



EFFECT OF TWO DIFFERENT ASHMARIHARA FORMULATION IN THE MANAGEMENT OF ASHMARI-A PILOT STUDY.

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ABSTRACT

Introduction: Urinary stone constitute one of the commonest diseases in our country and pain due to kidney stones is known as worse than that of labour pain. Among all the pain, abdominal pain always drags not only patient's attention but also the curiosity of the surgeon. The information regarding *Ashmari* is available in almost all *samhita* (Ancient treatise) of Ayurveda. In India, approximately 5-7 million patients suffer from stone disease and at least 1/1000 of Indian population needs hospitalization due to kidney stone disease. Sushruta has mentioned conservative as well as surgical management for *Ashmari*. There are various form of medicines mentioned in the classics like *Kwatha* (decoction), *Ghrita* (ghee), *Kshara* (alkalipreparation), *Vati* (tablet), etc for management of *Ashmari*. **Methodology:** In this study, two doses forms of *Ashmarihara* formulation i.e. *Kwatha* and *Ghanavati* has been tried in the cases of urinary stone. Total 20 patients of *Ashmari* having different size of stones (from 3mm to 10mm) irrespective of the site were selected from OPD of *Shalya Tantra*, and allocated into two groups. In group-A (n=10) *Ashmarihara Kwatha* 40ml, two times a day for 30 days was prescribed. In group-B (n=10) *Ashmarihara Ghanavati*, 500mg two times a day for 30 days was prescribed. The assessment of relief in sign and symptoms was done after every 15 days for 1 month and further follow up was done for 1 month after completion of treatment. **Result:** In patients of Group-A (*Ashmarihara Kwatha*) 4 stones were expelled out and 7 stones were decreased in their size. In patients of Group-B (*Ashmarihara Ghanavati*) 3 stones were expelled out and 10 were decreased in their size. This showed that *Ashmarihara* formulations have potential to disintegrate and expel out the stones from urinary system. **Discussion:** In modern science there are various surgical interventions like Dormia Basket, PCNL, ESWL etc. to remove the stone but they have their own limitations and there are chances of recurrence. Whereas, *Ashmarihara* formulations corrects *Agni* by *Pachana* and *Anuloma* properties, so as to prevent formation of *Aama* and breaks the pathogenesis of *Ashmari* and in this way it helps in prevention of further *Ashmari* formation. As per the formulation is concern the patient preferred the *Ghanavati* as it is more palatable as compared to *Kwatha* with same result. Another issue is of preparation which is tedious job in this busy era. **Conclusion:** In this study, results were almost similar in both groups. So, it can be recommended that *Ashmarihara Ghanavati* is good option instead of *Ashmarihara Kwatha*, in the management of *Ashmari*.

KEYWORDS: Ashmari, Urinary Stone, Urolithiasis, Ashmarihara Kwatha, Ashmarihara Ghanavati.

INTRODUCTION

Shalya Tantra is a branch of *Ayurveda* which deals with surgical as well as parasurgical procedures like *Kshaarakarma*, *Agnikarma* & *Raktamokshana*, but gives equal emphasis on *Bhaishajya Chikitsa* as well.

Mootrashmari (Urinary Stone) is most common disease of urinary system. As per classics Ashmari is included in *Ashtomahagada* (Eight Dreadful Diseases) due to its notorious nature and reluctant to cure.^[1] It is the third most common affliction of the urinary tract, exceeded only by UTI and BPH.^[2] Description of Ashmari is found in almost all *Samhitas* of *Ayurveda* for eg. either as a type of *Mootraghata* (*Acharya Charaka*)^[3] or as a separate disease (*Acharya Sushruta*).^[4] *Acharya*

