



Clinical Evaluation Of *Ashmarihar Kasaya* In The Management Of Urolithiasis (*Mutrashmari*)

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ABSTRACT:

Urolithiasis is the most common urinary tract problem affecting people globally. Efforts have been made continuously since past, for a safe & effective treatment for this alarming disease. The best and latest modern treatment for this disease is invasive surgery which requires hospital stay, pain and post-operative complications. In this context an Ayurvedic classical formula *Ashmarihar Kasaya* (*Siddhayoga Samgraha* Ch.18) is described as an effective drug in management of urolithiasis (*mutrashmari*). So a study was performed on account of above statement. The result was assessed by using a series of parameter and it was found that *Ashmarihar Kasaya* is highly significant in relieving most of the signs & symptoms. Also, the drug is found effective in removal of small ($\leq 5\text{mm}$) stones and reduce the size of big (6-10mm) stones present in ureter, bladder and kidney.

Keywords:- *Asmari, Ashmarihar Kashaya, Mutrashmari, Urolithiasis*

INTRODUCTION

The word "Urolithiasis" is made up of two words "ouros" which means urine and "lithos" which means stone in greek. It is a condition where calculi are formed anywhere in urinary tract. Urolithiasis is most common disease of urinary system. It occurs more frequently in male than female and in white than black. However, it shows some familial predisposition also. Archaeological findings give profound evidence that humans have been suffering from kidney and bladder stone since centuries.¹ The oldest bladder stone is reported at "ELAMARAH" in upper Egypt, dated about 4800 BC. Rigveda and *Atharvaveda*

(2000 – 5000 BC) also mentioned about the stone and advised people not to ride a horse. Urinary calculus is a stone like body composed of urinary salts bounded together by a colloid matrix of organic material. It consists of nucleus, around which concentric layers of urinary salts are deposited. In this paper the clinical study and observation regarding effect of *Ashmarihar Kasaya* on patients of urolithiasis has been described. The *Ashmarihar Kasaya* works on the principles of diuresis, *Ashmari bhedana* and *vatanulomana* properties.²



AIMS AND OBJECTIVE

1. To assess the efficacy of *Ashmarihar Kasaya* in the management of urinary tract calculi.
2. To relieve the patients from pain and mental tension associated with surgical procedures.
3. To find out a simple, harmless, efficient and cost-effective method to treat *Mutrashmari*.

MATERIAL AND METHODS

1. Total 30 patients having size of calculus less than 10 mm were registered from O.P.D. of N.I.A. Hospital.
2. All the patients in the present study were selected between 20 to 50 years of age irrespective to their sex, religion, occupation etc.
3. Patients with renal impairment, of immediate surgical requirement and complications were excluded.
4. Routine hematological, complete urine and stool examination, biochemical investigations, plain X-ray (KUB region), USG (KUB region) and IVP (if needed) were carried out for the purpose of assessing the overall condition of the patients before and after treatment.
5. The changes in the values of investigations, signs & symptoms and overall therapy were recorded for the assessment.

Drug

For the making of *Ashmarihar Kashaya*, total 16 drugs were used as showed below in table – 1 below.

All the drugs were taken in particular amount and made into coarse powder (*Yavakuta*). Every 10 gm quantity of coarse powder (*Yavakuta*) is mixed with water 160 ml of water and boiled till 1/4th (40 ml) of it left. The decoction was filtered and given to the patient after adding *Shilajeet* 625mg (5 Ratti).³

At every administration a fresh decoction was made from the compound.

DOSE :40 ml twice a day (empty stomach)

DURATION :90 days

Assessment Criteria

Most of the signs and symptoms of *Mutrashmari* described in Ayurveda are subjective in nature. So for statistical analysis, a multidimensional scoring system has been adopted. The scoring was done before the treatment, between the treatment and after the treatment. A statistical analysis was done and percentage of relief was calculated

at the end of the treatment to know the efficacy of therapy. Final conclusion was given according to number grading with respect to parameters of different signs and symptoms as follows.

- Cured : 76% to 100% relief in subjective signs and symptoms & absence of any calculus in urinary tract with radiological evidence.
- Markedly Improved : 51% to 75% relief in subjective signs and symptoms & downward movement or partial disintegration of *Mutrashmari* with radiological evidence.
- Improved : 26% to 50% relief in signs and symptoms without any change in size of stone confirmed with radiological evidence.
- Mildly Improved : only up to 25% relief in subjective sign and symptoms.

