

## EFFICACY OF VARUNADI KWATHA IN THE MANAGEMENT OF KAPHAJA ASHMARI (VESICAL PHOSPHATE CALCULUS) – A CLINICAL STUDY

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### ABSTRACT

One of the most common causes for calculi formation is urine infection which leads to calculi formation. When we see the symptoms and consistency of *Kaphaja Ashmari* mentioned in Ayurvedic texts it may be correlated with the phosphate calculus in modern medical science. In Ayurveda, *kapha dosha* in increased quantity has been accepted as the main reason for the formation of *Mutrashmari*. In the present clinical study, 30 patients of *Kaphaja Mutrashmari*, were treated with *Varunadi Kwatha* for 90 days and the effect of the drug on the signs and symptoms were evaluated. The trial compound has shown encouraging symptomatic relief in most of the clinical features with expulsion of calculi. During the trial periods the treated group had shown no side effects of the drug compound.

**Keywords:** *Kaphaja ashmari*, Phosphate calculus, Urine infection, *Varunadi kwatha*

### INTRODUCTION

Formation of urinary calculi is described in Ayurvedic scriptures as *Mutrashmari*. It is said to be one of the eight most troublesome diseases (*Mahagadas*). The diagnostic part in case of calculi by ancient *Acharyas* seems to be true even at present. Formation of *Mutrashmari*, according to *Sushruta*, is due to *Sroto vaigunya* resulting from *dushita Kapha* localized in *Basti*, in conjunction with *pradushita vata* and *pitta*.<sup>1</sup> An alarming rise in the incidence of Urolithiasis coupled with a motivation provided by W.H.O. to explore the possibility of discovering cure on traditional line has created an impetus for further research in the light of Ayurvedic knowledge. Looking in to the gravity of the problem the present research was done on the efficacy of

*Varunadi Kwatha*, a preparation advocated by Chakradutta.<sup>2</sup>

### AIMS AND OBJECTIVES

- To understand clinical manifestations of *Kaphaja Ashmari* as per *Ayurveda* and contemporary science and to assess the efficacy of *Varunadi kwatha* in it.

### MATERIALS AND METHODS

**Source of data:** Total number of 30 patients attending O.P.D. & I.P.D. of Madhav vilas hospital N.I.A. Jaipur, having classical symptoms of *Kaphaja Ashmari* were selected irrespective of sex, religion, occupation for the present clinical study. A special study proforma was prepared on the basis of signs and symptoms of *Mutrashmari* described in Ayurvedic and modern text.<sup>9</sup>

**Inclusion Criteria:**

- Age between 16 to 60 years
- Increased frequency of micturition
- Burning micturition
- Haematuria
- Pyuria
- Fever
- Dysuria

**Exclusion Criteria:**

- Age less than 16 years and more than 60 years
- Renal tuberculosis
- Diabetes Mellitus
- Hypertension
- Polycystic kidney
- Renal failure
- Pyelonephritis

**Investigations**<sup>8</sup> For the purpose of assessing the overall condition of the patients

- Complete Urine (routine and microscopic)
- Plain X-ray (KUB region), USG (KUB region) were carried out before and after completing the due course of the treatment.

**Posology:**

*Varunadi Kwatha with Yava Kshara*<sup>4</sup>

**Contents:** *Varun, Pashanbhed, Shunti, Gokshur, Yavakshara*

*Varunadi Kwatha* and *Yava Kshara* were prepared in N.I.A., Pharmacy as per AFI.

Patients were treated with *Varunadi Kwatha* with dose of 40 ml along with *Yava Kshara* (500mg) twice a day.<sup>7</sup>

**Duration:** 3 months (90 days)

**Observational period:** Once in 30days

**Follow up period:** 30-60days after the completion of treatment

**Criteria for Assessment:**

**Subjective Criteria**

**Pain**

No Pain- 0

Occasional pain required no treatment-1

Occasional pain required treatment-2

Constant dull pain required treatment-3

Constant severe pain required treatment but did not show any relief-4

**Burning Micturition**

No burning micturition-0

Occasional burning micturition-1

Occasional burning micturition, required treatment-2

Constant burning micturition, required treatment-3

Severe constant burning micturition, but did not show relief even after treatment-4

