

A COMPARATIVE CLINICAL STUDY OF *PASHANBHINNA RASA* PREPARED BY TWO DIFFERENT METHODS ON *MUTRASHMARI* W.S.R. TO UROLITHIASIS

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Published online: May, 2017

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ABSTRACT

Mutrashmari is considered as one among the *Astamahagadas* by *Acharyas*. It is one of the most important diseases of *Mutravaha sroto vikaras* where both medicinal and surgical treatments are advised and agreed by all the classical texts. Nowadays it is correlated with urolithiasis. Due to food and life style variations it has become a global problem varying its incidence as per geographical distribution, sex and age group. In spite of surgical intervention in large number of cases the disease has found its recurrence. For this constant efforts are being made to evolve an effective treatment as well as prevention of recurrence of Urinary calculi. In the present study an effort was made to find the comparative efficacy of “*Pashanbhinna Rasa- A & Pashnabhinna Rasa- B*”. In this study, 40 patients with diagnosis of urolithiasis were randomly selected and given trial drug for 60 days. The subjects were asked for follow up once in fifteen days for consecutive 2 months. After completion of study the results were assessed basing on percentage of relief before and after treatment basing on symptomatic relief and USG. Statistically significant improvement was observed with P-value < 0.001. Hence the study revealed that the drug *Pashanbhinna Rasa-A* is more effective than *Pashnabhinna Rasa- B* in the management of *Mutrashmari*.

Keywords: *Mutrashmari*, *Mahagada*, *Urolithiasis*, *Pashanbhinna Rasa- A & Pashanbhinna Rasa- B*

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 diseases¹. *Ashmari* specifically called as *Mutrashmari*, a disease of *Mutravaha srotasa*. The symp-

toms of *Mutrashmari* go on in accordance with symptoms of urolithiasis of modern science. Hence *Mutrashmari* can be correlated with urolithiasis. It is estimated that approximately 2% of the population experiences renal stone disease at sometime in their life with male-female ratio of 2:1. The peak

incidence is observed in 2nd to 3rd decades of life². 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 surgically³. 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. In *Ayurveda*, many formulations are available for treatment of *Ashmari*. *Pashanbhinna Rasa* is such a formulation which described in *Rasa-chandanshu* (200-202), and indicated in *Ashmari*.

AIMS AND OBJECTIVES

1. To study the disease in terms of its etiopathogenesis, clinical manifestations with possible correlation to the description available in modern and *ayurvedic* medicine for urolithiasis.
2. To find out a safe, simple, effective and economical method of treating *M tr mari*.
3. To find out the comparative efficacy of trial drug (*Pashanbhinna Rasa-A* & *Pashanbhinna Rasa-B*) in the management of *M tr mari*.

MATERIALS AND METHODS

The Study was a randomized Clinical Trial on total 40 patients. Patients were randomly selected from OPD and IPD from Department of *Shalya tantra*,

Shubhdeep Ayurved Medical College and Hospital, Indore (M.P.).

INCLUSION CRITERIA

- Patients having classical signs and symptoms of *Mutrashmari* were included viz. pain in the region of umbilicus, perineum and dome of bladder; experience of severe pain on movement of the urine was included.
- Patients between 20 to 60 years of age irrespective of sex and occupation were included.
- Size of the urinary calculi from 2 mm to 9 mm was included.

EXCLUSION CRITERIA

- Patients suffering from *Ashmari* of size more than 9 mm.
- Patient of *Ashmari* having systemic diseases like IHD, RHD, AIDS & other chronic diseases like TB and acute & chronic renal failures.
- Pregnant women and lactating mother & patients below 20 years.

INVESTIGATIONS

- For the purpose of assessing the overall condition of the patients, Urine REME and plain X-ray (KUB region)/ USG (Kidney Ureter Bladder region) were carried out before and after completing the due course of treatment. The changes in the values and in signs and symptoms were recorded for the assessment.

DRUG INTERVENTION

TRIAL DRUG- *Pashanbhinna Rasa-A* (*Rasa-chandanshu-200-202*) & *Pashanbhinna Rasa-B* (*Vridhdha vaidya parampara*) prepared in Pharmacy of S.A.M.C.H., INDORE (M.P.)

