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RESEARCH ARTICLE

MANAGEMENT OF MUTRASHMARI WITH SHIGRU MULA KWATHA

***,[1]Dr. Kunal Kishore, [2]Dr. Ganapathirao, [3]Dr. Chandrakanth Halli and [4]Dr. Vijay Biradar**

[1]Lecturer, P.G. Department of Shalyatantra, SRTAM College & Hospital, Gaya, Bihar
[2,3,4]P.G. Department of Shalya Tantra, N.K.J. Ayurvedic Medical College & P.G.Centre, Bidar

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ABSTRACT

Urinary disorders have a specific identity both in modern and Ayurvedic system of medicine. The oldest written reference of this disease is seen in samhitha. The improper purificatory procedure results in residual accumulation of kapha and pitta Prakopa in mootravah srotas. Hence all the doshas collectively result in formation of Ashmari. Ashmari (urolithiasis) is a frequent clinical problem with an incidence of 0.1% to 6% in general population. The disease is prevalent irrespective of their socio-economic and cultural background. It is estimated that about 5-7 million patients are suffering from urinary calculus in India with male to female ratio of 2:1. The peak incidence is observed in 2nd to 3rd decades of life. There are different treatment lines for the management of Ashmari in modern system. In spite of all these techniques, surgical management remains as a treatment of choice. Recurrence is inevitable in 60% of cases. But these techniques can develop complications and are not affordable to an average Indian patient. So there is a need to find out an alternative management. Management of urinary disease occupies an important place in Ayurveda. Even though a lot of research has been done in Ashmari management, there is still a vast scope to explore new avenues. Hence the proper, cost effective, simple, safe, conservative i.e. Shigrumula kwatha is advised.

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INTRODUCTION

Ashmari is a disease in which there is formation of stone, Ashmari specifically called as Mootrashmari is a disease of mootravah srotas. It is considered as one among the eight most deadly diseases, which has been described elaborately in Ayurvedic classic. Acharya sushruta has delt separate chapter for this disease. The information regarding Ashmari is available in almost all samhitha. This infers the prevalence of Ashmari since the inception of medicine in India. Acharya Sushruta, father of Ancient surgery, while dealing with the management of mutrashmari, stressed fist on different form Ashmarighna yogas like ghrita, kshara, kashaya. In Ayurveda numbers of drugs are mentioned to treat mutrashmari. Among them the 'Shigru mula kwatha+', which is mentioned in Chakradatta 34/25, Vangsen Adhyaya Ashmari Rogadhikarh Sloka 62 and Bhavaprakasha 37/65 is selected for the study. This drug is advised in Paneeya form. This drug can be given on O.P.D basis and is administered without requiring hospitalization. Drugs are easily available, economical and are easy to administer, which are having vedana shamaka, mutral properties. Hence the clinical study has been undertaken to evaluate the efficacy of 'Shigru Mula kwatha'. The main aim of this particular study is inclined towards the disintegration, dissolution, dislodgement and expulsion of stone.

Corresponding author:* **Dr. Kunal Kishore,
Lecturer, P.G. Department of Shalyatantra, SRTAM College & Hospital, Gaya, Bihar

Aims and Objectives

1. To evaluate therapeutic effect of Shigrumula kwatha in Mutrashmari.
2. To know the efficacy of the conservative medical treatment.

MATERIALS AND METHODS

The most important requirement in the clinical study is a well defined protocol. So, in the present study following protocol was followed.

Source of data

The present clinical study on the management of mutrashmari was carried out at N.K.J.A.M.C. Bidar. This study was carried out at O. P. D. level and the work was limited according to the facilities available in the P. G. Dept. of shalya Tantra .The data was also collected by conducting camps for the purpose of clinical study.

Selection criteria

The selection of cases was done on the bases of clinical presentation and the diagnosis was established accordingly. The patients were registered according to the proforma

prepared for the study irrespective of their sex, occupation and socio – economic status.

Inclusive criteria

1) Age group between 16to 50 years, irrespective of sex.
2) Chronicity of the disease less than one year.
3) Size of the calculi less than 10mm.
4) Irrespective of site logging in the urinary tract.
5) Mild hydronephrosis can be included for the study.

Exclusion criteria

1. Calculus with severe hydronephrosis.
2. Obstructive calculi with severe infection.
3. Calculi with severe systemic disorders like diabetes, HTN.
4. Calculi in pregnant women.

Nature of study: The study comprises of 3 phases

- Diagnostic phase
- Intervention phase
- Assessment phase

Total number of 30 patients were selected randomly and were divided into two groups i.e. Group - A and Group - B each group contains 15 patients.

