



## Ayurveda management of *Ashmari* w.s.r. Renal Calculi: A Single Case Study.

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### ABSTRACT:

**Introduction:** Urolithiasis, the third most prevalent condition affecting the *Mutravaha srotas*, has a significant recurrence rate and adversely affects the quality of life. The current study aims to investigate the collective impact of Ayurvedic medication, dietary modifications, and lifestyle adjustments on the fragmentation and elimination of calculi.

**Material & Methods:** A 35-year-old male patient presenting with symptoms of abdominal pain, nausea, vomiting, and painful urination was diagnosed with *ashmari* based on clinical manifestations and investigative findings. An abdominal ultrasound scan revealed an elongated calculus measuring approximately 9.6 mm in the lower ureter of the right kidney, accompanied by proximal hydroureteronephrosis. The patient was administered the two *Chandraprabha Vati* along with *Tranpanchmoola Kashayam* (40 ml) twice daily before meals. Additionally, after a meal, two *Gokshuradi Guggulu* tablet crushed with *Punarnavashtaka Kashayam* were administered twice daily with water for five weeks.

**Results:** The study aims to assess the impact of the prescribed Ayurvedic treatment regimen on the fragmentation and elimination of the calculi.

**Discussion:** The study will contribute to understanding the efficacy of Ayurvedic medication, dietary modifications, and lifestyle adjustments in managing urolithiasis.

**Conclusion:** The collective impact of Ayurvedic medication, dietary modifications, and lifestyle adjustments in the treatment of urolithiasis will be evaluated in this study. The results will shed light on the effectiveness of this integrative approach, potentially improving patient outcomes and quality of life.

**Keywords:** *Ashmari*, Ayurveda, Herbal Medicine, Renal Stone, Renal Calculi.

## INTRODUCTION

Nephrolithiasis, also known as urolithiasis, ranks as the third most prevalent ailment of the urinary tract, following

urinary tract infection and prostatic hyperplasia. The global incidence of stone formation ranges from 10% to 25% over



an individual's lifetime. The highest incidence of the aforementioned condition in India is observed in regions such as Jammu and Kashmir, Punjab, Haryana, Delhi, Rajasthan, Madhya Pradesh, and Gujarat, which is also known as the Stone belt of India. The peak age group affected by this condition is between 20 to 30 years, and it is commonly observed during the summer season in males who are overweight and have a high body mass index (BMI). The incidence of Recurrence is observed to be 15% at the end of the first year, while it increases to 30-40% after five years and reaches 50% after a decade. [1] According to Ayurveda, the medical conditions of Nephrolithiasis or urolithiasis can be related to *Vrukka Ashmari* or *mutrashmari*, which are classified as one of the *Astamahagada*, or diseases that can be tough to alleviate. [2] The Ayurvedic classical text *Sushrut Samhita* provides a comprehensive account of the process of stone formation, including its symptoms and management, as elucidated by *Acharya Sushruta*. According to *Acharya Sushruta*, there are four types of calculi that are classified based on their association with *Kapha*, *Vata*, *Pitta*, and *Shukrajashmari*. [3] *Shleshmashari* is caused by the overconsumption of *kapha*-enhancing foods, which results in sediment accumulation below and around the bladder opening, leading to obstruction of the urinary passage. This obstruction causes pain in the form of grinding, tearing, and pricking sensations, and the bladder becomes heavy and cold. [4] The combination of *Kapha* and *Pitta* results in the manifestation of hardness, proliferation, and subsequent blockage of the bladder's opening. This obstruction of the urinary tract leads to the onset of a painful sensation characterised by burning, sucking, and heating in the bladder, accompanied by *Ushnavata*. [5] The presence of *Kapha* in association with *Vata* has caused the formation of hardened material around the opening of the bladder, leading to obstruction of the urethral passage. This obstruction results in excruciating pain, during which the patient may exhibit severe symptoms such as teeth clenching, umbilical pressure, frequent rubbing of the penis, anal touching, flatulence, burning sensation in the penis, and difficulty in passing urine, which may result in the simultaneous excretion of wind, urine, and faeces. [6] As a result of sexual intercourse that is either interrupted or excessive, semen may become dislodged but not discharged, leading to its misdirection. Subsequently, *vayu* accumulates and solidifies the semen in the region between the penis and scrotum, ultimately resulting in its desiccation. The aforementioned condition results in the hindrance of the urinary tract, leading to symptoms such as

