

**CLINICAL STUDY OF SWADANSTRADI KASHAYA IN
MUTRASHMARI W.S.R. TO UROLITHIASIS**

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ABSTRACT

Mutrashmari (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. It is the third most common affliction of the urinary tract, exceeded only by UTI and BPH. Description of Ashmari is found in almost all *Samhitas* of *Ayurveda* for eg. either as a type of *Mutraghata* (*Acharya Charaka*) or as a separate disease (*Acharya Sushruta*). *Acharya Sushruta*, father of plastic surgery, has described *Mutrashmari* 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. Urolithiasis is a pathological condition of urinary system where aggregation of urinary crystalloids takes place anywhere in urinary tract i.e. from kidney to urinary bladder. Renal calculi are very common. 50% of patients present between the ages of 30 and 50 years. The male-female ratio is 4:3. Ingredient of Swadanstradi

Kashaya, which is easily available may be effective to cure Ashmari. Hence, in this clinical study of Swadanstradi kashaya are being select for management of Mutrashmari.

KEYWORDS: Mutrashmari, Urolithiasis, Swadanstradi Kashaya.

INTRODUCTION

Ashmari is one of the dreadful diseases described by Acharya Sushruta. In Asta Mahagad Ashmari is considered. Acharya Sushruta describes its classification, symptomatology, etiology, pathology, complications and its management. In Ashmari disease, the mechanism is clearly mentioned i.e. srotovaigunya from vitiated kapha localised in basti in conjunction with vitiated vata and pitta is responsible for the formation of calculus.

वातव्याधिः प्रमेहश्च कुष्ठमर्शो भगन्दरम् ।

अश्मरी मूढगर्भश्च तथैवोदरमष्टमम् ॥४॥

अष्टावेते प्रकृत्यैव दुश्चिकित्स्या महागदाः । 9 | su sutra 33/4-5

Mutrashmari (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 *Mutrashmari* 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.

According to acharya vagbhata

वातव्याध्यश्मरीकुष्ठमेहोदरभगन्दराः । अर्शासि ग्रहणीत्यष्टौ महारोगाः सुदुस्तराः । A.H.N. 8/30

Mechanism of stone formation is explained on the basis of the degree of supersaturation of the ions forming the stone particularly calcium, phosphate, oxalates and uric acid etc. and concentration of inhibitors in the urine; the stone grows as more and more crystals are deposited around the nidus.

Renal stones have afflicted humans for millennia from the ancient study, it becomes evident that the urological problems remain a very important part of the medical science. It is the third most common affliction of the urinary tract, exceeded only by UTI and BPH.

Even though Ashmari is Kashta sadhya, line of treatment should not only the elimination or to remove the disease but also it avoids the recurrence by prakriti vighatana. To avoid the incidence of recurrence after surgical removal of stone and in search of an effective conservative treatment the present work “Clinical study of Swadanstradi kashaya in Mutrashmari wsr to Urolithiasis”.

Urolithiasis is a pathological condition of urinary system where aggregation of urinary crystalloids takes place anywhere in urinary tract i.e. from kidney to urinary bladder. Renal calculi are very common. 50% of patients present between the ages of 30 and 50 years. The male-female ratio is 4:3. The symptoms are variable and the diagnosis sometimes remains obscure until the stone is discovered on a radiograph. Some important signs and symptoms are following-

1. Silent calculus- Some stones, even large stag-horn calculi, causes no symptoms for long periods, during which there is progressive destruction of the renal parenchyma.
2. Pain- pain is the leading symptoms in 75% of people with urinary stone disease.
3. Haematuria
4. Pyuria

Drug review

Ingredient of swadanstradi kashaya

श्वदंष्ट्रैरण्डपत्राणि नागरं वरुणत्वचम् ।

एतत् क्वाथवरं प्रातः पिबेदश्मरिभेदनम् ॥ (chakardatta34/30)

1. Gokshur -Act as diuretic due to presence of abundant amount of Potassium Salt and Alkali.
2. Erand patra- Act as Diuretic and Pain relief.
3. Nagar-Act as pain relief.
4. Varun twak- Act as diuretic.