Ingredients

1. *Shuddha parada* (Mercury)
- 01 part

- | | |
|--|---|
| <ol style="list-style-type: none"> 2. <i>Shuddha Gandhaka (Sulphur)</i> - 02 part 3. <i>Shuddha shilajeet (Asphaltum punjabianum)</i> - 04 part 4. <i>Sweta punarnava (Boerhavia diffusa) swaras</i> - Q.S. 5. <i>Vasa patra (Adhatoda vasica) swaras</i> - Q.S. 6. <i>Sweta aprajita (Clitoria ternatea) Swaras</i> - Q.S. | <ol style="list-style-type: none"> 2. Added <i>shilajeet</i> in <i>Kajjali</i> 3. <i>Bhavana</i> given by different drugs and prepared <i>chakrikas</i>. 4. <i>Chakrikas</i> divided into 2 samples of equal weight which named Sample- A and Sample- B. 5. Sample- A Processed in <i>Dola yantra</i> according to <i>Rasa chandanshu</i> (200-202) and called <i>Pashanabhinna Rasa-A</i> 6. Sample B Processed in <i>Valuka yantra</i> according to <i>Vridhdha Vaidya parampara</i> and called <i>Pashanbhinna Rasa-B</i> |
|--|---|

Procedure: It was 6 Steps

1. *Kajjali* prepared.

Table 1:

	Group- A-(20 Patients)	Group -B--(20 Patients)
Drugs	<i>Pashanbhinna Rasa-A</i>	<i>Pashanbhinna Rasa-B</i>
Form	Powder	Powder
Dose	125 mg BD before meal	125 mg BD before meal
Duration	60 days (max.)	60 days (max.)
<i>Anupana</i>	Mixed with 1gm of <i>Bhumiamlaki churna</i> and 250mg of <i>Indrayana phala churna</i> , followed by <i>kulthi kwath</i> as <i>Anupana</i> .	Mixed with 1gm of <i>Bhumiamlaki churna</i> and 250mg of <i>Indrayana phala churna</i> , followed by <i>kulthi kwath</i> as <i>Anupana</i> .

FOLLOW-UP

Drug was give for 60 days. The patients were kept under follow up period of 15 days, so that the total overall effect of treatment could be assessed.

CRITERIA FOR DIAGNOSIS

General Symptoms Score (According to Ayurveda):

1. *Ruk nabhi sevani Basti moordhashu:*

- No complaints - 0
- Mild : Difficulty on forcible urination (rarely) - 1
- Moderate : Difficulty on forcible urination (oftenly) - 2
- Severe: always difficulty for urination. - 3

2. *Visheerna moothram:*

- Clear, easy micturation - 0

- Clear micturation after displacement of stone with mild pain - 1
 - Yellowish colour micturation with pain after displacement - 2
 - Severe pain or obstructed urine - 3
- #### 3. **Colour(Gomedakaprakasha, Atyavilta):**
- Clear urine - 0
 - Cleare urine with mild pain after displacement - 1
 - Yellowish coloured urine after displacement - 2
 - Blood stained urine with severe pain - 3

Chief signs and symptoms scores (According to modern)

1. **Pain:**

- No pain – 0
- Occasional pain did not require treatment – 1

- Occasional pain but, required treatment – 2
 - Constant dull ache pain, required treatment – 3
 - Severe constant pain, but did not show relief even after treatment- 4
- 2. Burning Micturition :**
- No burning micturition – 0
 - Occasional burning micturition – 1
 - Occasional burning micturition, required treatment – 2
 - Constant burning micturition required treatment – 3
 - Constant severe burning micturition but did not show relief even after treatment – 4
- 3. Dysuria :**
- No dysuria – 0
 - Occasional dysuria – 1
 - Occasional dysuria which require treatment – 2
 - Constant dysuria which require treatment – 3
 - Constant severe dysuria but did not show relief even after treatment – 4
- 4. Tenderness in Renal Angle :**
- No tenderness – 0
 - Mild tenderness – 1
 - Moderate tenderness – 2
 - Severe tenderness – 3
 - Acute tenderness – 4
- 5. Haematuria :** On the basis of microscopic urine analysis
- No RBC/Hpf - 0
 - 0 – 5 RBC/Hpf - 1
 - 6 – 10 RBC/Hpf – 2
 - 11 – 15 RBC/Hpf – 3
 - >16 RBC/Hpf – 4
- 6. Pus Cells :** On the basis of microscopic urine analysis
- No pus cells/Hpf - 0
 - 0 – 5 pus cells/Hpf - 1
 - 6 – 10 pus cells/Hpf - 2
 - 11 – 15 pus cells/Hpf - 3
 - >16 pus cells/Hpf – 4

CRITERIA FOR TOTAL EFFECT OF THERAPY

For the assessment of the total effect of therapy following categories were taken into considerations.