dysuria, bladder discomfort, and testicular swelling. Furthermore, the obstruction may become more severe and subsequently resolve in situ. This mathematical concept ought to be recognised as seminal calculus. [7] The process of urinary stone formation is a multifaceted physiochemical phenomenon that encompasses a series of events, including urinary saturation, super-saturation, nucleation, crystal growth, crystal retention, and ultimately, stone formation. [8] Numerous treatment modalities have been implemented in contemporary scientific research; however, their cost remains a significant concern, and the underlying pathogenesis of recurrent stone formation remains unresolved. It is imperative to identify a cost-effective, readily accessible, and socially acceptable medication for the treatment of *Mutrashmari*. [Figure-1] [Figure-2] Therefore, in the current clinical investigation, a selection of *deepan*, *pachana*, *mutral*, and *Ashmari bhedana dravyas* have been chosen for the purpose of managing *Mutrashmari*.

## CASE REPORT

On 10<sup>th</sup> January 2023, a 35-year-old married male patient of Hindu conviction presented at the Makwana Clinic with complaints of *Udarshoola* (~Abdominal colic pain), *Mutrakruchcha* (~Difficulty in urination), *Hrullasa* (~Nausea), and *Chardi* (~Vomiting) for a duration of one week. Other related complaints included *Kshudhanasha* (~Loss of appetite), *Klama* (~Fatigue without exertion), and *Jwar* (~Fever) over the past 7 to 8 days. The patient's personal history indicates that they consume omnivorous diet. Specifically, they have a history of consuming foods that are high in oil and fat content. Additionally, the patient reports a regular habit of consuming homemade meals and engaging in excessive physical activity. Notably, the patient reported occasionally smoking addictive behaviours. The patient presents with symptoms of constipation and a frequency of one urge for defecation every two days.

Past history: The patient experienced a urinary tract infection one month ago.

Family history: There is no notable familial history.

On the examination of abdomen the patients showed there was no organomegaly but tenderness elicited in both side of the lumber region and left side of renal angle and vitals being pulse rate 78/min, respiratory rate of 20/min, blood pressure of 120/70 mm of Hg and body weight is 79 Kgs, 170 cm height, calculated BMI 27.3. As advised, patient underwent Ultrasonography of the Abdominal-pelvic region on 9<sup>th</sup> January 2023, and the report abdominal

ultrasound scan revealed an elongated calculus measuring approximately 9.6 mm in the lower ureter of the right kidney, accompanied by proximal hydronephrosis. As per classics, majority of clinical features of *mutrashmari* such as ‘*Vedana in Udar Pradesha*’ (~Pain in abdomen), *Sadaha mutrata* (~Burning micturition) and *Sarakta mutrata* (~Blood mixed urination) were observed. On the basis of *Nidana* (~Causative factors) and *Rupa* (~Clinical features) this clinical condition is diagnosed as *Ashmari* (~Urolithiasis). The Following oral medicines were administered for six weeks month.

#### Table No 1: Treatment Schedule

Table No 2: *Pathyapathya* (Wholesome and Unwholesome diet) chart

### RESULT

After a period of six weeks, a significant number of clinical symptoms associated with *Mutrashmari*, including ‘*Vedana in Udar Pradesha*’ (~Pain in abdomen), *Sadaha mutrata* (~Burning micturition) and *Sarakta mutrata* (~Blood mixed urination), were observed to have subsided. The patient was recommended to obtain a new ultrasonography report, which was found to be within the normal range. Fresh ultrasonography did not reveal any presence of calculi or hydronephrosis. A follow-up was conducted every two weeks over a period of two months, during which the patient did not exhibit any signs or symptoms related to renal calculi.

