance daily and dietary regimen to restore healthy immune system. Present study deals with to find out main causative factors of *Mutrakricchra* and factors responsible for hampered immune system.

**Key-Words:** *Ayurveda, Epidemiology, Mutrakricchra, Immune system*

### **AIM:**

To assess the *Pradhanik nidana* of *Mutrakricchra* in defined population and to formulate the hypothesis related the etiology of disease.

### **Material and Methods:**

Study Design - Descriptive study (cross sectional study) with following objectives:

1. To define population under study.
2. To define disease under study.
3. To describing the disease with respect to time, place and person specificity, etc.
4. To explore measurement of disease.
5. To compare with known criteria.
6. To formulate an aetiological hypothesis related to the disease.

### **Defining the population under study:**

The study was hospital based, which was conducted at OPD and IPD, Arogyashala, N.I.A., Jaipur (Raj.). Hence, the population involve patients those were registered in OPD/IPD. Questionnaire was prepared taking into consideration general details of the patients and details regarding the disease based on the Ayurvedic and modern literature.

### **To define disease under study:**

- Presence of clinical presentation like burning micturition, urgency, frequency, scanty urine and painful micturition, etc. were considered as characteristics symptoms of disease.
- Detect of specific *Nidana* using questionnaire based on Ayurvedic literature.
- Assessment of secondary criteria; presence of pus cells, R.B.C., cast cell, epithelial cells, crystals, motile bacteria etc. in urine and bacterial growth on urine culture.

**Factors considered to Assess *Nidana* of Disease:**

- ✓ *Atibhojana*
- ✓ *Ajirna*
- ✓ *Amla, Katu and Lavana rasa sevana*
- ✓ *ruksha padarth*
- ✓ *Vayama*
- ✓ *Tikshna aushodha*
- ✓ *Madya pana*
- ✓ *Nitya drutapristhayanata*
- ✓ *Anupa mamsa*
- ✓ *Sharkara and Asmar*
- ✓ *Bhaya abhyantara shalya*
- ✓ *Vegavadharana*
- ✓ *Ativyavaya*

**Criteria of Diagnosis of Specific type of *Mutrakricchra***

Specific grades were assigned to particular symptoms and sum grade was considered to ascertain presence of specific types of *Mutrakricchra* (**Table 1**), for convenient characteristics symptoms were observed and ranked as “1” if present or “0” if absent.

**Table 1: Assessment of specific types of *Mutrakricchra* based on presence of characteristics features of disease:**

<b>Types of <i>Mutrakricchra</i></b>	<b>Symptoms</b>	<b>Grade/point</b>
<i>Vataja Mutrakricha</i>	<i>Alpamalpam mutra pravritti</i>	01
	<i>Muhur muhur mutra pravritti</i>	01
	<i>Tivraruja in vankshana, basti, medra</i>	01

	<i>Samutpeedya muska, mehana, basti</i>	01
<i>Pittaja Mutrakriccha</i>	<i>Haridra/Rakta/Pita mutra</i>	01
	<i>Ushna mutra</i>	01
	<i>Saruja</i>	01
	<i>Sadaha in muska, mehna, basti</i>	01
<i>Kaphaja Mutrakriccha</i>	<i>Snigdha/Picchila mutra/Anushna mutra</i>	01
	<i>Sweta mutra</i>	01
	<i>Guruta/Sopha in basti and mehana</i>	01
	<i>Romancha</i>	01
<i>Sannipataja mutrakriccha</i>	<i>Nanavarna</i>	01
	<i>Muhur muhur mutra pravritti</i>	01
	<i>Daha/Sita/Ruja</i>	01
<i>Ashmarija Mutrakriccha</i>	<i>Sarudhira mutra</i>	01
	<i>Visirna dhara</i>	01
	<i>Vedana in /sevani/mehana/basti</i>	01
	<i>Sharkarayuktamutra</i>	01
<i>Sharkaraja Mutrakriccha</i>	<i>Kukshi Shula/Hritapida</i>	01
	<i>Agnimandya</i>	01
	<i>Kampa</i>	01
	<i>Vedana Shamana after mutravega nigrahana</i>	01
<i>Abhighataja Mutrakriccha/Kshataja</i>	<i>H/o Abhighata</i>	01
	<i>Mutrasanga</i>	01

