



Case Report

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A CASE STUDY ON MUTRASHMARI (UROLITHIASIS) USING YAVAKSHARADI YOGA

Sheshashaye B^{1*}, Hemantkumar P², Prasanna N Rao³

¹PhD Scholar, PG Dept. of Shalyatantra, S.D.M. College of Ayurveda, Hassan, Karnataka, India

²Professor, PG Dept. of Shalyatantra, S.D.M. College of Ayurveda, Hassan, Karnataka, India

³Principal & Professor, PG Dept. of Shalyatantra, S.D.M. College of Ayurveda, Hassan, Karnataka, India

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*Corresponding author

E-mail: sai0305@gmail.com

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ABSTRACT

Mutrashmari – Urolithiasis is a consequence of complex physico-chemical processes which involves sequence of events in the formation of any Urinary stone (Urolithiasis) i.e. consequence of imbalance between stone promoters and inhibitors in the kidney. Urinary stones are the major cause of Morbidity. Increased incidence of Urolithiasis in this industrialised world is associated with improved standards of living and is strongly associated with race, ethnicity and region of residence. The identification of common, modifiable risk factors for Urolithiasis may result in new approach for treatment and prevention. With these objectives in this study, the drug Yavksharadi yoga (Yavakshara and Gokshura) a unique combination mentioned in Yogaratanakara was selected. In Ayurveda, 'Yava' (*Hordeum vulgare*) and 'Gokshura' (*Tribulus terrestris*) are used widely as Pathya (wholesome diet) for the management of Mutrashmari. This has Vedana shamaka (Reduces pain / spasm), Mutrala (Diuretic property) and Ashmari bhedaka (Lithotryptic) properties in it. In the present work we have tried to study the combined action of Yavaksharadi yoga, diet and lifestyle changes with respect to disintegration / expulsion of the calculi and avoidance of recurrence over a period of 18 months.

Keywords: Mutrashmari, Urolithiasis, Yavaksharadi yoga.

INTRODUCTION

The disease Mutrashmari¹ is one among the Asta-mahagadha (Eight fatal conditions) formed in the urinary system.^{2,3} Based on its clinical features, in Bio-medicine it is compared to Urolithiasis. Urolithiasis is a consequence of complex physico-chemical processes which involves sequence of events in the formation of any Urinary stone. It is as follows –

Urinary saturation → Super saturation → Nucleation → Crystal growth → Crystal aggregation → Crystal retention → Stone formation.⁴

The lifetime prevalence of symptomatic Urolithiasis is approximately 10 % in men, 5 % in women and the probability of the second stone formation within 5 – 7 years is approximately 50 %.⁵

Various risk factors have been identified and these includes a family history of Urinary stones, Insulin resistant states, history of Hypertension, Primary Hyperparathyroidism, history of Gout, Chronic Metabolic acidosis and Surgical Menopause.⁶

In fact, Pathyapathya (wholesome and unwholesome diet and activities) has been shown to be an important factor. A diet rich in cereals and pulses, fluoride rich water, intake of fruits such as oranges and grapes and the presence of nano bacteria plays a vital role.^{7,8}

Many treatment modalities have been adopted in Biomedicine to combat the disease but it is quite expensive and also the pathogenesis behind recurrence of formation of stone cannot be avoided.

Therefore it is necessary to find out an economical, effective, easily available and acceptable medicine to treat Mutrashmari.

In Ayurvedic literature all sorts of methodologies including surgical technique have been described.

Acharya Susrutha said that before going for surgical procedures one should try with oral medications like Ghrita (Medicated ghee), Taila (Medicated oil), Paneeya Kshara (medicated Alkali preparation) etc. which possesses the properties such as Chedana (Cutting / Breaking), Bhedana (Splitting), Lekhana (Scarification) and Mutrala (Diuretic) for facilitating the disintegration of the Urinary stones.⁹

Hence in this present clinical study, a paneeya kshara i.e 'Yavaksharadi yoga' (Yavakshara and Gokshura choorna)¹⁰ is selected for the management of Mutrashmari.