### DISCUSSION

The subject of calculi encompasses four distinct types that are primarily associated with the *Kapha Dosha*, namely *Kaphajashmari*, *Pittajashmari*, *Vatajashmari*, and *Shukrajashmari*. The individual was diagnosed with *Ashmari* and subsequently treated with drugs that target the primary components of the pathology, including *Aharaj mala (Mutra)*, *Kapha* and *Pitta dosha*, and *Jatharagni*. The selected drugs were chosen for their *Deepan-pachan*,<sup>[9]</sup> *Chedan-Bhedan*<sup>[10]</sup> and *Lekhan*<sup>[11]</sup> properties in order to evaluate their effectiveness in treating *Ashmari*. *Chandraprabha Vati* is purported that the substance in question functions as a diuretic and exerts its effects through various mechanisms. This text refers to various types of diuretics, including osmotic, thiazide, potassium sparing, loop diuretic, and those that promote glomerular filtration rate.<sup>[12]</sup> *Trinpanchmool* is a commonly employed remedy in Ayurvedic literature for the alleviation of

urinary tract infections, painful urination, and difficulty in urination. It has been observed to decrease elevated levels of *Pitta Dosha*. The *Trinpanchmool* herbs have the ability to eliminate excess water containing toxins from the body without disrupting the balance of electrolytes. This property aids in the support of kidney function and the treatment of *Mutrakruccha*. Classical texts describe various formulations of *Trinpanchmool*, such as *Kwath*, *Ksheerpaka*, and *Basti*, for the management of *Pittajroga*, *Mutrakruccha*, *Ashmari*, and other related conditions.<sup>[13]</sup> The Ayurvedic formulation known as *Gokshuradi Guggulu* comprises a blend of various herbs, including *Gokshura*, *Guggulu*, *Triphala*, *Trikatu*, and *Musta*. This therapeutic intervention is employed for the treatment of *Prameha*, *Pradara*, *Vatarakta*, *Mutraghata* and *Ashmarihar*. *Gokshura* possesses lithotriptic properties, aiding in the dissolution of urinary calculi, as well as diuretic properties, promoting increased urine production. The fruits of this plant are composed of a limited amount of essential oil, resins, and nitrates. *Guggulu* possesses *Vatashamaka* and *Ashmari Bhedan* properties. Additionally, the gum resin of *Guggulu* exhibits antiseptic, blood-enriching, demulcent, antispasmodic, and carminative effects. *Musta* possesses diuretic and stimulant properties, which promote the elimination of calculi.<sup>[14]</sup> *Punarnavashtaka Kwatha* such as *Punarnava (Boerhavia diffusa Linn.)*, *Haritaki (Terminalia chebula Retz.)* and *Guduchi (Tinaspora Cordifolia)* are having antioxidant, diuretic, anti-inflammatory as well as antimicrobial properties which can help alleviate condition of Hydronephrosis.<sup>[15]</sup>

### CONCLUSION

According to *Acharya Sushruta*, the primary method of treatment for all illnesses is *Nidana Parivarjana* (~Avoidance of the causal factors). According to *Acharya Lolimbraj*, if one follows the *Pathya*'s, no disease will arise; yet, if one does not follow them and exhibits persistent apathy, no treatment is necessary because the disease cannot be cured. The same intervention can be utilized on a bigger sample size because this is a single case study to determine the effectiveness of Ayurveda herbo-mineral formulations and the function of *Pathya* in the treatment of *Mutrashmari* (~Urolithiasis).