**Dysuria**

No dysuria-0

Occasional dysuria did not require treatment-1

Occasional dysuria, required treatment-2

Constant dysuria, required treatment-3

Severe constant dysuria, but did not show relief even after treatment-4

**Objective Criteria**

**Hematuria**

0-1 RBC/Hpf in urine-0

2 – 5 RBC/Hpf in urine-1

6 – 10 RBC/Hpf in urine-2

11 – 15 RBC/Hpf in urine-3

>16 RBC/Hpf in urine-4

**Pyuria**

No pus cells/Hpf in urine-0

1 – 5 pus cells/Hpf in urine-1

6 – 10 pus cells/Hpf in urine-2

11 – 15 pus cells/Hpf in urine-3

>16 pus cells/Hpf in urine-4

**pH of urine**

Up to 7(Normal range 4.5-6)-0

7 to 8 -1

8 to 9 -2

9 to 10 -3

>10 -4

**WBC count of urine**

0-3 /Hpf in urine-0  
 4-5 /Hpf in urine-1  
 6-7 /Hpf in urine-2  
 8-9 /Hpf in urine-3  
 >9 /Hpf in urine-4

**OBSERVATIONS AND RESULTS**

In the present clinical study it was observed that maximum number of patients (76.66%) were in the age group of 16-35 yrs. Sex wise distribution of patients reveals that the highest number of patients were male i.e. 66.66% followed by female 33.33%. Analysis based on socio-economic status of the patients of present study, depicts incidence of *Kaphaj Mutrashmari* among lower middle 63.33% and poor 23.33% classes of society. Distribution of the patients according to diet, showed little higher incidence of *Mutrashmari (Kaphaja type)* in vegetarians i.e. 53.33% followed by non-vegetarians i.e. 46.66%. Maximum number of patients were possessing *Vata-Kapha Prakriti* i.e. 46.66% followed by 30% *Kapha-Pitta Prakriti*. 73.33% of the patients in the present study were having negative family history, where as 26.66% were having positive family history.

**Clinical recovery:**The therapy (*Varunadi kwatha* with *Yava kshara* orally) provided excellent relief in *Gomedaka prakasha* (100%), *Sarudhiramutrata* (100%), *Basti*

*guruta*(92.00%), *Mehana vedana* (93.33%), *Mutratharasanga* (91.89%), *Nabhi vedana* (95.83%), *Basti vedana* (92.11%), *Vishirṇadhara*(91.07%), *Ati avilamutrata* (91.38%), *Basti shitalata*(87.18%), *Sevani vedana*(87.50), Pain (82.46%), Burning micturition (91.04%), haematuria (86.21%), Dysuria (82.35%), Pyuria (91.80%) and Fever (88.88%). The relief was found statistically highly significant (P<0.001).

**Effect of therapies on urine Analysis:**

In present study, complete urine analysis was carried out. Microscopic urine analysis revealed that 86.21%, 91.80% and 92.31% relief was observed in R.B.C., pus cells and W.B.C. respectively. The alkaline nature of urine changes to normal pH up to 90.28%. The treated group showed highly significant effect (P<0.001) in pus cells, R.B.C., W.B.C. and urine pH.

**Effect of therapies on calculi at different site and size:**

From the study, the patients treated with drug compound has shown good effect on uretero vesical junction calculi, Both bladder and UV junction calculi and bladder calculi of 6mm-10mm in diameter and less effect on calculi of 11mm-20mm in diameter.

**Results on objective parameters:** There was highly significant result in various clinical features as showed in **Table 1 & 2.**

**Table 1: Showing the relief in clinical features**

Clinical Features	Mean		%	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Basti vedana	1.27	0.10	92.11	0.99	0.18	06.48	<0.001
Nabhi vedana	0.80	0.03	95.83	1.22	0.22	03.43	<0.001
Sevani vedana	0.53	0.07	87.50	0.97	0.18	02.63	<0.01
Mehan vedana	1.50	0.10	93.33	1.10	0.20	06.96	<0.001
Mutrathara sanga	1.23	0.10	91.89	0.97	0.18	06.38	<0.001

