

Management of Urolithiasis (Mutrashmari) by an Ayurvedic Preparation Aanandyog

Dr. Nagesh Kumar Sharma,¹

Dr. Amit Mishra,²

Dr. Kumari Nidhi Shree Bibhuti³

Dr. Ragya Tiwari⁴

1. PG Scholar, Department Shalya Tantra VYDS Ayurveda Mahavidyalaya, Khiurja
2. Professor and Head, PG Department of Shalya Tantra, VYDS, Khurja
3. Assistant Professor, PG Department of Shalya Tantra, VYDS, Khurja
4. PG Scholar, Department of Shalyatantra

ABSTRACT

Introduction: In the present study an effort was made to evaluate the efficacy of *Aanandyog* (Alkaline preparation mentioned in Bhaishajya Ratanavali) in the management of Mutrashmari (renal Calculi). The main aim of this particular study was inclined towards the disintegration, dissolution, dislodgement and expulsion of renal stones. These drugs are easily available, economical and are easy to administer, which are having anti-inflammatory, diuretic and Antilithic properties. Total 30 patients were selected randomly and were treated with Anandyog 250 mg twice daily with Godugdha as a Anupana for one Month. After completion of the study, the results were encouraging. The efficacy of *Aanandyog* in relief of Pain (77%), Haematuria (79%), Dysuria (84%), Size of stone (69%) and Number of stone (58%) was highly significant. Hence it was concluded that traditional ayurvedic management is effective and have no adverse effects on the patients of Urolithiasis.

Key words- Mutrashmari, Renal Calculi, Anandyog,

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 *Asthamahagada* (eight most deadly diseases),^[1, 2] In India, approximately 5 -7 million patients^[3] suffer from stone disease and at least 1/1000^[4] of Indian population needs hospitalization due to kidney stone disease. The incidence of calculi varies as per geographical distribution, sex and age group. The recurrence rate is 50 to 80%. Males are more frequently affected than the female and their ratio is 4:3.^[5] The incidence is still higher in the age group between 30-45 years and incidence declines after age of 50. Stones are an age old anguish of the human body and occur at several sites particularly in Kidney, Urinary bladder and Ureter. It is very common metabolic disorder in all the afflictions.

In Ayurveda numbers of drugs are mentioned to treat *mutrashmari*. The study compound has been taken from Bhaishjaya Ratnavali - *Ashmari roga adhikara shloka* 25-26^[6] The compound is a *kshara* made up of *Tila panchang*, *Apamarga Panchanga*, *kadali stambha*, *Palash*, *Amalaki*, *kanda* and given in a dose of 250 mg twice in day with sheep urine as a *Anupana*. This drug is advised in *Paneeya* form. This drug was given at O.P.D basis and is administered without requiring hospitalization.

Ingredients in this Formulation were easily available, economical and having *vedana shamaka*, *mutral* properties. Hence the clinical study has been undertaken to evaluate the efficacy of '*Anadyoga*'. The main aim of this particular study is inclined towards the disintegration, dissolution, dislodgement and expulsion of stone.

AIMS AND OBJECTIVE OF THE STUDY

- To study the literature related to *Mootrashmari*.
- To search out better treatment in respect of effect cost and none recurrence.
- Evaluation of *Aanandyog* in the management of *Mootrashmari*.

MATERIALS AND METHODS-

For the clinical study 30 patients of *Mutrashmari* were collected as per the clinical presentation and diagnostic criteria from OPD and IPD of Shalya Tantra at Vaidya Yagya Dutt Sharma Ayurveda Mahavidyalaya Khurja, Bulandshahar.

Selected patients were treated with Anand yoga 250 mg twice daily with Aja Mutra for 1 month

INCLUSIVE CRITERIA

Patients were selected between 18-60 yrs age group, irrespective of sex, having calculi size less than 10 mm anywhere on KUB. Patient's those who were ready to give written consent.

EXCLUSION CRITERIA :

- Patients below the age of 18 yrs. and more than 60 yrs
- Associated with any systemic disorder like cardiac disease, Diabetes mellitus, hypertension, liver disorder etc.
- Calculus sized more than 10 mm with severe hydronephrosis .
- Obstructive calculi with severe infection
- Calculi in pregnant women

DIGNOSTIC CRITERIA-

patients complaining of pain abdomen and other related symptoms like Dysuria, Haematuria and burning micturition were selected and all these patients were subjected to through general and systemic examination which includes microscopic examination of urine, X-ray KUB and USG.