Case History

A 37 year male patient presented with complaints of abdomen pain associated with difficulty in Urination and reddish discolouration of urine since one month.

Patient was asymptomatic one month ago. One day suddenly he noticed severe pain in the abdomen and associated with vomiting and fever. He consulted a nearby physician and got temporary relief from those complaints. Later he observed that pain in abdomen, dysuria and haematuria were persisting after few days and for which he approached our hospital in search of alternative remedy.

According to his statement, it was found that the pain was intermittent and colicky in nature and it was appreciated on either side of the abdomen. Dysuria felt by patient normally at the beginning of urination which is of pricking type and Haematuria which is intermittent in nature.

There was no history of Diabetes mellitus or Hypertension. Diet history reveals that his food intake

was irregular in terms of quality and quantity due to his stressful occupation.

His vitals were within normal limits. On examination of the abdomen, there was no organomegaly but tenderness elicited in the both side of the lumbar region and left side of renal angle.

As advised, Patient underwent Ultrasonography of the Abdomeno-pelvic region on 12th September 2007, and the report revealed that ‘Two calculi measuring 5mm and 3 mm each were noticed in right kidney along with 10 mm calculi in the left Kidney and confirmed that it was Bilateral renal calculi. His Blood and Urine reports were within normal limits. (Table 1a, b)

As per classics, majority of clinical features of Mutrashmari such as ‘Vedana in Udara pradesha’ (Pain abdomen), ‘Sadaha mutrata’ (Burning micturation) and ‘Sarakta mutrata’ (Blood mixed urination) were observed. On the basis of Nidana (Aetiology) and Rupa (Clinical features) this clinical condition is diagnosed as Vatajashmari.¹¹

As Sushruta explains, the use of Paneeya kshara as one among the major tool to counteract Ashmari. ¹² ‘Yavaksharadi yoga’ a unique combination described in Yogaratnakara is administered to him for a period of 1 month. It contains one part of Yavakshara and five parts

of Gokshura choorna. 6 g of this yoga was given thrice a day with buttermilk, before food for 1 month.

Subject was asked to adhere to the prescribed wholesome diet and activity chart. (Table 2)

During his first follow up, it was noticed that all the clinical features were absent except for pain abdomen, which was less in intensity. He was advised to repeat Ultrasonography abdomen and pelvis on 15 -10- 2007. Report reveals that, there was single calculi measuring 5 mm in the lower calyx of Right Kidney. (Table 1)

He was asked to stop all internal medications and continue only Pathyapathya chart. He was advised to review after 6 months with Scan report.

Patient visited back on 18th June 2008 for the follow up, stating that he got completely relieved from pain abdomen and has experienced neither Dysuria nor Haematuria till date.

Impression of the 3rd scan report confirmed that, there is no absolute calculus in the urinary tract. This shows that, the right renal calculus was also expelled out. Later he was advised to adhere to Pathyapathya chart till his next follow-up. (Table 1)

On 29th January 2009, the patient was sent for another Scan (4th) and the report proved that, there was no recurrence (new stone formation) of the Mutrashmari in any part of the urinary tract. (Table 1)

Table 1a: USG reports

Scanning Date	Clinical features	Impression
12-09-2007	Pain abdomen (severe), Dysuria and Haematuria	2 Calculi measuring 5mm and 3 mm noted in Right Kidney and 10mm in the Left kidney. (B/L renal calculi)
15-10-2007	Pain abdomen (Mild)	Calculus measuring 5 mm in the lower calyx of the Right kidney. (Right renal calculi)
18-06-2008	No any complaints	Essentially normal study
29-01-2009	No any complaints	Essentially normal study