Sarudhira mutrata	0.60	0.00	100	0.93	0.17	03.53	<0.001
Gomeda prakasham	0.40	00	100	0.86	0.16	02.56	<0.01
Ati avilamutrata	1.93	0.17	91.38	0.97	0.18	09.96	<0.001
Basti guruta	1.67	0.13	92.00	0.86	0.16	09.76	<0.001
Basti shitalata	1.30	0.17	87.18	1.04	0.19	05.96	<0.001
Vishirnadhara	1.87	0.17	91.07	0.95	0.17	09.78	<0.001

**Table 2: Showing the relief in assessment criterias**

Clinical Features	Mean		%	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Pain	1.90	.33	82.46	0.50	0.09	17.03	<0.001
Burning micturition	2.23	.20	91.04	0.56	0.10	20.03	<0.001
Haematuria	0.97	.13	86.21	1.32	0.24	03.47	<0.001
Dysuria	1.13	.20	82.35	0.87	0.16	05.89	<0.001
Pyuria	2.03	.17	91.80	0.57	0.10	17.89	<0.001

From the study, the patients treated with drug compound has shown good effect on uretero vesical junction calculi, both bladder and UV junction calculi and bladder calculi of 6mm-10mm in diameter and less effect on calculi of 11mm-18mm in diameter as mentioned in Table no 3.

**Table 3: Showing the efficacy of the drug according to the site of calculi**

Size (mm)	Site	No. of patients	Effect
6-10	Uretero vesical junction	2	Exp.2, DS.-0, DM.-0, NC-0
	Bladder	4	Exp.4, DS.-0, DM.-0, NC-0
	Both bladder and UV junction	3	Exp.3, DS.-0, DM.-0, NC-0
11-18	Uretero vesical junction	3	Exp.1, DS.-2, DM.-1, NC-0
	Bladder	11	Exp.8, DS.-3, DM.-0, NC-0
	Both bladder and UV junction	7	Exp.2, DS.-5, DM.-3, NC-0

Microscopic urine analysis revealed that the alkaline nature of urine changes to normal pH up to 90.28% and 92.31% relief was observed in W.B.C. respectively which is showed in Table no 4 & 5.

**Table 4: Showing efficacy of drug on pH of Urine**

Features	Mean		%	S.D.	S.E.	‘t’	p
	B.T.	A.T.					
Urine ph	2.40	.23	90.28	0.59	0.11	20.04	<0.001

**Table 5: Showing efficacy of drug on WBC count in Urine**

Features	Mean		%	S.D.	S.E.	‘t’	p
	B.T.	A.T.					
W.B.C. in Urine	2.17	0.17	92.31	0.53	0.1	20.86	<0.001

## DISCUSSION

Total 30 no of patients were registered for the study. The study showed that males were more predominant for calculi formation than female. Occupational distribution of patients

indicates that highest number of the patients i.e. 40% were self employed. As per observation the highest number of patients i.e. 40% were addicted to tea/coffee. Maximum number of patients were possessing Vata-Kapha Prakriti i.e. 46.66% followed by 30% Kapha-Pitta

*Prakriti*. *Kapha Dosha* can easily be provoked in *Kaphaja Prakriti* persons, so they are more prone to *Kaphaja* diseases.

The therapy (*Varunadi kwatha* with *Yava kshara* orally) provided excellent relief in *Gomedaka Prakasha* (100%), *Sarudhiramutrata* (100%), *Basti Guruta*(92.00%), *Mehana Vedana* (93.33%), *Mutrardharasanga* (91.89%), *Nabhi Vedana* (95.83%), *Basti Vedana* (92.11%), *Vishirṇadhara* (91.07%), *Ati Avilamutrata* (91.38%), *basti shitalata* (87.18%), *Sevani Vedana*<sup>1</sup> (87.50), Pain (82.46%), Burning micturition (91.04%), haematuria (86.21%), Dysuria (82.35%), Pyuria (91.80%) and Fever (88.88%). Among clinical features, about Burning micturition the patients responded at first and relieved within two weeks. The relief was found statistically highly significant ( $P<0.001$ ). *Prakupitta pitta* and secondary infections were the causes for this *Sadahamutrata*. This *Prakupita Pitta* has antagonised with *Pittahara* properties like *Tikta* and *Kshaya Rasa* and the infection was controlled by *Mutrala* property of *Gokshura* of the drug compound. *Nabhi Vedana*, *Basti Vedana* and Haematuria have responded well. The drug compound showed good result on kaphaja vesical calculi. pH of urine came to normal from alkaline stage.