Take all above four contents in equal Amount and Prepare decoction.

MATERIAL AND METHODS

Material

1. Literally Review- This will be done on the basis of the detail literature related to the Ashmari (Urirary calculi).

- Brihatatrayee and Laghutrayee
- Modern book.
- 2. Clinical study classically diagnosed 30 patients will be taken for the study.
- 3. Drugs-The drug will be prepared in the pharmacy of GACH, Patna as per method mentioned in the classical text.

METHODS

- Number of Patients-30 patient will be selected from OPD of Govt. Ayurvedic College and Hospital, Patna.
- Consent will be taken from patient on prescribed format.
- Case record proforma will be fulfilled.
- Swadanstradi Kashaya is given in decoction form (Dose- 80 ml in a day in two divided doses).
- Follow up will be done on every 15 days to assess the changes, Ultrasonography and X-ray KUB will be done on every 1 month to assess the changes.
- Total duration of study- 3 month

AIM AND OBJECTIVES

Aim

Clinical study to know study the efficacy of Swadanstradi kashaya in Mutrashmari wsr to Urolithiasis.

Objective

1. To understand the Ashmari from ayurveda as well as modern point of View.
2. The study will be conducted to explore ayurvedic research in Ashmari w.s.r. to Urinary calculi.
3. To evaluate therapeutic effect of Swadanstradi kashaya in Mutrashmari.

Criteria for selection of patients

A) Inclusion criteria

- Age group between 16 to 60 years, irrespective of age.
- Size of calculi less than 10mm.
- Irrespective of site logging in the urinary tract.
- Patients fulfilling the diagnostic criteria based on sign and Symptoms of urinary calculi in ayurvedic classics and modern sciences will be selected for the present study.

B) Exclusion criteria

- Patient below 16 years and above 60 years.
- Calculus with severe hydronephrosis.
- Obstructive calculi with severe infections.
- Calculi with severe systemic disorders like Diabetes, Hypertension, CA, AIDS.
- Calculi in pregnant women.
- Patient with COVID 19 Positive.
- CBD and Gall bladder stone.

Investigation

Ultrasonography

X-ray KUB

Uric acid

Serum Creatinine

Alkaline Phosphate

Serum Calcium

Criteria for Examination and Assessment

1. Assessment was done on the basis of relief in signs and symptoms of urolithiasis.
2. Other investigation findings (laboratory as well as radiological) on the basis of specially Designed research proforma through scoring pattern.

1. Subjective criteria

- (a) Pain
- (b) Burning Micturition
- (c) Haematuria
- (d) Dysuria

2. Objective parameter

Size of Stone

OBSERVATION AND RESULTS

All data will be observed and statistically analyses. It provides basis of analysis of the problem and effects of the method adopted for its cure. A clinical study was conducting Swadanstradi Kashaya in Mutrashmari w.s.r. to Urolithiasis.

Selection of patient

Number of Patients-30 patient will be selected from OPD of Govt. Ayurvedic College and Hospital, Patna.

Dose

Swadanstradi Kashaya is given in decoction form (Dose- 80 ml in a day in two divided doses).

Follow UP

Follow up will be done on every 15 days to assess the changes, Ultrasonography and X-ray KUB will be done on every 1 month to assess the changes.