After the diagnosis was confirmed the patients were registered for the clinical study

Anand Yoga-

Anandayoga preparation:

- (1) Tila - Sesamum indicum - Panchanga (whole plant)
- (2) Apamarga - Achyranthus aspera - Panchanga (whole plant)
- (3) Palasha - Butea frondosa - Kanda twaka (bark)
- (4) Kadali - Musa sapientum - Kanda (tuber)
- (5) Amalaki - Emblica officinale - Kanda (trunk)

The Mrudu kshara of above ingredients was prepared as explained in the Sushruta Samhita. In this procedure 654 gms of kshara was obtained from 4 kg of mixed ash. Then that kshara was filled in the gelatin capsule having 250 mg weight.

Table no. 1 Drug, Dose & Duration :

No. of Patients	30
Drug	Anand Yoga
Dose	250 mg twice daily
Anupana	Goat Milk
Duration	1 month
Fulow up	On 30 th day for 3 months

ASSESSMENT CRITERIA

The patient's response was assessed on subjective & objective parameters.

I. Mootrakrichhra

- | | |
|----------------|---|
| 1. No pain | 0 |
| 2. Mild pain | 1 |
| 3. Moderate | 2 |
| 4. Severe pain | 4 |

II. Renal colic pain

- | | |
|----------------|---|
| 1. No pain | 0 |
| 2. Mild pain | 1 |
| 3. Moderate | 2 |
| 4. Severe pain | 3 |

III. Hematuria

- | | |
|----------------------|---|
| 1. No bleeding | 0 |
| 2. Spotting bleeding | 1 |
| 3. Mild bleeding | 2 |
| 4. Severe bleeding | 3 |

IV. Frequency of urine

- | | |
|--------------------------------|---|
| 1. No frequency of urine | 0 |
| 2. Mild frequency of urine | 1 |
| 3. Moderate frequency of urine | 2 |
| 4. Severe frequency of urine | 3 |

OBJECTIVE CRITERIA

Size of stone: will be assessed by USG every 15 days 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 than two (multiple)

OBSERVATION & RESULTS :

Table no. 1 Showing Age of Patients n= 30

AGE	No. of Patients	PERCENTAGE %
20-29	6	20 %
30-39	13	43.33 %
40-49	9	30 %
50-59	2	6.66 %

Table no. 2 Showing Sex of Patients n= 30

SEX	NO OF PATIENTS	PERCENTAGE
MALE	23	76.66 %
FEMALE	7	23.33%

Table No. -3 Showing chief complaints of patients

n= 30

CHIEF COMPLAINT	NO. OF CASES	PERCENTAGE
Pain	30	100%
Dysuria	30	100%
Hematuria	30	100%
Burning micturition	19	63.33%

Table no. 4 Showing associated complaints

n= 30

ASSOCIATED COMPLAINT	NO. OF PATIENTS	PERCENTAGE
Fever	13	43.3 %
Nausea	18	60 %
Vomiting	14	46.6 %

Table no. 5 Showing Nature of Pain

N=30

Pain abdomen		Total	Percentage
Mode of Onset	Sudden	16	53.3 %
	Recurrent	4	13.3 %
	Gradual	10	33.3 %
Duration	Constant	1	3.3 %
	Intermittent	12	40 %
	Colicky	7	23.3 %
	Radiating	10	33.3 %
Severity	Mild	8	26.6 %
	Moderate	11	36.6 %
	Severe	11	36.6 %
Site of stone	Left	16	53.3 %
	Right	14	46.6 %

Table no. 6 Showing Nature of haematuria

n= 30

	TOTAL	PERCENTAGE
Constant	0	0%
Occasional	19	63.3%
Beginning	11	36.6%
Terminal	0	0%

Table no. 7 Showing site of pain

N= 30

Site of stone	Total	Percentage (%)
Lumber	9	30 %
Flanks	10	33.3 %
Suprapubic	2	6.6 %
Perineal	0	0 %
Groin	5	16.6 %
Pelvis	3	10 %
Midureter	1	3.3 %

Table no. 8 Showing Nature of dysuria

N= 30

Dysuria	TOTAL	PERCENTAGE
MILD	13	43.33.%
MODERATE	12	40%
SEVERE	5	16.67%

Table no. 9 Showing types of ashmari as per dosha

n= 30

Ashmaribheda	TOTAL	PERCENTAGE %
Vataja	22	73.3
Pittaja	7	23.3
Kaphaja	9	30

Table no. 10 Showing site of stone

n= 30

Site of stone	Total no of patients	Percentage (%)
Renal	8	26.66%
Ureteric	15	50%
Both	0	0%
Urinary bladder	7	23.33%

