



EFFECT OF AYURVEDIC FORMULATION IN MUTRASHMARI- A CASE STUDY

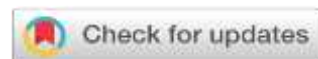
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ABSTRACT

Renal calculi (*Mutrashmari*) are the most common complaint of the urinary system, affecting 10-12% of the population in industrialized countries and caused by a complex process of physiochemical events including super achromatism, nucleation, growth, aggregation, and retention with the order. Urinary monuments are the major cause of Morbidity. Increased frequency of Urolithiasis in this industrialised world is associated with bettered morals of living and is strongly associated with race, and region of residence. **Material method:** A 42-year female patient presented with complaints of pain in the left side of the flank region and difficulty in micturition in the last 2 months. The patient was asymptomatic for 2 months and one day suddenly pain started in the abdomen and fever with chills and rigors, and burning micturition occur. The patient took allopathic medicine and got temporary relief in symptoms. After a few days, the patient observed that pain in the abdomen and dysuria reoccur. Investigation-In USG 5 mm left renal calculus is present. Gall bladder not visualized (H/O cholecystectomy present) and No H/O Diabetes mellitus and HTN, No abnormality present in CBC. So, with all these complaints the patient came to the Govt. Ayurveda College and Hospital, Varanasi for better treatment. We used some combination of the ayurvedic drug i.e., *Trivikram Rasa*, *Hazrulyahud Bhasma*, *Pashan-bheda Churna*, *Shweta Parpati*, *Yavkhsara* mixed in one combination which is taken two times a day and *Gokshuraadi Guggul* 250 mg tablet two times in a day. **Result and observation:** The patient had a significant improvement in symptoms by using this

ayurvedic formulation. Before treatment In USG, 21/01/2021- 5 mm left renal calculus was present and After treatment In USG 8/03/2021, no calculus was seen. By using these drugs patient got complete relief. **Conclusion:** After 2 months of treatment left renal calculus was removed and all symptoms subsided.

Keywords: *Mutrashmari*, Urolithiasis, *Trivikram Rasa*, *Hazrulyahuda Bhasma*, *Pashan-bheda Churna*, *Shweta Parpati*, *Yavkhsara*, *Gokshuradi Guggul*.

INTRODUCTION

Renal stone disease is common, affecting individuals of all countries and ethnic groups. Urinary calculi consist of aggregates of crystals, usually containing calcium or phosphate in combination with small amounts of proteins and glycoproteins. The most common types are i.e., Calcium oxalate-60%, Calcium phosphate-15%, Uric acid-10%, Cystine, and others-1%¹. The aetiopathogenesis of renal stone- (1) Infection: an organism such as *Proteus*, *Pseudomonas*, or *Klebsiella* produce recurrent UTI. These organisms produce urea, cause stasis of urine, and precipitate stone formation. (2) Hot climates cause an increase in the concentration of solutes, resulting in the precipitation of calcium and the formation of calcium oxalate stones. (3) Dietary factors- A diet rich in red meat, fish, and eggs can give rise to aciduria. A diet rich in calcium-tomatoes, milk, and spinach produces calcium oxalate stones. A diet lacking in vitamin A causes alters it and forms stones².

Mutrashmari or urinary stone is the most painful and common disease of the urinary system. It is the third most common affliction of the urinary tract, exceeded only by UTI and BPH. As per classics *Ashmari* is included in *Ashta Mahagada* due to its fatal nature³. Description of *Ashmari* is found in almost all Samhitas of *Ayurveda* as well as in vedas, either as a type of *Mutrashmari* (as per *Charaka*) or as a separate disease (as per *Sushruta*). *Acharya Sushruta* the father of surgery has described *Mutrashmari* first time in detail including etiological factors, classifications symptomatology, pathology, complication, and its management in the most scientific manner. About 30% patients of with urinary disorders are found to suffer from urolithiasis. The process of urinary stone formation as described by *Sushruta* as follows- One person who does not follows *Shodhana* treatment and

who is *Apathyakari* (uses unwholesome items), *Shleshma Dosha* gets aggravated, and saturates the urine in the system. This saturated urine (*Shleshma yukta mutra*) is the material (cementing substances) that causes urinary stone formation⁴. Through urine different stone-forming doshas like *Vata*, *Pitta*, and *Kapha* come from the system, and along with the cementing substances they form urinary stones of particular doshas involved.

Modern science also emphasizes on involvement of various factors like hereditary, age, sex metabolic disorders, sedentary lifestyle, hydration status, the mineral content of water, nutritional deficiency, etc for urinary stone formation. It causes pain, loss of working time, medical expenses, and needs for hospitalization as well as it is an infrequent cause of renal failure and death. *Acharya Sushruta* has described various medicines as well as surgery. Medicinal treatment has been advised to be undertaken in the early stage of the disease.