OBSERVATION & RESULT

After the completion of treatment, it was noticed that *Ashmarihar Kasaya* cured the symptoms (according to Ayurveda) like *Mutradhara Sanga* (79.60%), *Basti Vedana* (79.24%), *Mehana Vedana* (78.12%), *Sevani Vedana* (76.92%). Effect was markedly improvement in *Gomeda Prakasham* (72.91%), *Ati Avilamutrata* (66.66%), *Nabhivedana* (65.70%) and *Sarudhira Mutrata* (54.59%) as showed below in table – 2 below.

Ashmarihar Kashaya cured the symptoms (according to modern) like Dysuria (83.33%), burning micturition (82.41%) and Pain (76.30%). Relief was statistically moderately improved in renal angle tenderness (69.44%), followed by improvement in Pyuria (50.00%) and Haematuria (54.59%) as showed in table – 3 below.

It has been observed that total 14 ureteric stones were found out of which 11 stones were ≤ 5 mm & 3 stones were between 6 - 10 mm of size. 6 stones of size ≤ 5 mm & 2 stones of size between 6 - 10 mm were expelled out. 2 stones of size ≤ 5 mm & 1 stone of size between 6 - 10 mm were reduced in size. In 3 stones of size ≤ 5 mm downward movement was observed. Total 8 kidney stones were found out of which 4 stones were ≤ 5 mm & 4 stones were between 6 - 10 mm. 1 stone of size ≤ 5 mm & 1 stone of size between 6 - 10 mm were expelled out. 1 stone of size ≤ 5 mm & 2 stones between 6 – 10 mm were reduced in size. No downward movement was observed in kidney stones. 2 stones of sized ≤ 5 mm & 1 stone of size between 6 - 10 mm remain unchanged. In bladder, out of 4 stones, 2 stones were ≤ 5 mm & one stone was between 6 - 10mm were found. Out of them 2 stones of size ≤ 5 mm expelled out, 1 stone of size ≤ 5 mm remain unchanged and 1 stone

between 6 - 10mm reduced in size as showed in table – 4 below.

Out of 26 patients, 14 patients were suffering from Ureteric stone of which 8 patients (57.14%) were cured, 3 (21.42%) markedly improved and 3 (21.42%) improved. In 8 patients of Kidney stone, 2 patients (25.00%) cured, 3 markedly improved (37.50%) and the rest 3 patients (37.50%) were mildly improved. In 4 patients of Bladder stone, 2 patients (50.00%) were cured, 1 markedly improved (25.00%) and 1 was mildly improved (25.00%) as showed in table – 5 below.

DISCUSSION

- According to the results of table-1 & 2, it can be said that relief in signs and symptoms of *Mutradhara Sanga*, *Basti Vedana*, *Mehan Vedana*, *Sevani Vedana*, Dysuria, burning micturition and pain was observed due to *Sula Prashamana*, *Shothahara*, *Vatanulomana* and *Mutrala* properties of the ingredients in *Ashmarihar Kasaya*.⁴
- From the result shown in table-3, it can be summarized that *Ashmarihar Kashaya* is having good effect on ureteric and bladder stones of sized less than 5 mm and mild effect on stone between 6 – 10 mm because of its *vatanulomana*, diuretic and lithotriptic properties.
- It was observed that a good cure rate was found in ureteric and bladder stones, followed by kidney stones as shown in table 5. It might be due to the diuretic, analgesic lithotriptic properties of the ingredients in *Ashmarihar Kasaya*.⁵

CONCLUSION

The figures of the present study show that out of 26 treated patients, 12 patients (46.15%) were cured, 7 patients (26.92%) markedly improved, 3 patients (11.53%) improved, and 4 patients (15.38%) were observed mildly improved as showed in table – 6 below. So, it can be concluded that the condition of the patients was markedly improved according to the symptoms but the expulsion of the stone was not more than 50% in all the cases. Out of 12 cured patients, 6 patients (75.00%) were having stone of size ≤ 5 mm and 3 patients (25.00%) were having stone

size between 6 – 10 mm. So we can say that *Ashmarihar Kasaya* is more effective in removal of small (< 5mm) sized stone specially present in ureter. But it is highly significant in relieving most of the signs & symptoms like *Mutradhara Sanga*, *Basti Vedana*, *Mehan Vedana*, *Sevani Vedana*, Dysuria, burning micturition and pain (more than 75%).

The present study was done for 90 days. If it could have been continued for longer duration, it may show better results even in patients having stone of size between 6 – 10 mm.

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Table – 1: Drugs used for making of *Ashmarihar Kasaya*.