1. **Cured:** Relief in all the signs and symptoms along with 100% disintegration of the *Ashmari* and absence of any calculus in the urinary tract.
2. **Markedly Improved:** 76 to 99% relief in signs and symptoms along with disintegration (>50%) of the *Ashmari*.
3. **Moderate Improvement:** 51-75% relief in sign and symptoms along with disintegration (>25%) of the *Ashmari*.
4. **Mild Improvement:** 26-50% relief in sign and symptoms along with disintegration (up to 25%) of the *Ashmari*.
5. **No Improvement:** Up to 25% relief in sign and symptoms along without disintegration of the *Ashmari*.

RESULTS

The data and the observations of the 40 patients recorded as follows:

1. **Age:** 30% patients were age group of 21-30, 35% were age group of 31-40 yrs and 25% were age group 41-50 yrs, Followed by 10 % of age group of 51-60 yrs.
2. **Socio-economical status:** Majority of the patients were of middle and lower middle economical status 35% each, while 15% and 10% of the patients were of upper middle and poor economical status respectively. Minimum incidence of disease was found in rich i.e. 05 %.
3. **Diet:** 42.5% were vegetarians. The remaining 57.5 % of the patients were mix.
4. **Prakriti:** Majority of the patients were of *Kapha-Pittaja Prakriti* (55%), while 25% and 20% of the patients were of *Pitta-Vataja* and *Kapha-Vataja* respectively.
5. **Rupa:** 82.5 % patients were having *Mutradhara Sanga* followed by *Nabhi Vedana* 80 %,

Basti Vedana 57.5 %, *Sasiktam* 20 % and 25 % *Mehana Vedana*, *Sarudhira Mutrata*, each. These are again followed by 65 % and 22.5 % *Atyavilata* and *Sevani Vedana* respectively.

6. **Clinical features (Modern Parameter):** Pain was the most common complaint seen in 95 % of patients. Nausea & vomiting and fever were observed in 17.5% each. While dysuria in 57.5 %, tenderness in renal angle, burning micturition, haematuria were observed in 50%, 65% and 36.36% each respectively
7. **Size of stone:** 41.66% of the stones were more than 05mm, while 41.66% were of less than 05mm. in diameter.
8. **Site of stones:** The kidney stones were found in 88.88 %, ureteric stones 9.72 % and bladder stone 1.38 %.
9. **Number of stones:** Maximum number of patients i.e. 52.5 % had single stone, 27.5 % patients had two stones while remaining 20 % patients had more than two stones.
10. **Bilateral - unilateral:** Majority of the patient i.e. 82.5% were having unilateral stone while only 17.5% were having bilateral stone.
11. **Variety of stone:** Maximum 62.5% patients had *Vataja* type of *Ashmari*, while 27.5% patients were having *Kaphaja* type of *Ashmari*, whereas only 10% patients were having *Pittaja* type of *Ashmari*.

EFFECT OF THERAPY

1. **Effect of therapy on clinical features (According to Ayurveda):** The therapy on the patients of Group- A, showed highly significant effect on symptoms like *Ruk nabhi sevani Basti moordhashu*, *Visheerna moothram*, *Colour* with the percentage of relief 76.85%, 85.37% and 70.75% respectively and in Group B percentage of relief 75.51%, 80.48% and 70.50% respectively.
2. **Effect of therapy on clinical features (According to Modern):** The therapy on the patients of Group- A, showed highly significant

results were obtained in Pain, Burning Micturition, Dysuria, Tenderness in renal angles, Haematuria and Pus cell with the percentage relief of 77.61%, 76.44%, 79.09%, 64.89%, 75.0% and 83.29% respectively and in Group B percentage relief of 76.11%, 69.44%, 78.57%, 61.47%, 63.63% and 81.29% respectively.