Table 1b: Blood and Urine test reports

Blood report	Report	Urine report (physical, chemical and microscopic)	Report
Haemoglobin	14.20%	Volume	50 ml
Total count	7,700cells / cumm	Colour	Pale Yellow
Differential count		Appearance	Clear
Neutrophill	66.00%	Odour	-
Lymphocytes	30.00%	pH / Reaction	6.5
Eosinophil	3.00%	Specific gravity	1.04
Monocytes	1.00%	Albumin	-
Basophil	0.00%	Glucose	-
ESR	10	Ketone bodies	-
		Bile salts	-
		Bile Pigments	-
		Epithelial cells	-
		Pus cells	2 – 4 cells
		Erythrocytes	1 – 2 cells
		Bacteria	-
		Cast	-
		Crystals	-

Table 2: Pathyapathya chart

Ahara varga (Food habits)	Pathya	Apathya
Vegetables	Carrots, Karela (Bitter guard), Potatoes, Radish, Pumpkin.	Brinjal, Beans, Lady finger, Capsicum, Tomato, Cucumber, Palak.
Cereals	Barley, Moong dal, Horsegram	Fine wheat flour (Maida), Oat meal, Bran.
Fruits	Bananas, Lemon, Apricots, Plums, Apple, Almonds	Black Grapes, Amla, Kiwi, Strawberries, Chickoo.
Miscellaneous	Coconut water, Lemonade, Aloe vera Juice, pineapple Juice, Butter milk	Coffee, Cashew nuts, Chocolates.
Healthy food (Kidney)	Papaya, Garlic, Yoghurt	Rajmah, Mushroom, Cauliflower, Peas.
Vihara (Activities)	Regular exercises	Day sleep, Controlling natural urges, Sweating

Table 3: Probable Mode of action or Samprapti vigatana

Samprapthi gataka	Mutrashmari	Yavaksharadi yoga and Takra (use)
Dosha	Tridosha	Tridoshagna
Dushya	Mutra	Mutrala
Agni	Jataragni mandya	Deepana, Pachana
Ama	Jataragnimandya janya	Nirama
Srotas	Mutravaha srotas	Mutrala
Udbhava sthana	Amashaya and Pakvashaya	Shoolagna
Sanchara sthana	Siras, amapakvashayagat Mutravaha srotas	Mutrala
Adhistana	Mutravaha srotas and basthi	Mutrala
Vyaktha sthana	Mutravaha srotas and basthi	Mutrala
Dusti prakara	Sanga	Chedana, Bhedana and Lekhana
Rogamarga	Madhyama	Ashmari bedhana
Vyadhi swabhava	Mutra apravrutitjanya vicar	Mutra pravrutikaraka
Sadyasadhyatha	Kruchhra, Sastrasadhya	Sadya

DISCUSSION

Gokshura contains potassium nitrate in rich quantity, which acts as an alkaliizer.¹³ Further, when it is combined with Yavakshara, synergetic action of alkaliizer is enhanced and appreciating the results in disintegration and elimination of urinary stones from urinary tract.

However the pharmacotherapeutic and pharmacokinetic effects of ksharatatvam from the Gokshura and Yavakshara, is a known fact i.e. ashmari chedaka, mutrakrichrahara. (Table 3)

CONCLUSION

Acharya Sushruta says 'Nidana parivarjana' (Avoidance of the causative factors) is a major treatment tool for any diseases. 'Gadanigraha' another text of Ayurveda advocates - if one obeys the pathyas, no disease will occur and if one - never mind them and continues apathyas, no treatment is needed, as it is not going to be cured.

As this is single case study the same intervention can be used on larger population to see the efficacy of Yavaksharadi yoga and role of pathya in the management of Mutrashmari (Urolithiasis).

Benefits of the study

- The correct use of prophylactic and therapeutic medications decreases the morbidity by its diuretic and lithotriptic action concerned with expulsion of the stone.
- To decrease the risk of further stone formation, a patient is strictly advised to follow certain rules of conduct, diet and lifestyle regime (pathyapathya) during the course of Ayurvedic treatment and thereafter to prevent reoccurrence.

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