Group – A: 15 Patients will be treated by Shigrumulakwatha – 40ml/twice a day for 45days before meal

Group-B: 15 Patients will be given 6gm of Kulttha churna, with warm water as anupana before food.

Observation period

Patients of both the group were advised for a follow up of every 15 days for 45 days, during treatment. Patients were advised to drink 3-4 liters of water and to consume yava, godhuma, shastika shali, kushmanda etc. with proper sleep, & excretion of natural urges.

Follow up period

The patients were advised for follow up once in seven days to rule out any recurrence of symptoms. However patients were advised to report immediately if they noticed any real symptoms.

Assessment criteria

A. Subjective criteria

- Pain abdomen
- Heamaturia
- Dysuria

B. Objective criteria

- Size of stone
- Site of stone
- Number of stone

Assessment criteria

Subjective criteria

Pain: Assessed by MRC (Medical Reserch Council) scale

- G_0- Absence of pain/no pain.
- G_1 –Mild- pain that can be easily ignored and no need for medical intervention.
- G_2 – Modrate – pain that cannot be ignored, interferes with daily activities and needs treatment from time to time.
- G_3 – Severe – pain of such intensity which is unable to bear and needs analgesics.

Haematuria: will be assessed by routine urine examination

- Grade 0- Absence of hematuria.
- Grade 1-occasional haematuria
- Grade 2- Intermittent haematuria
- Grade 3- Constant haematuria

Dysuria:- will be assessed by history of pain and radiation during Micturation

- Grade 0- absence of pain during micturation
- Grade 1- Scalding pain at tip of urethral meatus
- Grade 2- Moderate pain during micturation
- Grade 3- Sever pain during micturation

Objective criteria

Size of stone: will be assessed by USG every week in mm

Site of stone: will be assessed under USG guidance and graded as follows.

- Grade 0- Expelled
- Grade 1-Stone in bladder
- Grade 2-Stone in ureter
- Grade 3-Stone in renal pelvis

Number of stone: was assessed under USG & x-ray guidance and graded as follows

- Grade 0 – No stone
- Grade 1- One stone
- Grade 2 - Two & more then two (multiple)

PH of urine: was assessed by biochemical examination of urine.

Blood Urea: was assessed by routine urine examination.

Serum Creatinine: was assessed by routine urine examination.

X- Ray KUB: was assessed before treatment and after treatment and was presented with Present (1) and Absent (0).

RESULTS

The above statistical analysis shows that in case of pain in abdomen the mean ± S.E. before treatment was 2.6±0.18 and

was reduced to 2.06±0.20 after 15 days, 1.46±0.16 after 30 days, and 0.53±0.13 after 45 days. The test of significance shows that the drug is not Significant to reduce pain in abdomen in AT1 and Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Haematuria the mean ± S.E. before treatment was 1.93±0.20 and was changed to 1.8±0.17 after 15 days, 1.46±0.13 after 30 days, and 0.4±0.13 after 45 days. The test of significance shows that the drug is not Significant to reduce Haematuria in AT1, and highly significant to reduce with the P-value <0.01 in AT2 & AT3 respectively. In case of Dysuria the mean ± S.E. before treatment was 2.06±0.20 and was reduced to 1.86±0.21 after 15 days, 1.13±0.16 after 30 days, and 0.33±0.12 after 45 days. The test of significance shows that the drug is not Significant to reduce Dysuria in AT1 and Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Size of stone the mean ± S.E. before treatment was 4.53±0.17 and was reduced to 3.8±0.31 after 15 days, 2.8±0.27 after 30 days, and 1.4±0.37 after 45 days. The test of significance shows that the drug is Highly Significant to reduce Size of stone with the P-value <0.01 in AT1, AT2 &AT3 respectively.