3. **Effect of therapy on stones at different sites and size in Group A and Group B:** Among the 44 stones, less than 5 mm in size, 38 stones were expelled, 4 stones were decreased in size, 1 stone observed increased in size and 1 stone had no change. Among the 28 stones, 5mm - 9mm in size, 07 stones were expelled, 20 stones were decreased in size and 1 stone observed increased in size.
4. **Effect of therapy on types of Urolithiasis:**
In group A: Out of 20 patients, 13 patients were having *Vataja Ashmari* out of them 6 patients were observed cured, 4 had markedly improved and 3 moderately improved. 5 patients were having *Kaphaja Ashmari* out of them 2 were observed cured, 1 was observed markedly improved and 2 were observed moderately improved. 2 patients were having *Pittaja* type of *Ashmari*, 1 was cured and 1 was observed markedly improved.
In group B: Out of 20 patients, 12 patients were having *Vataja Ashmari* out of them 5 patients were observed cured, 4 had markedly improved and 3 moderately improved. 6 patients were having *Kaphaja Ashmari* out of them 2 were cured, 3 were markedly improved and the rest were moderately improved. 2 patients were having *Pittaja* type of *Ashmari*, 1 was observed cured, and 1 was observed markedly improved.
5. **Effect of therapy on types of Urolithiasis:**
In group A: Out of 16 patients having kidney stone; 7 were cured, 4 were markedly improved and 5 patients were moderately improved. Out of 3 patients having Kidney- Ure-

ter stone, 1 was cured and 2 had markedly improved and out of a single patient having bladder stone was cured.

In group B: Out of 16 patients having kidney stone; 6 patients got cured, 6 markedly improved and 4 moderately improved. 2 patients were having ureteric stone, observed all cured. 2 patients were having Kidney- Ureter stone, observed all markedly improved.

6. Overall Effect Of Therapy-

In Group A: - 9 patients i.e. 45 % were cured, 6 patients i.e. 30 % were markedly improved and 5 patients i.e. 25 % remained moderately improved.

In Group B: - 8 patients i.e. 40 % were cured, 6 patients i.e. 30 % were markedly improved and 6 patients i.e. 30 % remained moderately improved.

PROBABLE MODE OF ACTION OF DRUG COMPOUND:

- The compound possesses all the needful actions like *Kaphahara*, *Lekhana* and *Mutrala*. The ingredients of the compound pacify *Kapha dosha* by virtue of their *Ushna Virya* of *shilajeet* and *punarnava* and *kattu tikta kashay rasa* of *punarnava*, *aparajita* and *vasa*. *Shilajeet* also shows "*Cheddhan*" property due to *Ushna virya*. *Aparajita* and *Vasa* has property of *Mutrala* (Diuretic) by virtue of their '*Sheeta Virya*'. *Punarnava*, a well known *Mutrala dravya* is again an ingredient in this formulation.
- Thus in total this formulation has the capacity to disintegrate the pathogenesis of the disease '*Ashmari*' and due to its diuretic action it flushes out the disintegrated '*Ashmari*' by the process of diuresis.

CONCLUSION

- Overall effect of therapy shows that in group-A - 45% of patients were cured, 30% markedly

improved and 25% remained Moderately improved In Group-B- 40% patients were cured, 30% were markedly improved and 30% remained Moderately improved.

- So, here it can be concluded that the properties of both *Pashanbhinna Rasa* regarding to disintegration and expulsion of stones and can produce total relief in sign and symptoms of Renal Calculi which proves that it is an ideal preparation for the management of Renal Calculi. After this Clinical Study, entitled "A COMPARATIVE CLINICAL STUDY OF PASHANBHINA RASA PREPARE BY TWO DIFFERENT METHODS ON MUTRASHMARI W.S.R. TO UROLITHIASIS" it put light on following conclusions:

1. *Pashanbhinna Rasa* is a Classical remedy for Renal Calculi mentioned by Ancient *Acharyas*.
2. *Pashanbhinna Rasa-A* is more effective than *Pashanbhinna Rasa- B* in expulsion of Renal Calculi and decrease in size.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Rahul Anand & Halidar Pronab: A Comparative Clinical Study Of Pashanbhinna Rasa Prepared By Two Different Methods On Mutrashmari W.S.R. To Urolithiasis. International Ayurvedic Medical Journal {online} 2017 {cited May, 2017} Available from: http://www.iamj.in/posts/images/upload/434_440.pdf