

## A COMPARATIVE CLINICAL STUDY OF VARUNADI KWATH AND TRIVIKRAM RASA ON MUTRASHMARI W. S. R. TO UROLITHIASIS

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**ABSTRACT :** Acharya Sushruta has mentioned *Mahagada* which literally means grave disease which is difficult to treat and cause tremendous misery to sufferer. *Mutrashmari* is one among these *Mahagada*. Symptoms of *Ashmari* can be correlated with those of urolithiasis described in modern surgical literature. Treatment of urolithiasis chiefly surgical but at times results are not satisfactory or there is major concern regarding recurrence. Medical treatment as a main treatment or as an adjuvant to overcome recurrence has always been under investigation. In Ayurveda there have been many formulations available for treatment of *Ashmari* among which *Varunadi Kwath* and *Trivikram Rasa* has been indicated in *Ashmari*. A clinical trial was planned to evaluate the efficacy in patients of urolithiasis. Study was conducted according to special protocol designed for this purpose and the same was approved by competent authorities prior to commencement of study. Thirty nine patients were registered for the clinical trial and 30 patients completed trial and data obtained were used for interpretation and for drawing conclusion. *Varunadi Kwath* provided significant relief in pain (54.55%), burning micturition (58.33%), dysuria (61.54%), hematuria (87.50%), WBC count of urine (52.63%), size of calculus (52.94%) and no. of calculus (52.94%). *Trivikram Rasa* provided significant relief in pain (53.85%), burning micturition (43.75%), dysuria (53.85%), hematuria (75.00%), WBC count of urine (45.00%), size of calculus (42.86%) and no. of calculus (50.00%).

**Key words:** -*Mutrashmari*, *Mahagada*, *Urolithiasis*, *VarunadiKwath*, *Trivikram Rasa*.

**INTRODUCTION:** *Ashmari* is a disease in which there is formation of stone, exerting severe pain as given by enemy. Hence it might have been considered as one among the 'Astamahagada' i.e. one of the deadly diseases.<sup>1</sup> *Ashmari* specifically called as *Mutrashmari*, a disease of *Mutravahasrotasa*. The symptoms of *Mutrashmari* go on in accordance with symptoms of urolithiasis of modern science. Hence *Mutrashmari* can be co-related with urolithiasis. It is estimated that approximately 2% of the population expe-

riences renal stone disease at sometime in their life with male-female ratio of 2:1. The peak incidence is observed in 2<sup>nd</sup> to 3<sup>rd</sup> decades of life.<sup>2</sup> The cause of stone formation is not yet fully understood but in majority of the cases multiple factors are involved. Management of various types of *Ashmari* has been described in *Sushruta Samhita* in view of the fatality of the disease. Treatment has been advised to be undertaken in the early stages of the disease. Indication for the surgical management has been given along with a note of

caution regarding its dangers and doubtful chances of success. It was to be undertaken only on failure of conservative treatment and when death was inevitable if not treated surgically.<sup>3</sup> So recurrence of stone even after removal is becoming a great problem and constant efforts are being made to evolve an effective treatment as well as prevention of recurrence of the disease. There are various useful formulation described in *Ayurvedic* classics for the management of above condition. *Sushruta Samhita* is the prime literature in the field of *Ayurvedic* surgical conditions, he broadly describe the various condition of urogenital system. *Acharya Chakrapani* also describing some formulation for the management of mutrashmari. He indicated the *Varunadi Kwath* in the management of *Mutrashmari*. Management for urolithiasis also described in the *Laghutrayee*.

#### AIMS AND OBJECTIVE:

- To compare the efficacy of *Varunadi Kwath* and *Trivikram Rasa* in the management of *Mutrashmari*.
- To access the combined efficacy of *Varunadi Kwath* and *Trivikram Rasa* in the management of *Mutrashmari*.