#### **Probable mode of action:**

'*Varunadi Kwatha*', formulation explained by *Chakradatta*, possess all the needful properties like *Kaphahara*, *Lekhana* and *Mutrala*.

The ingredients of the compound pacify *Kapha Dosha* by virtue of their *Ruksha Guna*, *Katu Vipaka* and *Ushna Virya* and also show "*Lekhana*" property due to *Ushna Virya*. The *Lekhana Karma*

is again enhanced by famous *Lekhana Dravya* i.e. *Yavakshara*, which is one ingredient in it.<sup>5</sup>

The *Vatanulomana*, *Shothahara* and *Mutrala* properties of ingredients helps to relieve pain and *Sthanika Sotha*. *Jwara* is also relieved due to the *Jwarahara* action of *Pashanbhed*, *Varun* and *Shunthi*. *Deepana* property of drug helps to increase the *Agni*, which further check the formation of *Ama* at *Jatharagni* level.<sup>5</sup>

Remaining drugs of the compound act as *Mutrala* (diuretic) by virtue of their '*Sheeta Virya*' and *Madhur Rasa*. *Gakshura*, *Varun*, *Yavakshra* and *Pasanbheda*, these well known *mutrala dravyas*<sup>6</sup> is again an ingredient in this formulation.

All the ingredients of the drug, by their *Bhedana*, *Ashmarihara* and *Kaphahara karmas* along with *Mutrala Karma*, are helpful to reduce the size of the *Ashmari* and expelled it out from the body.

Thus in total this formulation has the capacity to disintegrate the pathogenesis of the disease '*Ashmari*' and due to its diuretic action it flushes out the disintegrated '*Ashmari*' by the process of Diuresis.

#### **CONCLUSION**

Urological problems form an important part of medical deliberations. The clear cut cause of the disease is still unknown. But in *Ayurveda*, *Kapha Dosha* in increased quantity has been accepted as the main reason for the formation of *Mutrashmari*.

The study suggests that *Kaphaja Ashmari* can occur in both the sex at any age but the age group of 3<sup>rd</sup> and 4<sup>th</sup> decades of life is more prone to this disease.

The predominant *Dosha* in *Ashmari* is *Kapha*. So, *Guru*, *Sheeta*, *Snigdha*,

Madhura Ahara, irregular food habits, day sleep may increase Kapha leading to formation of Mutrashmari.<sup>2</sup>

Majority of calculi were seen in bladder at Uretero – vesical junction.

Varunadi Kwatha was found to have highly significant effect on Nabhi Vedana, Basti Vedana, Mutradharasang, significant effect on Mehana Vedana, Gomedaka Prakasha and Sarudhiramutrata.<sup>1</sup>

Treated group showed highly significant effect on Pain, Burning Micturition, Haematuria, Dysuria and Pyuria.

The drug compound has shown its role in decreasing pus cells, R.B.C, W.B.C and urine pH.

The overall effect obtained shows the 66.66% of the patients recorded a complete cure, 13.33% were markedly improved and 20% were improved and the result is statistically highly significant.

Observations obtained from the treated group had shown no side effects of the drug compound.

#### REFERENCES

1. Sushruta Samhita- Ayurveda Tattava-Sandipika Hindi commentary by Kavi Raj Ambica Dutt Shastri
2. Astang Hridaya - Sarvangasundara Commentary by Arundatta
3. Nighantu Adarsh - By Bapala G. Vaidya
4. Chakradatta of Shri Chakrapanidatta with Vaidyaprabha Hindi Commentry by Dr. Indradev Tripahi, Chaukhambha Sanskrit Bhawan, Varanasi, Edition: Reprint 2010.
5. Dhanvantari Nighantu with Hindi Commentary by Dr. Jharkhandey Ojha and Dr. Umapati Mishra, Adarsh Vidya Niketan, 1<sup>st</sup> Edition, 1985.
6. P.V.Sharma Dravya Guna Vigyan 15th edition Chaukhambha Sanskrit.
7. Abhinava Bhaisajya Kalpana Vijnanam by Acharya Siddhinandan Mishra, Chaukhambha Surabharati Prakashan, Edition, 1999.
8. Harrisons' Principles and Internal Medicine
9. Principles of Urology – Cambell

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