	<i>Vedana in basti/vankshana</i>	01
	<i>Raktapravritti</i>	01
<i>Shakritaja Mutrakriccha</i>	<i>Adhaman</i>	01
	<i>Shula</i>	01
	<i>Mutrasanga</i>	01
<i>Shukraja Mutrakriccha</i>	<i>Vedana in vankshana/mehana/basti</i>	01
	<i>Shukramutra</i>	01
	<i>Shopha in mehana</i>	01

**ROGI PARIKSHA:**

- **Prakriti Pariksha:** The *Prakriti* was decided based on the proforma, patients were divided into any of the 7 types of *Prakriti* i.e., *Vatapittaja*, *Pittavataja*, *Pittakaphaja*, *Kaphapittaja*, *Kaphavataja* and *Vatakaphaja Prakriti*. *Manasa prakriti* was assessed according to proforma. In this regards patients were divided into *Satvarajasika*, *Rajasasatavika*, *Satvatamasika*, *Tamasasatavika*, *Rajasatavika* and *Tamasarajasika Prakriti*.
- **Vikriti Pariksha:** *Vikriti* was assessed according to proforma, *Dosha-dhatu-mala Kshaya* and *Vridhhi Lakshana* were assessed along with *Srotodusti*.

The subjective parameters as depicted in **table 2** were graded and assessment was made accordingly on the basis of severity of symptoms.

**Table 2: Assessment parameters and their scoring on the basis of severity of symptoms:**

S. No.	Symptoms	Score				
		0	1	2	3	4
1)	Burning Micturition	No	Occasional	Mild	Moderate	Severe
2)	Pain (Lower front portion of abdomen/lip of the penis or urethra/upper back/other)	No	Occasional	Mild	Moderate	Severe
3)	Urgency	No	Urgency but control	Mild	Moderate	Intense urgency
4)	Frequency	Occurs in normal routine time	Increased frequency but not interfere the normal routine work.	Increased frequency to the level when patient's routine work is less interrupted.	Increased frequency when patient's routine work is moderately interrupted.	Increased frequency up-to the level of tiredness
5)	Hot urine	No	Occasional	Mild	Moderate	Severe
6)	Tenderness	No	Mild	Winching of face on pressure	Winching of face & withdrawal	Resisting examination

					of affected part on pressure	
7)	Urethral discharge	No	Occasional	Mild	Moderate	Severe
8)	Vaginal discharge	No	Occasional	Mild	Moderate	Severe
9)	Fever	Normal	98.6 0F - 99.60F	99.60F - 10.60F	100.60F - 101.60F	> 101.6 0F

## OBSERVATIONS

Majority of patients (25%) belonged to the age range 20-30 yrs. Maximum number of participants (61%) were females, 79% were married, 68% from the middle class and 38% participants were housewife followed by 22% in service class. Study observed 31% illiterate participants while 95% participants were belonged to *Jangala desha*. 90% had no relevant family history, 81% had no history of recurrent problem of *Mutrakricchra*, 75% had no history of previous medications, none of the participants had a history of *Mutravikara* in partner and 14% had a history of injury. Maximum participants (55%) gave a history of > 30 days duration of illness followed by 27% gave a history of (7 days duration of illness), 58% participants had *Samyaka pipasa*, 60% were consumed *Ubhayahara* (mixed diet), 88% were consumed tea, 46% had *Madhya koshta* and 34% had *Kroora koshta*. Study observed various types of *Mutrakricchra* as depicted in **Table 3** according to different *Nidana*.

**Table 3: Various types of *Mutrakricchra* according to different *Nidana***

S. No.	<i>Nidana</i>	No of Participants	%	Types of <i>Mutrakricchra</i>	%
1)	<i>Adhyasana</i>	02	02%	<i>Pittaja</i> <i>Sannipataja</i>	50% 50%
2)	<i>Amla, Katu, Lavana</i> <i>rasa sevana</i>	34	34%	<i>Vataja</i> <i>Pittaja</i> <i>Sannipataja</i> <i>Shakritaja</i>	09% 65% 03% 23%
3)	<i>Madya pana</i>	02	02%	<i>Pittaja</i>	100%
4)	<i>Anupa mamsa</i>	12	12%	<i>Pittaja</i> <i>Shakritaja</i>	58% 42%
5)	<i>Nitya</i> <i>drutapristhayanata</i>	13	13%	<i>Vataja</i> <i>Pittaja</i> <i>Sannipataja</i> <i>Shakritaja</i>	31% 38% 08% 23%
6)	<i>Ativayama</i>	10	10%	<i>Vataja</i> <i>Pittaja</i> <i>Shakritaja</i>	30% 60% 10%
7)	<i>Vegavadharana</i>	17	17%	<i>Vataja</i> <i>Pittaja</i> <i>Sannipataja</i> <i>Shakritaja</i>	12% 47% 06% 35%
8)	<i>Ativyavaya</i>	05	05%	<i>Pittaja</i>	100%
9)	<i>Ajirna</i>	50	50%	<i>Vataja</i> <i>Pittaja</i>	18% 44%