#### MATERIALS AND METHODS:

##### • INCLUSION CRITERIA:

- (1) Age between 18 to 60 years
- (2) Ultrasonological evidence of single calculus / multiple calculi  $\leq 10$  mm, present in kidney(s)/ ureter(s) / urinary bladder.
- (3) Willing to participate in study.
- (4) All the patients presenting with either following symptoms were selected for study-
  - Increased frequency of micturition (*Bahumutrata*)
  - Burning micturition (*Mutradaha*)

▪ Interrupted stream of urine (*Mutravibandha*)

▪ Nausea (*Utklesh*)

▪ Vomiting (*Vamana*)

▪ Fever (*Jwara*)

▪ Dysuria (*Mutrakrichchha*)

▪ Pain in flanks (*Katishool*)

▪ Haematuria (*Rakta-Mutrata*)

▪ Pyuria (*Pooya-Mutrata*)

#### • EXCLUSION CRITERIA

▪ Age less than 18 years and more than 60 years.

▪ Patients with obstructive uropathy.

▪ Patients suffering from any major systemic disease like Diabetes Mellitus, Hypertension, Renal failure etc.

• **Sample Size:** 30 Subjects diagnosed to have *Mutrashmari* fulfilling the Inclusion criteria.

• **Source:** Subject selected from O.P.D. / I.P.D. at P.G. Department of *Shalya Tantra*, N.I.A. Jaipur.

• **Ethical Clearance:** The study is approved by institutional ethical committee of N.I.A.

• **Informed Consent:** The study explained clearly to the subjects & their signed, written informed consent was taken before starting the trial.

• **Investigations:** For the purpose of assessing the overall condition of the patients complete urine (routine and microscopic), USG (KUB region) were carried out before and after completing the course of the treatment.

• In the present study total 39 patients was registered for study, out of which 30 patients completed the trial. All the relevant data regarding the clinical study were statistically studied on the 30 patients who complete the study.



- Study was conducted over patients having symptoms of *Mutrashmari* divided into three groups.
- The selected patients of Group A were treated with 25 ml of prepared *Varunadi Kwath* with 500 mg *Yavkshara* twice daily before meal, Group B treated with *Trivikram Rasa* 250 mg twice daily with *Beejpoorak Mool Kwath* before meal and Group C treated with combined therapy of 25 ml of prepared *Varunadi Kwath* with 500 mg *Yavkshara* twice daily and *Trivikram Rasa* 250 mg twice with *Beejpoorak Mool Kwath* before meal for a period of 45 days and followed up every 3<sup>rd</sup> week for further 6 months.
- The assessments were done on these parameters: Pain, Burning Micturition, Dysuria, Hematuria, W.B.C. count of urine, Size of calculus and No. of calculus.
- For the assessment of the total effect of the therapy following four categories were taken into considerations by comparing assessment done on 1<sup>st</sup> day with the assessment done on 45<sup>th</sup> day.

#### DRUGS:

##### 1. *VarunadiKwath*<sup>4</sup>

**Ingredients:** *Varun, Pasanbheda, Shunthi, Gokshura, Yavakshar*

##### 2. *Trivikram Rasa*<sup>5</sup>

**Main Ingredients:** *Parad, Gandhaka, TamraBhasma*

**Other Ingredients:** *AjaKsheera, Nirgundi Anupana –BeejpoorakMoolKwath*

#### OBSERVATIONS AND RESULTS:

- It was found that *Mutrashmari* occurs in both sexes but most commonly observed in the male in between 18-30 years age group.
- Upper middle class and sedentary life style of persons were more prone to the disease.

• 61.54% of patients were complaining of Pain, 66.67% of patients were complaining of Burning micturition and 64.10% of patients were complaining of Dysuria.

• Maximum number of patients observed with Rt. sided single renal calculus of size between 5.1-10 mm.

• Group A (*Varunadi Kwath*) and Group B (*Trivikram Rasa*) was found to have significant effect on pain, burning micturition, dysuria, hematuria, W.B.C. count of urine, size of calculus and no. of calculus.