Sushruta, father of plastic surgery, has described *Mootrashmari* first time in details including etiological factors, classifications, symptomatology, pathophysiology, complication & its management by drugs, para-surgical therapy as well as surgical management in a most scientific manner. The process of urinary stone formation as described by *Acharya Sushruta* is as follows-

iĖšÉÉxÉÇzÉÉâkÉlÉzÉİsÉxrÉÉmÉjrÉMüÉËUhÉ:
mÉĖMÑüİmÉİÉ:

zsÉåwqÉÉᄇᄇÉxÉÇmÉÚᄇÉåAIEÑmÉëIuÉzrÉoÉÍxi
ÉqÉzqÉUÏCeÉIÉrÉIÉ ||^[5]

The *Kapha* of person who neglects to cleanse

(*Samsodhana*) the internal channels of his organs or is in the habit of taking undesirable and unsuitable (*Apathyakari*) foods, enraged and aggravated by its own exciting causes and travel into the urinary bladder. Here it becomes saturated with the stone forming substances and gives rise to the formation of concretion or gravels to pass through the urine. So an exuberance of deranged *Kapha Dosha* should be taken in to consideration as the underlying cause of *Mootrashmari*.

Acharya Sushruta described various medicines as well as surgical intervention for *Ashmari*. Medicinal treatment is advised to be undertaken in the early stages of the disease. Indication of surgical management has been recommended along with a note of caution regarding its complications.^[6] Surgical treatment has to be undertaken only on failure of conservative treatment and when death becomes inevitable as per the *Sushruta*.

As per *Ayurveda* medicinal treatment includes use of various *Ghrita*, *Kwatha*, *Churna*, *Kshara Dravyasetc* *Ashmariharhwatha* is used in OPD of IPGT&RA Hospital in routine which shows encouraging result in cases of *Mutraroga* (Urinary Disorders).

Modern science emphasizes on various factors like heredity, age, sex, metabolic disorders, sedentary life style, dehydration, mineral content of water, nutritional deficiency etc. for urinary stone formation. Urolithiasis causes pain, loss of working time, medical expenses, need for hospitalization and an infrequent cause of renal

failure. In modern science the best possible treatment for urinary calculus is use of various drugs to correct involved pathologies and use of diuretics as well as surgical intervention including open surgery, per cutaneous techniques, ESWL^[7] etc. Even after surgery there are high chances of recurrence because urinary stones have peculiar tendency of recurrence.

The prevalence and incidence of urolithiasis still is a major urinary problem facing by the society across the world. The epidemiology of this disease differs according to geographic distribution of population in terms of prevalence, incidence, age, sex distribution, stone composition and stone location etc. Race, diet and climatic factors also influence the prevalence of this disease. In developing countries like India prevalence of urolithiasis is increasing day by day.

In Gujarat, particularly in Saurashtra region the incidence of *Mootraashmari* is very high due to high mineral content of water and hot climate. Approximately 30% patients of urinary disorders are found suffering from urolithiasis.^[8]

MATERIAL AND METHOD

Selection criteria of Patient

Patient having signs and symptoms of *Mootrashmari* (Urolithiasis as per modern and *Ayurveda* considering Doshic variance of *Mootrashmari* shall be selected from OPD and IPD of I.P.G.T. & R.A. Jamnagar and from special camps arranged time to time if required.

Drugs

Ashmariharakwatha: (Siddhyogasamgraha, 18/3 Ashmarimootrakricchaadhikar)

No.	Drug	Botanical name	Part used	Quantity
1.	Pashanabheda	<i>Burgenialingulata</i>	Root	1 part
2.	ErandaKarkatimoola	<i>Carica Papaya linn</i>	Root	1 part
3.	Shatavari	<i>Aspragusracemosus</i>	Kanda	1 part
4.	Gokshura	<i>Tribulusterrestrislinn</i>	Fruit& root	1 part
5.	Varuna	<i>CratavanurvelaBuch.</i>	Twak	1 part
6.	Trapushabeeja	<i>Cucumissativus Linn.</i>	Seeds	1 part
7.	Kushamoola	<i>Desmostachyabipinnatastp.</i>	Root	1 part
8.	Kasha moola	<i>Sacchrumsponantium</i>	Root	1 part
9.	Sagawana	<i>Tectonagrandis Linn.</i>	Fruit	1 part
10.	Dhana (rice) moola	<i>Oryzasativa</i>	Root	1 part
11.	Punarnava	<i>BoerhaaviadiffusaLiin.</i>	Root	1 part
12.	Amruta	<i>Tinnosporacordifolia</i>	Root	1 part
13.	Apamarga	<i>Achyranthusasperalinn.</i>	Root	1 part
14.	Jatamansi	<i>Nordostachysjatamansi Dc.</i>	Root	2 part
15.	Khurasaniyavani	<i>Hyoscyamusnigerlinn.</i>	Patra, Pushpa, Beeja	2 part