				<i>Sannipataja</i>	06%
				<i>Shakritaja</i>	32%
10)	<i>Sharkara, Asmar</i>	07	07%	<i>Pittaja</i>	29%
				<i>Sannipataja</i>	57%
				<i>Shakritaja</i>	14%
11)	<i>Bhaya abhyantara shalya</i>	07	07%	<i>Vataja</i>	14%
				<i>Pittaja</i>	29%
				<i>Sannipataja</i>	14%
				<i>Shakritaja</i>	43%
12)	<i>Tikshna aushodha</i>	27	27%	<i>Vataja</i>	22%
				<i>Pittaja</i>	60%
				<i>Shakritaja</i>	18%

### Results and Discussion:

The maximum numbers of cases (25%) were observed in between age group 20-30 yrs., the increasing prevalence in the youth might be attributed to changes in various metabolic risk factors, due to modern life style especially consumption of unwholesome and awful life style. These age groups belong to *Madhyama ayu* when *Pitta* is predominant, 45.90% had menopause, in this age *Vata* is predominant and in *Mutrakricchra vata* is *Anubandhya dosha*. Some participants (12%) were habitual to consume coffee and 88% were of habitual to consumed tea. Caffeine increases acidity of the urine which is an irritant to the bladder and causes a flare-up of pain and other symptoms in both interstitial cystitis and acute cystitis. It increases acidity of urine through increasing acid metabolites of coffee in the urine. Many participants (approx. 40%) had *Avara adbhyavaharana shakti* and *Avara jarana shakti* this indicates that most of the participants were suffered from indigestion or impaired functioning of *Agni*. Study found common causative factors of *Mutrakricchra* i.e; *Ajirna* (50%) followed by *Katu-amla-lavana sevana* (34%) and *Tikshna audhadha* (27%).

Study observed maximum participants under category of *Pittaja mutrakricchra* (42%), most of the *Nidana* were caused *Pittaja* and *Vataja mutrakricchra*.

## Conclusion

*Ajirna* was the common causative factor in 50 % of participants, when *Ajirna* is associated with vitiated *Pitta* causes burning sensation, morbid thirst but when it associated with vitiated *Vayu* it gives rise to several *Vatika* diseases. *Acharya Vagbhata* says, the general features of *Ajirna* are *Vibhandha*, which is explained as *Mutra* and *Purisha apravritti*. In this condition, the formation of *Rasa* and *Kitta* is disturbed, *Samana vayu*, *Pachakapitta* and *Kledakakapha* are affected and the former part of *Dhatu* and *Mala* are not of a good quality. Therefore, *Kleda* the excretory product, is not removed through urine and so it accumulates in the body and causes urinary disease.

## References

1. Trikamji Y (Ed) ,Charak Samhita of Agnivesha WITH THE Ayurved Dipika commentary by Chakrapanidutta ,Choukhambha Surbharti Prakashana ,Varanasi (Reprint 2005) ,Cha.Chi -15,ver-47, 49.
2. Trikamji Y (Ed) ,Charak Samhita of Agnivesha WITH THE Ayurved Dipika commentary by Chakrapanidutta ,Choukhambha Surbharti Prakashana ,Varanasi (Reprint 2005).
3. Sushrut Samhita by Susrut with the Nibandha Sangrah commentary of Dalhan, Choukhambha Surbharti Prakashana ,Varanasi (Reprint 2003) Su.Ut-59 ver-8-11.
4. Olthof MR ,Hollman P.C.H., Katan M.B., et al., 2001 Journal Of Nutrition 131,66-71.
5. Murthy Shrikantha K. R, Asthang Sangraha English Translation v1,2 ed, Chaukhambha Orientalia ,Varanasi (1998).
6. Trikamji Y (Ed) ,Charak Samhita of Agnivesha, Ayurved Dipika commentary by Chakrapanidutta, Choukhambha Surbharti Prakashana, Varanasi (Reprint 2005) ,Cha. Chi -15, ver-47, 49.