Statistical analysis

All information which are based on various parameters was gathered and statistical calculation were carried out in terms of mean (X), standard deviation (S.D.) standard error (S.E.), paired test (t value) and finally results were incorporated in term of probability (p) as

$P \geq 0.05$ Insignificant

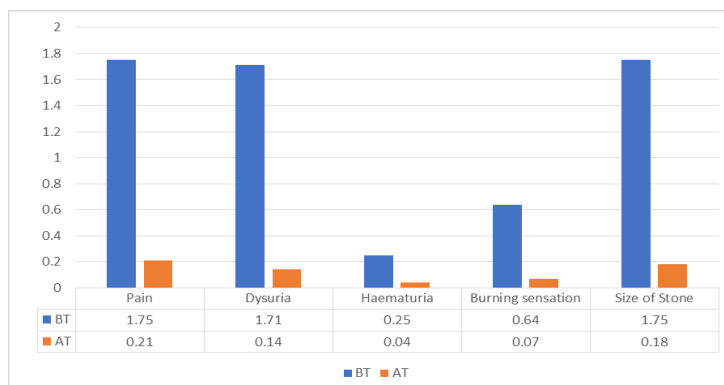
$P \leq 0.020$ Moderately significant

$P \leq 0.010$ Significant

$P \leq 0.001$ Highly significant

Effect of the therapy

S. No.	Criteria	Mean		%age Diff.	SD	SE	t	P
		BT	AT					
1	Pain	01.75	0.21	87.76	0.84	0.16	09.70	<0.001
2	Dysuria	01.71	0.14	91.67	01.03	0.20	08.04	<0.001
3	Haematuria	0.25	0.04	85.71	0.63	0.12	01.80	>0.05
4	Burning sensation	0.64	0.07	88.89	0.96	0.18	03.15	<0.05
5	Size of stone	01.75	0.18	89.80	0.69	0.13	12.05	<0.001



A. Effect of therapy on pain

The mean score of Pain, before treatment was 01.75 and after treatment it changed to 0.21 giving 87.76 % difference in mean score which was highly significant statistically ($p < 0.001$).

B. Effect of therapy on dysuria

The mean score of Dysuria, before treatment was 01.71 and after treatment it changed to 0.14 giving 91.67% difference in mean score which was highly significant statistically ($p < 0.001$).

C. Effect of therapy on haematuria

The mean score of Haematuria, before treatment was 0.25 and after treatment it changed to 0.03 giving 85.71% difference in mean score which was insignificant statistically ($p > 0.05$).

D. Effect of therapy on burning sensation

The mean score of Burning sensation, before treatment was 0.64 and after treatment it changed to 0.71 giving 88.89% difference in mean score which was significant statistically ($p < 0.05$).

E. Effect of therapy on size of stone

The mean score of Size of Stone, before treatment was 01.75 and after treatment it changed to 0.18 giving 89.80% difference in mean score which was highly significant statistically ($p < 0.001$).

DISCUSSION

In present clinical study total 30 diagnosed cases of *Mutrashmari* were registered.

General observations**Age**

In this study maximum (36.67%) patients were of the age group of 21 – 30 years followed by 20.00% patients of 41-50 years of age group. Though *Ashmari* can occur at any age but middle age group are more prone for occurrence of *Ashmari*.^[5] So, the present data is supportive of this fact. Because stressful life style and increased work load of this age group leads to irregular dietary habit and ignorance to health as well.

Sex

Maximum 76.67% patients were males and 23.33% patients were females. Here, it can be said that urolithiasis is more frequently found in males. It also supports the fact that male:

female ratio is 5-19:3-9 for urolithiasis. In females, stone formation is less because of low serum testosterone level.^[6]

Marital status

Maximum 60.00% patients were married in. As it is said that urolithiasis occurs more frequently in middle age group and most of the persons of this age got married, so the number of married persons was more which is obvious and it is difficult to say that marital status has any direct relation to the causation of *Ashmari* on the basis of present data.

Religion

All of the patients i.e. 100% in present study were Hindu. As per the available data, *Ashmari* has no relation with religion, but this might be due to geographical dominance of Hindu population in Patna and surrounding area of research place.