Rasa Panchakaof drugs

No.	Drug	Rasa	Guna	Veerya	Vipaka	Dosha karma	Karma
1.	Pashanabheda	Tikta, Kashaya	Laghu	Sheeta	Katu	KV	Bhedana, Ashmarighna
2.	Eranda Karkatimoola	Katu, Tikta	Laghu, Ruksha, Tikshna	Ushna	Katu	KV	Mutrala
3.	Shatavari	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	VPK	Balya
4.	Gokshura	Madhura	Guru, Snigdha	Sheeta	Madhura	V	Mutrala, Ashmarihara
5.	Varuna	Tikta, Kashaya	Laghu, Ruksha	Ushna	Katu	VK	Bhedana
6.	Trapushabeeja	Madhura, Tikta	Guru, Snigdha	Sheeta	Madhura	VP	Mutrala, Bastishodhana
7.	Kushamoola	Madhura, Kashaya	Laghu	Sheeta	Madhura	KP	Mutrala
8.	Kasha moola	Madhura, Tikta	Laghu, Snigdha	Sheeta	Madhura	VP	Mutrala
9.	Sagawana	Kashaya	Laghu, Ruksha	Sheeta	Katu	KP	Bastishodhana
10.	Dhana (rice) moola	Madhura, Kashaya	Guru, Laghu, Snigdha	Sheeta	Madhura	VPK	Mutrala
11.	Punarnava	Madhura, Tikta, Kashaya	Laghu, Ruksha, Sara	Ushna	Katu	VK	Mutrala, Shotha-hara
12.	Amruta	Tikta, Kashaya	Laghu	Ushna	Madhura	VPK	Balya, Deepana
13.	Apamarga	Tikta, Katu	Laghu, Ruksha, Sarak, Tikshna	Ushna	Katu	VK	Deepana, Mutrala
14.	Jatamansi	Tikta, Kashaya	Laghu	Sheeta	Katu	VPK	Medhya
15.	Khurasaniyavani	Katu, Tikta	Guru, Ruksha	Ushna	Katu	KV	Vedana-sthapana

Ashmarihara Kwatha Ghanvati

- The formulation of Ashmarihara Kwatha Ghanvati is formulated according to the contained drugs of Ashmarihara Kwatha, which is well known as being
- the treatment of Mootrashmari
- The Ingredients, Rasa Panchaka and the Pharmacological Actions may be as similar to the Ashmarihara Kwatha.

Grouping & Posology

Group	No. of patient	formulation	Route	Dose	Time (after meal)	Duration
Group A	10	Ashmarihara Kwatha	Orally	40 ml	Twice a day	30 day
Group B	10	Ashmarihara Kwatha Ghanvati	Orally	500 mg	Twice a day	30 day

(20 gm raw material will be taken for preparation of 40 ml Kwatha and 20 gm raw material will be taken for preparation of 500 mg Ghanavati).

Criteria for Diagnosis of Mootrashmari

Patient shall be diagnosed on the basis of clinical features, physical examination laboratory investigation & findings of radiological evidences.