In case of Site of stone the mean ± S.E. before treatment was 2.13±0.19 and was changed to 1.93±0.24 after 15 days, 1.4±0.16 after 30 days, and 0.53±0.13 after 45 days. The test of significance shows that the drug is Not Significant to change Site of stone in AT1& Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Number of Stone the mean ± S.E. before treatment was 1.26±0.11 and was reduced to 1.13±0.13 after 15 days, 1±0.09 after 30 days, and 0.53±0.13 after 45 days. The test of significance shows that the drug is not Significant to reduce Number of Stone in AT1 and Significant with the P-value <0.05 in AT2 & Highly Significant with the P-value <0.01 in AT3. The above statistical analysis shows that in case of pain in Abdomen the mean ± S.E. before treatment was 2.2±0.17 and was reduced to 2.13±0.16 after 15 days, 1.66±0.15 after 30 days, and 0.93±0.20 after 45 days. The test of significance shows that the drug is not Significant to reduce pain in Abdomen AT1 and Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Haematuria the mean ± S.E. before treatment was 1.86±0.21 and was changed to 1.8±0.2 after 15 days, 1.53±0.16 after 30 days, and 1±0.25 after 45 days. The test of significance shows that the drug is not Significant to reduce Haematuria in AT1 and Significant with the P-value <0.05 in AT2 & Highly Significant with the P-value <0.01 in AT3. In case of Dysuria the mean ± S.E. before treatment was 2.33±0.12 and was reduced to 2.2±0.10 after 15 days, 1.8±0.2 after 30 days, and 1.26±0.20 after 45 days.

Table 1. Effectiveness of Drug in GROUP-A

Sign /symptom	Mean ± S.D			Df	p-value	t-value	Effectiveness %	Remark
Pain Abd.	BT	AT1	2.06±0.20	14	_	1.87	8.82%	NS
	2.26±0.18	AT2	1.46±0.16		<0.01	5.52	35.29%	HS
		AT3	0.53±0.13		<0.01	14.66	76.47%	HS
Haematuria	BT	AT1	1.8±0.17		_	1.46	6.89%	NS
	1.93±0.20	AT2	1.46±0.13		<0.01	3.5	24.13%	HS
		AT3	0.4±0.13		<0.01	6.48	79.31%	HS
Dysuria	BT	AT1	1.86±0.21		<0.01	1.87	9.67%	NS
	2.6±0.20	AT2	1.13±0.16		<0.01	6.08	45.16%	HS
		AT3	0.33±0.12		<0.01	8.40	83.87%	HS
Size of stone	BT	AT1	3.8±.31		<0.01	3.77	16.17%	HS
	4.42±0.58	AT2	2.8±.27		<0.01	7.27	38.23%	HS
		AT3	1.4±0.37		<0.01	10.22	69.11%	HS
Site of stone	BT	AT1	1.93±0.24		_	1.8	9.37%	NS
	22.2±0.8	AT2	1.4±0.16		<0.01	6.20	34.37%	NS
		AT3	0.53±0.13		<0.01	8.41	75%	HS
Number	BT	AT1	1.13±0.13		_	1.46	10.52%	NS
	1.26±0.11	AT2	1±0.09		<0.05	2.25	21.05%	S
		AT3	0.53±0.13		<0.01	3.21	57.89%	HS

S.D–Standard deviation, B.T–Before treatment, A.T–After treatment, df– Degree of freedom, t–Test of significant, p–Probability, H.S- Highly significant N.S.- Non significant.