• Group C (*Varunadi Kwath* and *Trivikram Rasa*) was found to have very significant effect on pain, burning micturition, dysuria, hematuria, W.B.C. count of urine, size of calculus and no. of calculus.

• On inter-group comparison Group A (*Varunadi Kwath*), Group B (*Trivikram Rasa*) and Group C (*Varunadi Kwath* and *Trivikram Rasa*) showed not significant effect on pain, burning micturition, dysuria, hematuria, W.B.C. count of urine, size of calculus and no. of calculus.

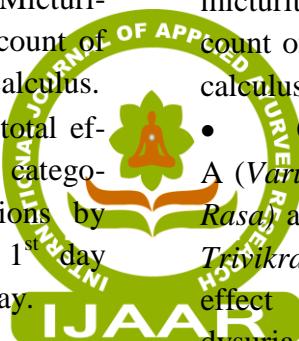
• None of patients were observed unchanged in the trial groups.

• Observations obtained from the trial groups had shown no side effects of the drugs.

• No recurrence was observed during the follow up.

• Overall effect of therapy in group A: 05 patients (50.00%) showed good response, 03 patients (30.00%) showed fair response, 02 patients (20.00%) showed poor response and no patient (00.00%) showed no response.

• Overall effect of therapy in group B: 03 patients (30.00%) showed good response, 04 patients (40.00%) showed fair



response, 03 patients (30.00%) showed poor response and no patient (00.00%) showed no response.

- Overall effect of therapy in group C:07 patients (70.00%) showed good response, 03 patients (30.00%) showed fair response, no patient (00.00%) showed poor response and no patient (00.00%) showed no response.

- Overall effect of therapy in 30 patients:15 patients (50.00%) showed good response, 10 patients (33.33%) showed fair response, 05 patients (16.67%) showed poor response and no patient (00.00%) showed no response.(Table and Graph)

## DISCUSSION:

- Relief in **pain** was observed might be due to *Vedana Sthapaka* properties of *Varun*, *Pasanbheda*, *Shunthi* and *Gokshura*, *Sothahara* properties of *Varun*, *Pasanbheda*, *Gokshura* and *Nirgundi*, *Vatanulomana* properties of *Varun* and *Shunthi*, *UshnaVirya* of *Varun*, *Shunthi*, *Nirgundi*, *Yavakshara*, *Parad*, *Gandhaka* and *Tamra Bhasma*.

- Relief in **burning micturition** was observed might be due to *Madhura Rasa* of *Varun*, *Gokshura* and *Beejpoorak*, *Madhura Vipaka* of *Shunthi*, *Gokshura*, *Parad* and *Beejpoorak* and *SheetaVirya* of *Pasanbheda*, *Gokshura*, *AjaKsheera* and *Beejpoorak*.

- Relief in **dysuria** might be due to *Vatanulomana* properties of *Varun* and *Shunthi*, *Mutrala* properties of *Varun*, *Pasanbheda*, *Gokshura* and *Yavakshara*, *Mutrakrichchhrahara* properties of *Varun*, *Pasanbheda* and *Yavakshara*.

- The observed effect on **hematuria and WBC count of urine** might be due to the *Sheeta Virya* of *Pasanbheda*, *Gokshura*, *AjaKsheera* and *Beejpoorak*, *Mutrala* properties of *Varun*, *Pasanbheda*,

*Gokshura* and *Yavakshara*, *Vranaropana Karma* of *Pasanbheda*, *Shunthi* and *Tamra*.

- The observed effect on **size of calculus and no. of calculus** might be due to the *Lekhana Karma* of *Yavakshara*, *Tamra*, *Bhedana Karma* of *Varun*, *Yavakshara*, *Ashmaribhedana Prabhava* of *Varun*, *Pasanbheda*, *Gokshura*.