Inclusion criteria

- Age – 16 to 70 years.
- Pain in the renal angle & loin region, radiating towards groin.
- Renal & Bladder Stone size up to 20 mm.
- Ureteric Stone size up to 10mm.
- Radiographic and/or USG evidence of the stone.
- Crystals of stone.
- Urolithiatic patients with controlled Hypertension & Diabetic Mellitus.

Exclusion criteria

- Renal failure.
- Gross Hydronephrosis.

- Acute pain abdomen.
- Cases which requires surgical intervention.
- Severe Haematuria.
- Renal and Bladder Stone size more than 20 mm.
- Ureteric Stone size more than 10 mm.
- Known cases of Malignancy, Tuberculosis, HIV positive, VDRL positive, Hepatitis-B positive

Laboratory investigation

- Routine haematological investigations
- Biochemical investigation --
 - FBS
 - Blood Urea
 - Uric acid
 - Serum Creatinine
- Urine examination – Routine & Microscopic
- Plain X-ray for KUB region
- USG (Whole abdomen & pelvis)

Assessment Criteria

- Most of the signs and symptoms of Ashmari described in Ayurveda are subjective and for statistical analysis scoring pattern has been adopted.

- Statistical analysis and percentage of relief (before and after treatment) shall be calculated to know the efficacy of the drugs.
- Score 0 to 3 was given according to severity of symptoms as mentioned further--

Scoring Pattern

Subjective Parameters:

Sr. No.	Parameters	Nil = 0	Mild = 1	Moderate = 2	Severe = 3
1.	Pain (Vedana)	No Pain	Bearable Pain	Bearable but required oral medication	Unbearable & required injectable medication
2.	Burning micturition (Mootradaha/ Mootrakriccha)	No burning micturition	Occasional burning micturition	Regular burning micturition	Burning micturition required medication
3.	Dysuria (Sashoolamutrata)	No dysuria	Occasional dysuria	Regular dysuria	Regular dysuria required medication
4.	Hematuria (SarudhiraMootrata)	No Hematuria	Smoky color urine	Blackish color urine	Bright red color urine
5.	Frequency of Micturition in 24 hrs (Abhikshanam)	Up to 6 times (Normal)	7- 9 times	10- 12 times	> 12 times

Objective Parameters

Sr. No.	Parameters	No change	Increase	Decrease
1.	Size of Stone	0	1	-1

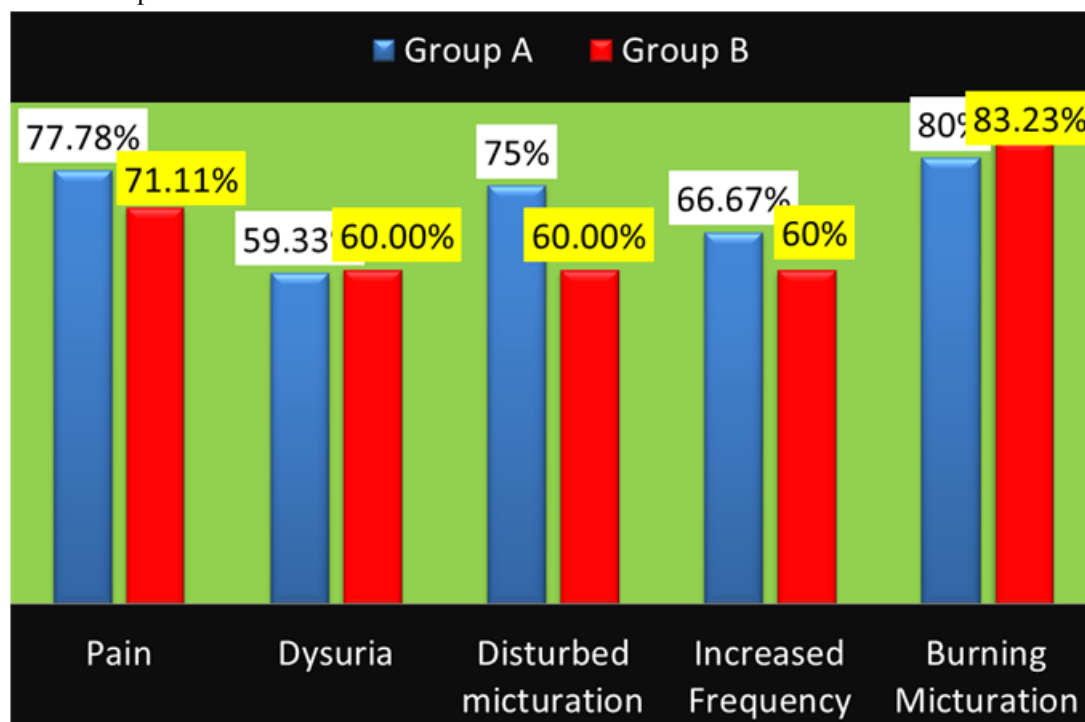
Sr. No.	Parameters	Absent	No change	Increase	Decrease
1.	Number of Stone	-----	0	1	-1