Case study: A 42-year female patient presented with complaints of pain in the left side of the flank region, fever, difficulty in micturition, nausea, and constipation in the last 2 months. The patient was asymptomatic for 2 months and one day suddenly pain started in the abdomen and a fever occur. The patient took allopathic medicine and got temporary relief in symptoms. After a few days, the patient observed that the above-mentioned symptoms reoccur. With all these complaints patient came to the RAC hospital, Varanasi for ayurvedic treatment.

Past history- No H/o HTN, DM, Thyroid.

Personal history-

- Marital status-married
- Tobacco- NAD
- Alcohol- No history

- Smoking-NAD

Surgical history- Cholecystectomy was done.

Systemic examination- BP: 120/78 mm of Hg, Pallor: Nil, Icterus: Absent, Cyanosis: Nil, Temp: febrile (99.5 F), R/R: 16/min, the Pulse rate: 72/min, Lymph node enlargement: Not palpable.

Investigation- 5mm left renal calculus seen in U.S.G. report (20/01/2021).

MATERIAL AND METHOD

According to *Acharya Sushruta*, the main treatment of any disease is to avoid the cause⁵. *Ashmari* is a *Kapha*-dominant disease. So, all the measures leading to the control of *Kapha* can be considered *Pathya*. For complaints of pain in the left side of the flank region and difficulty in micturition following ayurvedic formulation given to the patient.

Ayurvedic management of Ashmari (Urolithiasis)-

The patient was taking ayurvedic formulation of *Trivikram ras* 250 mg, *Hazrulyahuda Bhasma* 125 mg, *Pashan-bheda Churna* 250 mg, *Shweta Parpati* 125 mg, and *Yavkshara* 125 mg, this combination of drugs given two times in a day.

Gokshuradi Guggul 250 mg tablet two times a day.

Chitrakadi Vati 250 mg tablet (three times a day before meal) given for deepan pachan.

Triphala Churna 3 gm with lukewarm water (two times a day) was given so, to relieve constipation symptoms.

Trivikram ras- *Tamra bhasm*, *Parad*, *Gandhak*, used in this *Rasa aushadhi*. *Tamra Bhasma* possesses *Kashaya*, *Tikta*, *Amla*, and *Madhura Rasa* among which *Madhura* and *Kashaya Rasa* are dominant. *Tamra Bhasma* is having *Sara* and *Laghu Gunas*. It has been found effective in pacifying the *Kapha*, *Pitta*, and *Vata Doshas*. According to *Ras Tarangini- Lekhan*, *Ropana* property⁶.

Hazrulyahuda Bhasma (Lapis judaicus) -In vitro studies indicated that *Lapis judaicus* powder can reduce the size of calcium oxalate stones due to the presence of magnesium, which is a protective agent in calcium oxalate crystal growth. Moreover, its

basic pH nature could be another inhibitor for stone production⁷.

Pashanbheda Churna (Bergenia ligulata)- *Pashanbheda* is having *Kashaya Tikta Rasa*, *Laghu*, *Snigdha*, *Tikshna Guna*, *Katu Vipaka*, *Shita Virya* and *Ashmarighna*, *Bhedana*, *Bastishodhan*, and *Mutra-Virechaniya* properties and Chemical composition is Tannic acid, gallic acid, starch, Co-oxalate, glucose which has Antiprotozoal, anti-cancer, lithotriptic, anti-inflammatory, diuretic properties. Due to all these functions, *Pashanbheda* is a very good *Ashmarighna* drug⁸.

Shweta Parpati- *Suryakshara* (Potassium nitrate), *Sphatika* (Potash alum), *Tankana* (Borex), *Karpura* (Camphor), *Navasadara* (Ammonium chloride). All the ingredients of *Shweta Parpati* are *Mutrala* (diuretic) in nature. *Surakshara* and *Sphatika* contribute K⁺ ion which acts as an alkalizer so used in all conditions of dysuria. *Tankana* is useful in uterine infections. *Karpura*- Diuretic and keeps the urinary system free of bacterial infestations⁹.

Yavkshara- (Alkali preparation of barley) *Chedana*, *Bhedana* property are due to *Prabhav*. Anti-urolithiasis property is due to its alkaline nature. Diuretic activity is due to potassium salts. *Yava kshara* neutralizes the acidic media and prevents hyperconcentration of urine and the formation of calculi. It also helps in the dissolution of calculi as it changes the urinary pH¹⁰.