S.No	Name of the Drug	Latin name	Part used	Quantity
1.	<i>Pashana Bheda</i>	Begrenia ligulata	<i>Moola</i>	1 part
2.	<i>Sagaun</i>	Tectona grandis	<i>Fala</i>	1 part
3.	<i>Papita</i>	Carica papaya	<i>Jada</i>	1 part
4.	<i>Shatavari</i>	Asparagus racemosus	<i>Kanda</i>	1 part
5.	<i>Gokharu</i>	Tributes terrestis	<i>Moola</i>	1 part
6.	<i>Varuna</i>	Creataeva nurvala	<i>Chaal</i>	1 part
7.	<i>Kusha</i>	Desmostachya bipinnta	<i>Moola</i>	1 part
8.	<i>Kasa</i>	Saccharum spontaneum	<i>Moola</i>	1 part
9.	<i>Chawal Dhana</i>	Oryza sativa	<i>Moola</i>	1 part
10.	<i>Punarnava</i>	Boerhavia diffusa	<i>Moola</i>	1 part
11.	<i>Giloya</i>	Tinospora cordifolia	<i>Kanda</i>	1 part
12.	<i>Apamarga</i>	Achyrenthes aspera	<i>Moola</i>	1 part
13.	<i>Kheera</i>	Cucumis melovar utilissimus	<i>Beeja</i>	1 part
14.	<i>Jatamansi</i>	Nardostachys jatamansi	<i>Moola</i>	2 parts
15.	<i>Shilajit</i>	Asphaltum punjabianum	<i>Whole</i>	-
16.	<i>Ajvayana</i>	Hyoscyamus niger	<i>Beeja</i>	2 parts

Table – 2: Effect of therapy on clinical features (acc. to Ayurveda) after 90 days of treatment.

Clinical Features	Mean		%	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
<i>Nabhi Vedana</i>	2.40	0.80	65.70	0.51	0.10	15.72	>0.001
<i>Basti Vedana</i>	2.76	0.57	79.24	0.47	0.09	23.71	>0.001
<i>Sevani Vedana</i>	1.73	0.45	76.92	0.48	0.09	14.01	>0.001
<i>Mehan Vedana</i>	2.13	0.40	78.12	0.59	0.11	14.30	>0.001
<i>Mutradhara Sanga</i>	2.23	0.45	79.60	0.43	0.08	21.19	>0.001
<i>Sarudhira Mutrata</i>	1.93	0.85	54.59	0.41	0.08	12.93	>0.001
<i>Gomeda Prakasham</i>	1.60	0.45	72.91	0.38	0.07	15.51	>0.001
<i>Ati Avilamutrata</i>	2.16	0.50	66.66	0.51	0.10	14.40	>0.001

Table – 3: Effect of therapy on clinical features (acc. modern) after 90 days of treatment.

Clinical Features	Mean		%	S.D.	S.E.	‘t’	P
	B.T.	A.T.					
Pain	2.76	0.65	76.30	0.47	0.09	22.83	>0.001
Burning micturition	3.03	0.45	82.41	0.51	0.10	24.77	>0.001
Haematuria	1.93	0.85	54.59	0.41	0.08	12.93	>0.001
Dysuria	2.86	0.45	83.33	0.60	0.11	20.04	>0.001
Pyuria	1.00	0.40	50.00	0.51	0.10	04.95	>0.001
Renal angle tenderness	2.8	0.75	69.44	0.53	0.10	18.38	>0.001

Table – 4: Effect of therapy on stones at different site and size.

Size	Site	No. of patients*	Effect
≤5mm	Ureter	11	Exp.6, DS.-2, DM.-3, NC-0
	Kidney	4	Exp.1, DS.-1, DM.-0, NC-2
	Bladder	3	Exp.2, DS.-0, DM.-0, NC-1
	Urethra	0	-
6mm-10mm	Ureter	3	Exp.2, DS.-1, DM.-0, NC-0
	Kidney	4	Exp.1, DS.-2, DM.-0, NC-1
	Bladder	1	Exp.0, DS.-1, DM.-0, NC-0
	Urethra	0	-

NC - No change, Exp – Expelled, DM - Downward movement, DS - Decrease in size

Table –5: Effect of therapy on types of Urolithiasis in 26 patients.

Type	Total*	Cured	Markedly Improved	Improved	Mildly Improved
Ureteric stone	14	8 57.15 %	3 21.42 %	3 21.42 %	0 00.00 %
Kidney stone	8	2 25.00 %	3 37.50 %	0 00.00 %	3 37.50 %
Bladder stone	4	2 50.00 %	1 25.00 %	0 00.00 %	1 25.00 %

*Total number of treated patients excluding LAMA patients.

Table –6: Over all Relief

Results	Number of Patients	Relief
Cured	12	46.15 %
Markedly Improved	7	26.92 %
Improved	3	11.53 %
Unchanged	4	15.38 %