Effectiveness of Group a

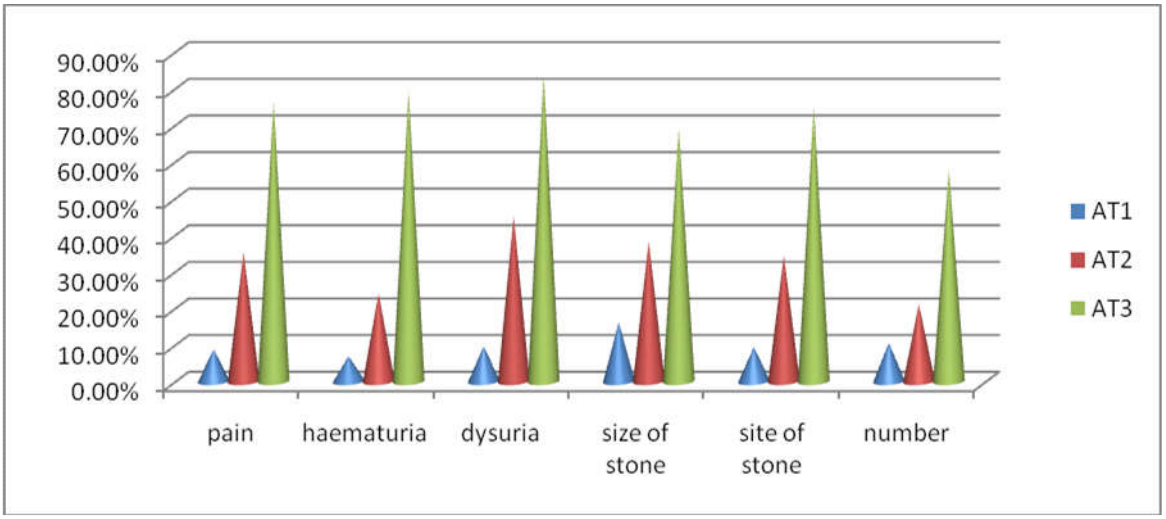


Table 2. Effectiveness of Drug in GROUP-B

Sign /symptom	Mean ± S.D			Df	p-value	t-value	Effectiveness %	Remark
Pain	BT	AT1	2.13±0.16	14	_	1	3.03%	NS
	2.2±0.17	AT2	1.66±0.15		<0.01	3.22	24.24%	HS
		AT3	0.93±0.20		<0.01	8.26	57.57%	HS
Haematuria	BT	AT1	1.8±0.2		_	1	3.57%	NS
	1.86±0.21	AT2	1.53±0.16		<0.05	2.64	17.85%	S
		AT3	1±0.25		<0.01	9.53	46.42%	HS
Dysuria	BT	AT1	2.2±0.10		_	1.46	5.71%	NS
	2.33±0.12	AT2	1.8±0.2		<0.01	4	22.85%	HS
		AT3	1.26±0.20		<0.01	6.95	45.71%	HS
Size of stone	BT	AT1	4.1±0.38		_	1.87	8.88%	NS
	4.5±0.25	AT2	3.46±0.36		<0.01	5.56	22.96%	HS
		AT3	2.46±.38		<0.01	7.09	45.18%	HS
Site of stone	BT	AT1	2±0.23		_	1.38	9.09%	NS
	2.2±0.2	AT2	1.66±0.21		<0.01	3.32	24.24%	HS
		AT3	1.2±0.2		<0.01	4.58	45.45%	HS
Number	BT	AT1	1.2±0.14		_	1.46	10%	NS
	1.33±0.12	AT2	1.2±0.14		_	1.46	10%	NS
		AT3	1±0.16		<0.01	2.64	25%	S

S.D–Standard deviation, B.T–Before treatment, A.T–After treatment, df– Degree of freedom, t–Test of significant, p–Probability, H.S- Highly significant N.S.- Non significant.

Effectiveness of Group B

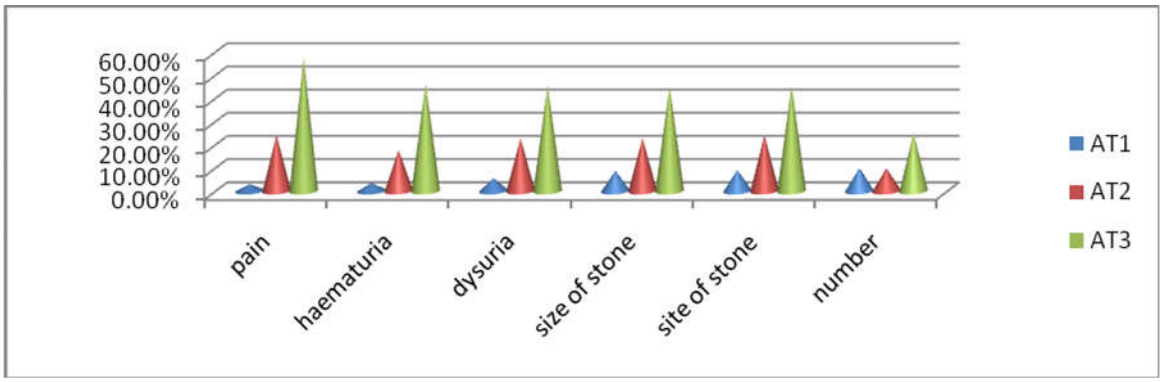
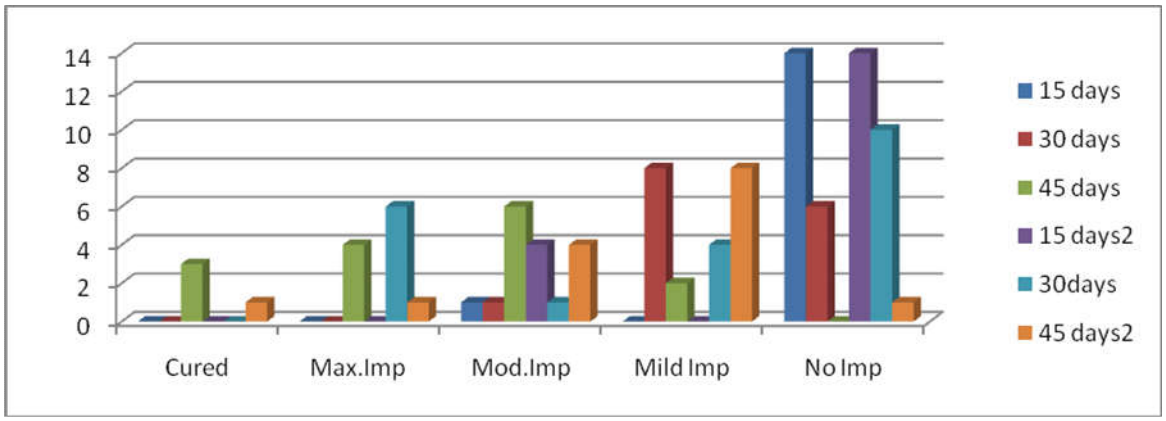


