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COMPARATIVE STUDY OF EFFICACY OF VARUNAMULA TWAK AND SHIGRUMOOL IN MANAGEMENT OF MUTRASHMARI

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ABSTRACT

Ayurveda' the ancient science of life is one of prides of India. It has dealt with many dreaded diseases under the headings of Mutrakrichha, Mutraghata, Mootrashmari etc. Mootrashmari is one of the most Common and distressing malady among the group of urinary disorders. Acharya '*sushruta'* the '*pioneer in the art and science of surgery'* had described widely and comprehensively about the mootrashmari with it's classification, symptomatology, etiology, pathology, complications and it's management.This is the proof for depth of knowledge of Acharyas on the subject of urinary disorder as a whole .Acharya sushruta*, 'Father of surgery'* included (ashmari) Mootrashmari in 'Ashtaumahagada' i.e. eight major diseases may be owing to it's potentiality to disturb anatomy and physiology of Urinary system. Sushruta have practiced extensive operative surgery on all system of body.'*Hirschberg'* also mentioned that *"The Indians knew and practiced theindigenous operation which always remain to the Greekas and which we Europians learn only from them with surprise."*Formation of stone like structure in urinary tract known as Mootrashmari. The prevalence of urinary tract disease is estimated tobe 2% to 3% Urinary stones have afflicted humankind since antiquity with the earliest recorded example being bladder and kidney stones detected in egyptian mummies dated 4800 B.C.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.

KEY WORDS: Ashmari, Uroliathasis. Shigrumula kwatha

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 'Varunamula Twak kwatha and Shigrumool kwatha' ,which is mentioned in Chakradatta 34/25, Vangsen Adhyaya Ashmari Rogadhikarh Sloka 62 and Bhavaprakasha 37/65 is selected for the study.

This both drugs 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 'Varuna Mula Twak kwatha and Shigrumool kwatha'. The main aim of this particular study is comparative effect of both kwath.

AIMS AND OBJECTIVES :

1. To evaluate comparative effect of Varunamula Twak kwatha and Shigrumool Kwath 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 SRTAMCH Gaya ,Bihar . This study was carried out at O. P. D. level and the work was limited according to the facilities available in the 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 Varunamula Twak kwatha – 40ml/twice a day for 45days before meal

Group - B: 15 Patients will be treated by Shigrumool Kwath – 40ml twice a day for 45 days before meal

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.

ASSESMENT CRITERIA:

A.SUBJECTIVE CRITERIA

- Pain abdomen

- Heamaturia
- Dysuria

B.OBJECTIVE CRITERIA

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

ASSESMENT 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
- Grde 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).

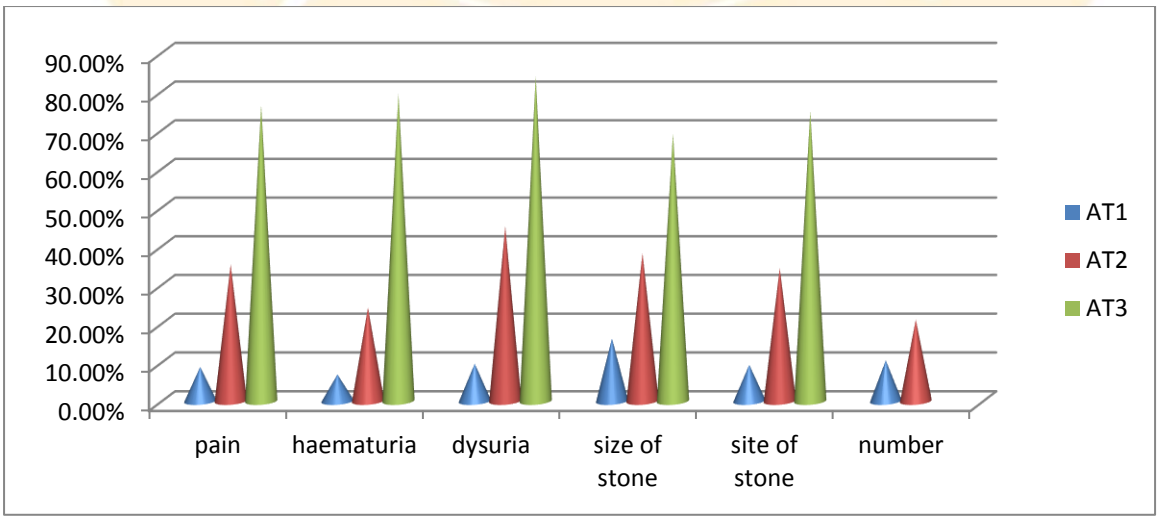
Result:

Showing 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:



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

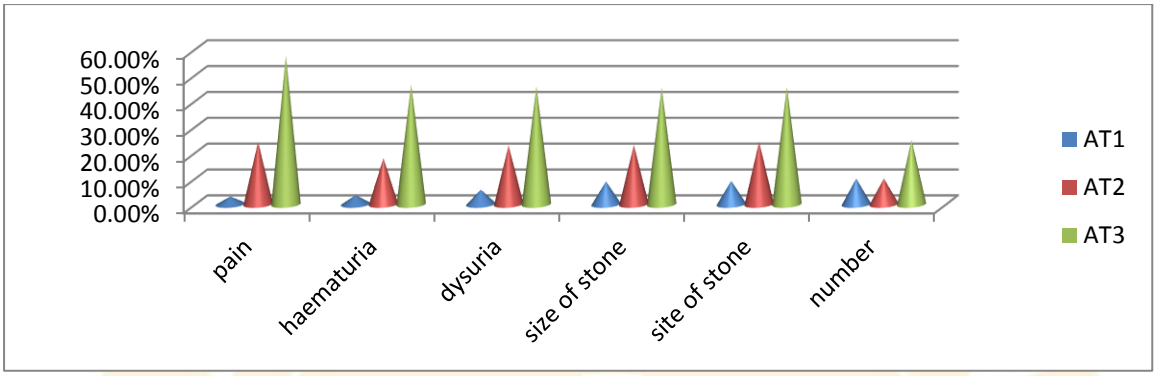
In case of Number of Stone the mean ± S.E. before treatment was 1.26±0.11 and was reduced to 1.13±0.13 after 15 days, 1±0.09 after 30 days, and 0.53±0.13 after 45 days. The test of significance shows that the drug is not Significant to reduce Number of Stone in AT1 and Significant with the P-value <0.05 in AT2 & Highly Significant with the P-value <0.01 in AT3.