RESULTS

Table no. 11 Showing Result of Anand Yoga on all Parameters

Sign /symptom	Mean \pm S.D			Df	p-value	t-value	Effectiveness %	Remark
Pain Abd. (Renal Coloc)	BT	AT1	2.06 \pm 0.20	29	—	1.87	8.82%	NS
	2.26 \pm 0.18	AT2	1.46 \pm 0.16		<0.01	5.52	35.29%	HS
		AT3	0.53 \pm 0.13		<0.01	14.66	76.47%	HS
Haematuria	BT	AT1	1.8 \pm 0.17		—	1.46	6.89%	NS
	1.93 \pm 0.20	AT2	1.46 \pm 0.13		<0.01	3.5	24.13%	HS
		AT3	0.4 \pm 0.13		<0.01	6.48	79.31%	HS
Dysuria (Mutra Kricchra)	BT	AT1	1.86 \pm 0.21		<0.01	1.87	9.67%	NS
	2.6 \pm 0.20	AT2	1.13 \pm 0.16		<0.01	6.08	45.16%	HS
		AT3	0.33 \pm 0.12		<0.01	8.40	83.87%	HS
Size of stone	BT	AT1	3.8 \pm .31		<0.01	3.77	16.17%	HS
	4.42 \pm 0.58	AT2	2.8 \pm .27		<0.01	7.27	38.23%	HS
		AT3	1.4 \pm 0.37		<0.01	10.22	69.11%	HS
Site of stone	BT	AT1	1.93 \pm 0.24		—	1.8	9.37%	NS
	22.2 \pm 0.8	AT2	1.4 \pm 0.16		<0.01	6.20	34.37%	NS
		AT3	0.53 \pm 0.13		<0.01	8.41	75%	HS
Number of Calculi	BT	AT1	1.13 \pm 0.13		—	1.46	10.52%	NS
	1.26 \pm 0.11	AT2	1 \pm 0.09		<0.05	2.25	21.05%	S
		AT3	0.53 \pm 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.

Table no. 12 Showing Radiological results

INVESTIGATION		PATIENTS	PERCENTAGE
X-RAY	BT	30	100%
	AT	24	80%
USG	BT	30	100%
	AT	24	80%

Table no. 13 Showing Overall assessment of results.

RESULT	AT 1	AT 2	AT3
Cured	0	0	6 (20%)
Maximum Improvement	0	0	8 (26.66%)
Moderate Improvement	2(6.66%)	2(6.66%)	12 (40%)
Mild Improvement	0	16 (53.3%)	4(13.33%)
No improvement	28 (93.3%)	12 (40%)	0

DISCUSSION-

The incidence of Mootrashmari was relatively more in males (76.66%) than in females (23.33%) in the present study and the ratio was almost 3:1.

Most of the patients belongs to Kaphavataja prakruti 21(70%) person and these persons are more prone to suffer from Ashmari where as in Kapha pittaja and Vata pittaja prakruti this number is 5(16.6%) and 4(13.3%) respectively . This is evident in our literature also that kapha and vata doshas are responsible for the formation of Mootrashmari.

Pain: The effectiveness of Anand Yoga is 76.47% with t-value 14.66 and the level of significance of p-value is <0.01, which is highly significant.. Anand Rasa has Ushana Veerya which acts as Kapha vatahara. Hence it is showing good response on pain.

Haematuria: The effectiveness is 79.31% with t-value 6.48 and the level of significance of p-value is <0.01, which is highly significant. The effectiveness of Anand Yoga is showing good response on Haematuria, because Amalaki, Kadali are having madhura rasa and raktha pitta shamaka due to this property it acts as

Rakthasthambhaka.

Dysuria: The effectiveness is 83.87% with t-value 8.40 and the level of significance of p-value is <0.01 . Kadali Kshara, Apamarga is having mootrajanaka property, which acts like diuretics and due to large intake of water also increases the urine output properly, which subsided dysuria .

Objective criteria:

Size of stone: The effectiveness is 69.11% with t-value 10.22 and the level of significance of p-value is <0.01 , which is highly significant. It shows that the Anand Yoga has kapha hara guna. By means of this guna it is capable to reduce the size of stone

Site of stone: The effectiveness is 75% with t-value 8.41 and the level of significance of p-value is <0.01 , which is highly significant. Due to mootrala and kapha hara guna it shows that Anand Yoga is capable to change the site of stone.