Overall Assessment of Therapy

Cured	90- 100% relief in sign and symptoms
Marked improvement	70- 89% relief in sign and symptoms
Moderate improvement	40- 69% relief in sign and symptoms
Mild improvement	20- 39% relief in sign and symptoms
No improvement	<20% relief in sign and symptoms

RESULTS

Results on chief complaints:



Effect of Therapy on Stone Size in Group A

Size of stone	No. of stone	Result	% change
3-5 mm	10	Expelled out = 3 Decrease in size = 6	30.00% 60.00%
6-10 mm	3	Expelled out = 01 Decrease in size = 01	33.33% 33.33%

Effect of Therapy on Stone Size in Group B

Size of stone	No. of stone	Result	% change
1-5 mm	14	Expelled out = 3 Decrease in size = 10	21.43% 78.57%
6-10 mm	1	Expelled out = 0 Decrease in size = 0	0%

DISCUSSION

- ❖ Urolithiasis is the third most common but most painful affliction amongst all urinary disorders with increasing incidences.
- ❖ In India Saurashtra region is most prone for this disease due to high mineral contents of water & high atmospheric temperature.
- ❖ Description of Ashmari is found in almost all Samhitas of Ayurveda, but Sushruta Samhita has been mentioned its detail in the form of nidān, chikitsa and surgical intervention.
- ❖ Ashmari has higher tendency of recurrence even after the surgical removal.
- ❖ It proves the need for such treatment that can treat the disease as well as check the recurrence with long term medicinal treatment
- ❖ Most of the ingredient have Tikta-Kashaya Pradhana Rasa, Laghu – Ruksha Guna, Sheeta Virya, Katu Vipaka and Vatakapsha Shamaka properties.
- ❖ Symptomatic relief was found due to Vatakapsha Shamana, Vedanasthapana, Shothahara, Mootrala, Rasayana and Anulomana properties of Ashmariharakwatha.
- ❖ It also helps in disintegration of Ashmari by Laghu Ruksha Guna and Vatakapsha Shamak properties.
- ❖ Mootrala, Bastishodhanaand Anulomanaproperties help in expulsion of Ashmari.
- ❖ It also corrects Agniby Pachanaand Anulomanaproperties, so prevents formation of Aama and breaks the pathogenesis of Ashmariwhichhelp in prevention of further Ashmariformation.

CONCLUSION

- ❖ In this study, results were found almost similar in both groups. Hence, it suggests that *Ashmarihara Ghanavati* is a good option instead of *Ashmarihara Kwatha* for the management of *Ashmari*.
- ❖ Because, Ghanavati is ready to take, palatable and preferred by patients whereas Kwatha preparation is tedious job.
- ❖ The *Ashmarihara* formulations correct *Agni* by *Pachanaand Anulomanaproperties*, so as to prevents formation of *Aama* and breaks the pathogenesis of *Ashmari*. And in this way it helps in prevention of further *Ashmariformation*.

- ❖ Therefore, it can be recommended for further study on large sample size.

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