## Probable mode of action of

**VarunadiKwath:** The properties of the ingredients like *Kaphahara*, *Lekhana*, *Vedanasthapana*, *Vatanulomana*, *Shoolaprashamana*, *Daha Prashamana*, *Trishnahara*, *Bhedana*, *Shothahara*, *Mutrala*, *Mutra Virechaniya*, *Deepana*, *Pachana*, act on The *Dosha* (*Vata*, *Pitta* and *Kapha*), *Dushya* (*Mutra*), *Srotasa* (*MutravahaSrotasa*) and *Agni*. The ingredients of *Varunadi Kwath* pacify *Kapha Dosha* by virtue of their *Ruksha Guna*, *Katu Vipaka* and *Ushna Virya* and also show "Lekhana" property due to *Ushna Virya*. The *Lekhana Karma* is again enhanced by Famous *Lekhana Dravya* i.e. *Yavakshar*, which is one ingredient in it.

The *Vatanulomana*, *Shothahara* and *Mutrala* properties of ingredients help to relieve pain and *Sthanika Sotha*. *Deepana* property of drug helps to increase the *Agni*, which further check the formation of *Ama* at *Jatharagni* level itself. *Pachana* property of ingredients helps in assimilations of drug in the body in case of *Jatharagnimandya*. Due to the *Ashmari Bhedana* or *Ashmari Hara* property of ingredients present in the drugs, stone might be dissolved. Some compounds of the drug act as *Mutrala* (diuretic) by virtue of their *Sheeta Virya* and *Madhura Rasa*. All the ingredients of the drug by their *Bhedana*, *Ashmarihara* and *Kaphahara Karma* along with *Mutrala Karma*, are helpful to reduce the size of the *Ashmari* and expelled it out

from the body. The ingredient (*Gokshura, Pasanbheda* etc.) in good proportion with *Yavakshara* have cumulative effect as *Ashmari Bhedana, Mutrala* and *Vrana Ropana* and *Yavakshara* with its *Lekhana, Shodhana* etc. properties may have reduced the size of the stone and *Varunadi Kwath* made them easy to expel out.

Thus in total this formulation has the capacity to disintegrate the pathogenesis of the disease *Mutrashmari* and due to its diuretic action it flushes out the disintegrated *Mutrashmari* by the process of diuresis.

- **Probable mode of action of Trivikram Rasa:**

*Trivikram Rasa* mainly consists of drugs of *Vayu* and *Agni Mahabhuta*. They are expected to act against vitiated *Kapha Dosha*, responsible for formation of stones which have dominance of *Prithvi* and *Jala Mahabhuta*. Ingredients of *Trivikram Rasa* have *Vata Kapha Hara* properties. *Vata Dosha* is considered to be main factor responsible for pain and vitiated *Kapha Dosha* responsible for formation of stones. So due to *Vata Kapha Hara* properties of *Trivikram Rasa* it is most likely to provide relief in pain and stops formation of stones. Constituents of *Trivikram Rasa* mainly consists *Katu, Tikta Rasa, Laghu, Sukshma* and *Snigdha Guna, Ushna Virya, Madhura* and *KatuVipaka*. These pharmacological properties of *Trivikram Rasa* induce *Vatakapha Shamaka, Agni Deepaka, AmaPachaka, Lekhana, VranaropanaKarma, Shotha Hara* effects.

*Tamra* have *Deepana* effect which regulates *Jatharagni*. *Tamra* and *Gandhaka* have *Amapachana* properties. *Tamra* has a strong *Lekhana* effect and thus it is supposed to reduce the size of the *Ashmari* and expelled it out from the body. *Parada* and *Tamra Bhasma* have

*SrotoShodhana* effect which may relieve *Sanga in the Mutravaha Srotasa*.

**CONCLUSION:** From the study, it can be concluded that-

- *Varunadi Kwath* and *Trivikram Rasa* are effective in patients suffering with *Mutrashmari* (Urolithiasis).

- Combined therapy of *Varunadi Kwath* and *Trivikram Rasa* is more effective for the management of *Mutrashmari*.

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Declared