Number of stone: The effectiveness is 57.89% with t-value 3.21 and the level of significance of p-value is <0.01 , which is highly significant. Due to mootrala and kapha hara guna, it also shows that Anand Yoga is capable to reduce the number of stone.

Overall clinical assessment of result:

After 90 days of treatment with Anand yoga 6 patients were cured(100%) , 8 had maximum (75%-99%) improvement, 12 had moderate (50%-74%) improvement, 4 had mild (25%-49%) improvement. Above results proves that Anand Yoga has a significant role in the management of Mootrashmari .

Probable Mode of action of Anand Yoga :

Ananda Yoga composed of Tilanala, Apamarga, Kadali Kanda, Palasha Kanda and Amalaki. This compound is the combination of 5 drugs which having synergetic action. All the drugs support or help each other for better combined effect. The probable mode of action may be-

- Due to Teekshna Guna and Chedana, Bhedana and Lekhana properties these drugs can easily breaks the stones or reduces the size of the stones and by this the size of stones become small and can easily removed out.
- Due to Sheeta Veerya and Madhura Vipaka of some drugs acts as a Mutrala,

while due to Katu Rasa these drugs have Marga Shodhaka and helps to easy expulsion of the Ashmari.

- It also has Ashmaribhedana, Tridosha Shamaka, Anulomana properties. It acts as Kaphagna and Vataghna.
- Vata and Kapha are the main responsible Doshas in the pathogenesis; it is evident that this formulation is effective in Ashmari.
- Apamarga having Teekshna Guna and Ashmari Bhedana property as well as Palasha and Tila is best drug for Kaphaja Vyadhi. So these three drugs do the Sampraptivighatana of Ashmari and thus in combination with Kadali and Amalaki, this Choorna act as Ashmarihara.
- The Yoga has Mutrala effect there by it will increase the intra luminal pressure. Because of this pressure stone will be expelled as a whole from the urinary system. It is due to Srustavinmutrakaraka and Anulomana property of the drug.

CONCLUSION-

- Urinary disorders have specific identity in both Ayurvedic and Modern systems. In Ayurveda Ashmari is considered as Ashtamaharoga being it is 'Dusschikitsya' i.e. difficult to cure.
- Ashmari is mentioned under Mootraghata, which is stone formation in urinary system.
- Management of Mootrashmari has become a problem to all the surgeons and physician even today due to many unavoidable drawbacks complications and recurrence, etc.
- In the observation it was found that, the lithotryptic action of the Ananda Yoga 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.
- In this way it can be said that "Ananda Yoga" is curative, safe and effective in relieving symptoms in early stage of disease and also useful in patients who are unwilling for surgery.
- "Ananda Yoga" 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, economical and effective.
- So the use of "Ananda Yoga" is an ambulatory type of treatment which gives no side effects & also can be used as a better alternative to surgery.

Reference-

1. Vaidya Yadavji Trikamji acharya, Krishnadas Academy, Varanasi, Commentary Dalhanacharya Nibhandha sangraha and Gayadasacharya Nyaychandrika Panjika on Sushruta Samhita of Sushruta, Chikitsasthana; Ashmari Chikitsa, chapter7; Verse3. Varanasi; Choukhambha sanskrita Samsthana, 7th edition reprinted 1998; p435-441.
2. Vijayarakshita and Srikantadatta, Madhukosh vyakhya on Madhava Nidana of Madhavakara, Vol-1, Chapter32, Verse1, Varanasi; Choukhambha Sanskrita Samsthana, 20th edition 1993; p514-52
3. Norman S Williams (2010) Bulstrode. Bailly & Love's short practice of Surgery. Chapter 71. (25th edn), Hodder Arnold publishers, London.
4. Townsend CM, Beauchamp D, Mattox KL (2010) Sabiston Textbook of Surgery. In editor. Sabiston Textbook of Surgery. Elsevier publications, Newdelhi.
5. Amitkumar singh (2009) Comparativeclinical Study in the Management of Mootrashmari with Kulattha Churna and Swetaparpati, MD Thesis. RGUHS, Bangalore.
6. Bhaishajyaratnawali with Hindi commentary siddhiprada by Pro. Siddhinandan Mishra, Part-II, Chaukambha Subharti Prakashan, Varanasi, reprint-2007, pp-690