Table 3. Overall clinical assessment of result

Result	GROUP – A			GROUP – B		
	15days	30 days	45days	15 days	30 days	45 days
Cured	0	0	3(20%)	0	0	1(6.66%)
Maximum Improvement	0	0	4(26.66%)	0	0	1(6.66%)
Moderate Improvement	1(6.66%)	1(6.66%)	6(40%)	1(6.66%)	1(6.66%)	4(26.66%)
Mild Improvement	0	8(53.3%)	2(13.33%)	0	4(26.66%)	8(53.3%)
No improvement	14(93.3%)	6(40%)	0	14(93.3%)	10(66.66%)	1(6.66%)

Graph Overall clinical assessment of result



The test of significance shows that the drug is not Significant to reduce Dysuria in AT1 and Highly Significant with the P-value <0.01 in AT2 & AT3 respectively. In case of Size of Stone the mean ± S.E. before treatment was 4.5±0.25 and was reduced to 4.1±0.38 after 15 days, 3.46±0.36 after 30 days, and 2.46±0.38 after 45 days. The test of significance shows that the drug is not Significant to reduce Size of Stone in AT1 and Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Site of Stone the mean ± S.E. before treatment was 2.2±0.2 and was changed to 2±0.23 after 15 days, 1.66±0.21 after 30 days, and 1.2±0.2 after 45 days. The test of significance shows that the drug is not Significant to

change Site of Stone in AT1 and Highly Significant with the P-value <0.01 in AT2 &AT3 respectively. In case of Number of Stone the mean ± S.E. before treatment was 1.33±0.12 and was reduced to 1.2±0.14 after 15 days, 1.2±0.14 after 30 days, and 1±0.16 after 45 days. The test of significance shows that the drug is not Significant to reduce Number of Stone in AT1 and AT2 respectively & Significant with the P-value <0.05 in AT3.

Group –A

Clinical assessment of result of Group-A shows that on 15thday 1 patient had moderate improvement, whereas 14 patients had no improvement. On 30thday 1patients had moderate improvement; whereas 8 patents had mild improvement whereas 6 patients had no improvement. On 45thday 3 patients had cured, 4 patients had maximum improvement and 6 patients had moderate improvement and 2 patient had mild improvement.

Group-B

In the similar way, Clinical assessment of result of Group-B shows that on 15thday 1 patient had moderate improvement, whereas 14 patients had no improvement. On 30thday 1 patients had moderate improvement; 4 patients had mild improvement, whereas 10 patients had no improvement. On 45thday 1 patients had cured 1 had maximum improvement, 4 patients had moderate improvement and 8 patients had Mild improvement and 1 patient had no improvement.

DISCUSSION

Finally the clinical assessment was carried out on overall results of the effect of Shigrumula kwatha on each individual signs and symptoms and collectively presented in the form of cured, maximum improved, moderate improved, mild improved and no improvement. However it was evident that in group-A after 45 days 3 patients were cured(100%) ,4 had maximum (75%-99%) improvement, 6 had moderate (50%-74%) improvement, 2 had mild (25%-49%) improvement and nil patient with no improvement. In group-B 1 patient were cured (100%), 1 had maximum (75%-99%) improvement, 4 had moderate (50%-74%) improvement, 8 patient had mild (25%-49%) & 1 patient had no improvement (>25%). Shigrumula kwatha has a significant role in the management of Mootrashmari

Conclusion

- In the observation it was found that, the lithotryptic action of the Shigrumula kwatha was showing significant effect on, reducing Pain intensity, reducing Haematuria, reducing Dysuria, reducing Size of stone, reducing site of stone and also reducing the number of stones.
- "Shigrumula kwatha" helps in relieving agony and discomfort to the patients without hospitalization. Hence it may be a poor man's choice as it is easily available, more economical and effective.
- So the use of "Shigrumula kwath " is an ambulatory type of treatment which gives no side effects & also can be used as a better alternative to surgery.

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