Showing effectiveness of Drug in GROUP-B

Sign /symptom	Mean ± S.D			Df	p-value	t-value	Effectiveness %	Remark
Pain	BT	AT 1	2.13±0.16	14	_	1	3.03%	NS
	2.2±0.17	AT 2	1.66±0.15		<0.01	3.22	24.24%	HS
		AT 3	0.93±0.20		<0.01	8.26	57.57%	HS
Haematuria	BT	AT 1	1.8±0.2		_	1	3.57%	NS
	1.86±0.21	AT 2	1.53±0.16		<0.05	2.64	17.85%	S
		AT 3	1±0.25		<0.01	9.53	46.42%	HS
Dysuria	BT	AT 1	2.2±0.10		_	1.46	5.71%	NS
	2.33±0.12	AT 2	1.8±0.2		<0.01	4	22.85%	HS
		AT 3	1.26±0.20		<0.01	6.95	45.71%	HS
Size of stone	BT	AT 1	4.1±0.38		_	1.87	8.88%	NS
	4.5±0.25	AT 2	3.46±0.36		<0.01	5.56	22.96%	HS
		AT 3	2.46±.38		<0.01	7.09	45.18%	HS
Site of stone	BT	AT 1	2±0.23		_	1.38	9.09%	NS
	2.2±0.2	AT 2	1.66±0.21		<0.01	3.32	24.24%	HS
		AT 3	1.2±0.2		<0.01	4.58	45.45%	HS
Number	BT	AT 1	1.2±0.14		_	1.46	10%	NS
	1.33±0.12	AT 2	1.2±0.14		_	1.46	10%	NS
		AT 3	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



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

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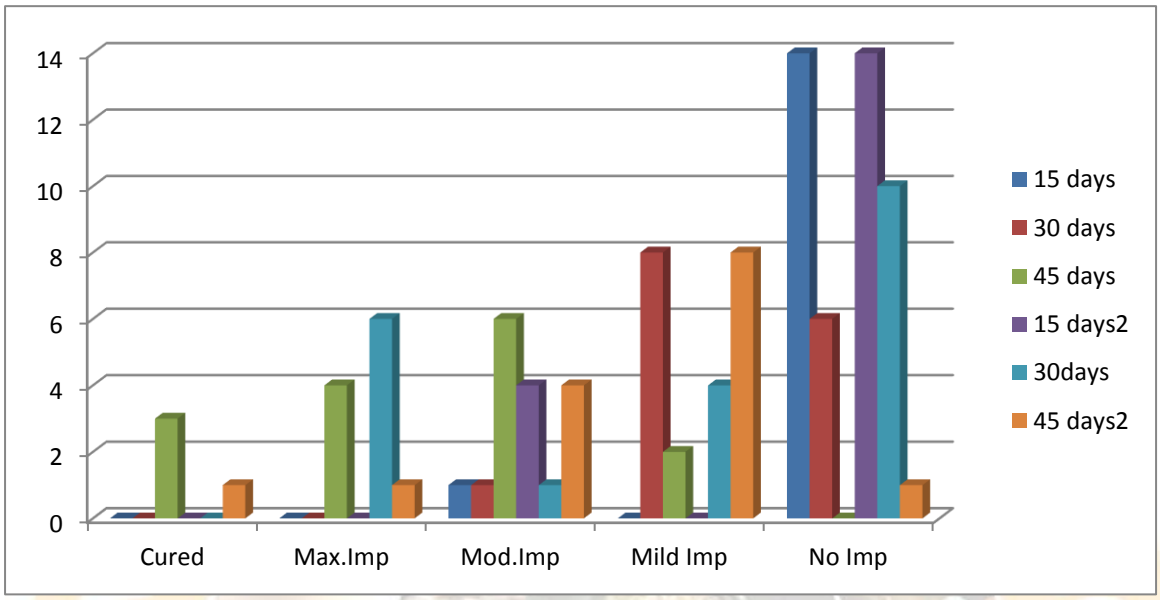
Table showing OVERALL CLINICAL ASSESSMENT OF RESULT

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 showing OVERALL CLINICAL ASSESSMENT OF RESULT



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

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 .

DISCUSSION:

Finally the clinical assessment was carried out on overall results of the effect of Varunamula Twak 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%). Shigrumoool kwatha has a significant role in the management of Mootrashmari

CONCLUSSION:

- In the observation it was found that, both the treatment are equally effective to reduce site and size of stone. The lithotryptic action of the Varunamula Twak kwatha was showing significant effect on, reducing Pain intensity, and Shigrumool kwath reducing Haematuria, and Dysuria, and also reducing the number of stones.
- So the use of "Shigrumool Kwath and Varunamula Twak 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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