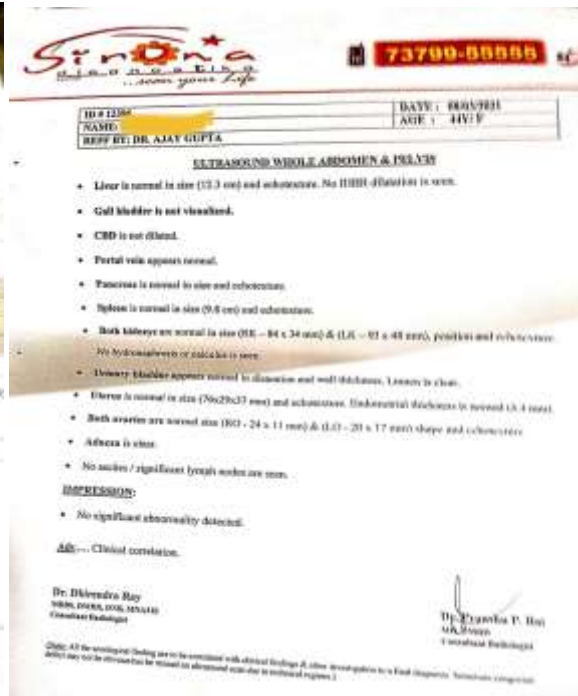
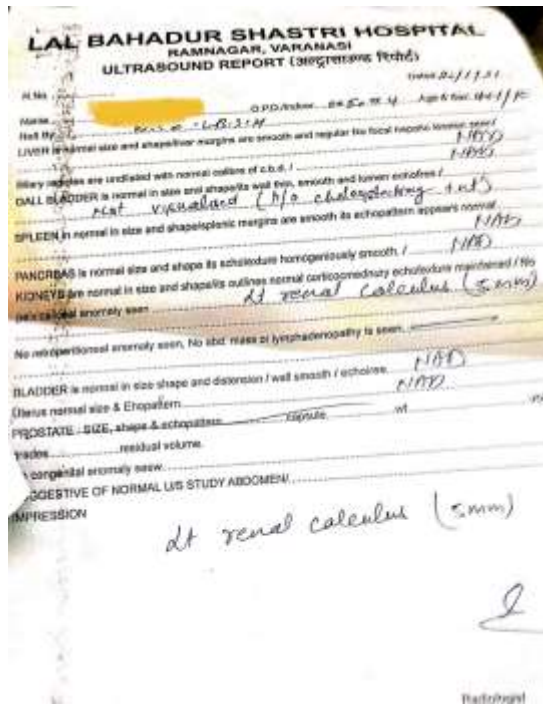
Gokshuraadi Guggul- *Nagarmotha* (Root), *Sounth* (Rhizome), *Kali Marich* (Seed), *Pippali* (Fruit), *Haritaki*(Fruit), *Bibhitaki* (Fruit), *Amla* (Fruit), *Shudh Guggul*, *Gokharu (Panchang)* *Gokshuradi Guggul* act as Antispasmodic, an antibiotic. it has *mutral* property¹¹. The anti-urolithiatic activity of ethanolic extract of *Gokshura* was studied in albino rats against induced urolithiasis and it inhibited stone formation almost completely along with normalization of leucocytosis, elevated serum urea levels and altered histopathology of urinary bladder¹².

OBSERVATION AND RESULT-

U.S.G. investigation	BT	AT
Right kidney	Normal size and no calculus seen	Normal size and no calculus seen
Left kidney	5mm calculus	No calculus

After using ayurvedic medicine abdominal pain, burning micturition, fever, nausea, and constipation-like symptom subsided and in the USG report there

are no calculus seen. There is no side effect seen during the treatment and follow-up.



DISCUSSION

Ashmari description is found almost in all *Samhita* of *Ayurveda*, but detailed description with its treatment is explicitly the contribution of *Sushruta Samhita*. *Charaka* advised medicinal management while *Sushruta* also explained the surgical intervention along with the medicinal management. According to modern science, the cause and mechanism of stone formation are still unknown but various factors like age, sex, irregular food habit, metabolic disorders, sedentary lifestyle, water intake, etc. may be responsible for the formation of renal stones. The two basic aspects of the pathogenesis of urinary stones are as follows-(a) increased urinary excretion of stone-

forming substances like calcium, phosphorus, uric acid, oxalate, and cysteine. (b) Physio-chemical changes influencing stone formation like pH of urine, stone matrix, and protective substance in urine. Urine should be supersaturated for the precipitation of crystalline substances leading to the formation of calculi in the urinary tract. The agents modifying nucleation, crystallization, and aggregation pH of the urine also play important role in stone formation.

In Ayurveda, two major factors are described as *Asamshodhana* and *Apathyasevana*, in which all the etiological factors of stone formation can be included. The basic cause of *Ashmari* is an aggregation of

Kapha Pradhana Dosha in Mutravaha Shrotas due to Agnimandya and Aam formation, which is caused by different Nidana Sewan. So, the drug used for the treatment of Ashmari should possess the properties to inhibit the process and to correct the pathology involved in the formation of Ashmari i.e., Samprapti Vighatan. Most of the ingredients of Ashmarihara, Mutral, Bastishodhan, Anuloman, Deepan, Pachana, Vedanaasthapana, and Kapha Vata Shamaka properties so it acts on the pathology of Ashmari Nirmana.

CONCLUSION

In this case study, the patient has shown encouraging results during the management of urolithiasis (*Mutrashmari*). As per the USG-abdomen, the patient has got removed the 5 mm of urinary stone within only 2 months of short duration by adopting Ayurvedic treatment. In addition, the general condition of the patient has also improved positively. Therefore, on the basis of observations and results of this case study, it can be inferred that *Ayurveda* has the potential to treat urolithiasis effectively.

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