Occupation

Most of the patients (36.67%) in this study were in Govt. job followed by 30.00% Students, 20% house wife, and only 13.33% were Agriculture. Occupation may play role in *Ashmari* formation. Peoples who are in Govt. job spent maximum time in works and ignore to take sufficient water and mostly they are the sufferer of irregular dietetic habit. Students have sedentary life style and irregular dietary habits resulting in over saturation of urine and ultimately formation of stone may be the one probable explanation.^[7]

Socio- economic status

Maximum no. of patients 73.33% were belonged to Middle class, 20.00% belonged to poor economic class followed by 06.67% to Rich class.

Middle class peoples are mostly having stressful life and irregular dietary habits leads to vitiation of *Agni* and *Doshas* resulting in diseased condition. This can be due to the increased flow of middle-class population visiting to this hospital.

Educational status

In this study maximum 70% patients were Graduate, 13.33% patients were High school, 10.00% patients were Uneducated and 06.67% patients were Primary educated. There is no such evidence of education and formation of *Ashmari* reported. This all may be due to the trend of every group of patients visiting to this hospital and nothing else.

Type of diet

In present study maximum 56.67% patients were vegetarian and 43.33% patients were habituated to consume mixed diet.

Though non-vegetarian peoples are more prone to stone formation^[8] but this data is due to geographical dominance of vegetarian population in this region and also suggestive that the vegetarian people may also have more chances of *Ashmari* formation.

Addiction

Maximum 66.67% patients in this study were having no addiction, addiction of smoking in 16.67% patients, 13.33% patients were addicted to tobacco chewing and 03.33% patients were addicted to alcohol. Tobacco can play role in the formation of urinary stone and others have no any proven relationship with *Ashmari*.

Bowel habit

Bowel habit was Regular in 70% and Irregular in 30% of patients. Irregular bowel habits may play role in formation of *Ashmari* due to vitiation of *Apana Vayu* playing important role in *Ashmari* formation.

Onset of present complaints

Onset of present Complaints was Gradual in maximum 46.67% patients and Sudden in 36.67% patients. It is because of maximum patients were suffered from renal stone in this study, and renal stones may remain silent for long time or occasionally causes dull ache pain which can be ignored by many patients.^[9]

So, patient visit hospital when pain aggravated.

Chief complains

Amongst all chief complains of *Ashmari*, Pain was found in 100% patients, Burning micturition in 73.33% patients, Dysuria present in 73.33% patients and Haematuria in 10% patients. These all are the classical symptoms of *Ashmari* and indicates different stages of disease pathology at which patient come for treatment.

Effect of swadanstradi kashaya on chief complaints (After treatment)

After completion of treatment, statistically highly significant result was observed in pain (*Vedana*), *Dysuria* and Size of stone. Statistically significant result was observed in Burning sensation. Statistically insignificant result was observed in haematuria.

It is due to *Swadanstrasdi Kashaya* which produces *Mutrala*, *Shodhana*, and *Pachana*, *Basti Shodhana*, *Vedanasthapana* and *Shothahara* effect. Due to *Mutrala* and *Vata Shamaka* properties it causes relief in pain and in *Mutrathara Sanga*.

Probable mode of action of swadanstradi kashaya

The ingredient Gokshur^[10] (*Tribulus Terrestris*) contains ample amount of potassium salts and alkaloids which is responsible for mutral and ashmarinashan karma. Varun (*Crataeva Nurvula*) bark generates fridelin, saponin, tannin, disogenin and betulinic acid which has diuretic action that slows down and hinders the formation of stone inside the organs. Also, it has Ashmaribhedan Prabhav. Sunthi (*Zingiber Officinale*) contains oil of ginger zingiberine, gingerin. It acts as a supportive drug in reducing pain and swelling associated with calculus. Therefore, it is added. Eranda (*Ricinus communis*) contains amylase, invertase and other enzymes. It's adbhaghav prabhava (Mode of action not known) causes Mutravishodhan and vedanasthapana karma. Except Gokshur all three ingredients are ushnavirya due to that it has urolithiatic property. Also due to mutral and shodhan guna it has diuretic property. Due to these gunas it breaks the Kaphavataj sanghat that is samprapti (Etiopathogenesis) of Mutrashmari resulting in breakdown and expulsion of calculi.

CONCLUSION

In this last section, conclusions have been drawn on the basis of discussion and in last of the thesis summary, bibliography and research proforma have been attached for ready reference.

- Regarding chief complaints of Ashmari, Swadanstradi Kashaya showed highly significant results in pain (*Vedana*), *Mutrakrichha* (*Dysuria*), Size of stone. Statistically insignificant results were observed in haematuria (*Sarudhira Mutrata*). Statistically significant results were observed in burning sensation. It indicates effectiveness of Swadanstradi Kashaya in improving symptoms of Ashmari due to which produces *Mutrala*, *Shodhana*, and *Pachana*, *Basti Shodhana*, *Vedanasthapana* and *Shothahara* effect. Due to *Mutrala* and *Vata Shamaka* properties it causes relief in pain and in *Mutrakrichha*.

- Swadanstradi Kashaya effective in management of mutrashmari due to improvement in physiology of Mutravaha Srotasa by correcting Agni, Ama Pachana and Anulomana of Vata Dosha.
- In this study maximum patients were of the age group of 21 – 30 years. Though *Ashmari* can occur at any age but middle age group are more prone for occurrence of *Ashmari*.
- In this study more prominent patients of *Ashmari* were Vataja Prakruti, which can be correlated to Oxalate stone.
- Avar Satwa patients can't get a good result from conservative treatment of mutrashmari.
- Those patients who can't get a good result in three months from conservative treatment than suggest further for surgical interventions.
- Dietary changes should be made (sodium, potassium, calcium, purines should be limited in cusines).
- The mineral water additionally increases the urinary pH as well as the excretion of magnesium and citrate.
- The mineral water is effective even in cases with high risk of stone formation (hypercalciuria, hyperoxaluria).
- Bicarbonated waters should be used in patients with combined stones containing Calcium Oxalate and Uric acid or in Uric acid stones but not in patients with phosphate stones.

REFERENCES

- 1 Sushruta, Sushruta Samhitaa Sootrasthaana with Nibandhasamgraha commentary of Shri Dalhanaachaarya, edited by Vaidya Yaadavaji Trikamji Āchaarya Chaukhamba Surbhaarati Prakaashana, Vaaraanasi, reprint edition, 2010; 2, 144: 33-4.
- 2 (a) www.urologytoday.net/urinary-stone-disease. (b) homepage.vghtpe.gov.tw/ Shao-Chuan Wang et.al., Correlation between urinary tract pure stone composition and stone morphology on plain abdominal film, J Chin Med Assoc, 2004; 67: 235-238. (c) www.ncbi.nlm.nih.gov/Pubmed/ McDonald MW, Stoller ML, Urinary stone disease: a pratical guide to metabolic evaluation, 1997; 52(5): 38-40.
- 3 Agnivesha, Charaka & Dridabala, Charaka Samhitaa Chikitsaa Sthaana, with Aayurveda Deepikaa commentary of Chakrapani edited by Vaidya Yadavaji Trikamji Ācharya, Chaukhamba Surbhaarati Prakaashana, Vaaraanasi, reprint edition, 2009; 599: 26-36.
- 4 Ibid, Sushruta Nidaana Sthaana, 2, 276: 3-1.
- 5 <http://www.myoclinics.com> www.medicinenet.com

- 6 www.patient.co.uk Peter Hughes, Kidney stones epidemiology, Nephrology, 2007; 12: S26-S30.
- 7 www.dilipraja.com/stome. www.linkedin.com
- 8 Ibid, Charaka samhita Chikitsa Sthaana, 1, 599: 26-32.
- 9 Ibid, 3: 1074.
- 10 Dravyaguna vigyan by Dr. Priyavat Sharma, Kashi hindu vishwavidyalaya Reprint, 1969; 2: 58, 632, 33, 652.