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**Conflicts Of Interest- Nil**

**Source of finance & support – Nil**

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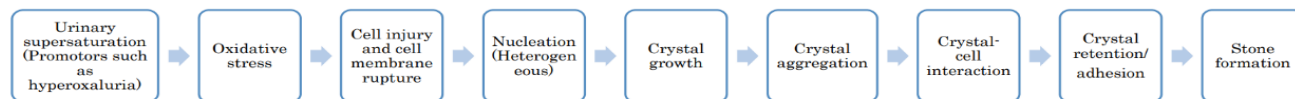
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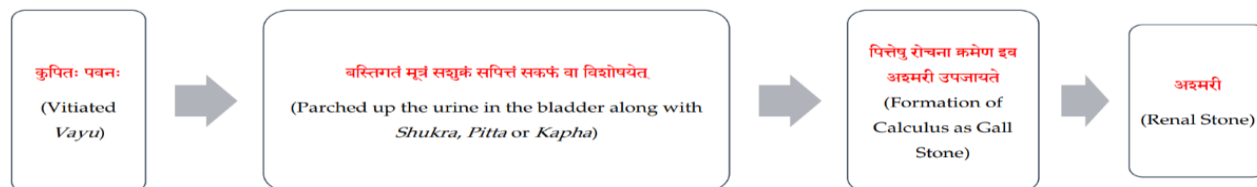
[Figure-1]

**Figure-1: Etiopathogenesis of Urolithiasis**



[Figure-2]

**Figure-2: माधवनिदानानुसारेणः सम्प्राप्तिः (Pathogenesis According to Madhavanidanam)**




**Table No 1: Treatment Schedule**

S.No	Treatment	Drug of choice	Duration
	Shaman Chikitsa	Chandraprabha Vati two tablet with Trinpanchmoola Kashayam 40ml TDS twice daily before meal Gokshuradi Guggulu tablet crushed with 40ml Punarnavashtaka Kashayam thrice daily after meal	Six weeks

**Table No 2: Pathyapathya (Wholesome and Unwholesome diet) chart**

S.NO	Aharaj vargas (Food habits)	Pathyaj (Do's)	Apathyaj (Don't)
1.	Vegetables	Carrots, Bitter guard, Potatoes, Radish and Pumpkin	Brinjal, Beans, Ladyfinger, Capsicum, Tomato, Cucumber, Spinach
2.	Cereals	Barley, Yellow Lentils, Horse gram	Fine wheat flour (Maida) , Oat meal, Bran
3.	Fruits	Bananas, Lemon, Plums, Apple, Almonds	Black grapes, Kiwi, Strawberries
4.	Miscellaneous	Coconut water, Lemonade, Aloe Vera juice, pineapple juice, Butter milk	Coffee, Cashew nuts, Chocolates
5.	Healthy food for Kidney	Papaya, Garlic, Yogurt	kidney beans, Mushroom, Cauliflower, Peas
6.	Vihara (Activities)	Regular Exercise	Day sleep, Controlling Natural urges, Excessive Sweating

USG Report Before treatment

 <b>Kapil Imaging Center</b> Dr. Janardhana M. Reddy M.D. (Radiology)	
Siddhi Vinayak Complex, Ground Floor, Nr. Kush Surgicare Hospital, Highway, Radhanpur	
<b>Name :</b>	<b>M / 35 Years</b>
<b>REF. By : Dr Malwana</b>	<b>Date: 09/01/2023</b>

**SONOGRAPHY OF ABDOMEN & PELVIS**

**LIVER:** Liver appears normal in size and shows normal parenchymal echoes.  
 No evidence of focal or diffuse lesion in seen. No evidence of dilated IHBR is seen. Portal vein appears normal at porta and normal at confluence.

**GALL BLADDER:** Gall bladder is physiologically distended and appears normal. CBD appears normal at porta.

**PANCREAS:** Pancreas appears normal in size and shows normal parenchymal echoes.


**SPLEEN:** Spleen appears normal in size and show normal parenchymal echoes.

**RIGHT KIDNEY:** (9.7 x 5.1) cm, proximal mild hydro-nephritis with hydro-ureter is noted up to mid ureteric stone of size 9.6 mm. Normal in size, shape and position with contour. Cortical and central echoes appear normal. CMD maintained.


**LEFT KIDNEY:** (10.2 X 4.4) cm, No evidence of Calculi hydronephrosis. Normal in size, shape and position with contour. Cortical and central echoes appear normal. CMD maintained.

**BLADDER:** Bladder is normally distended. No calculi noted.

**PROSTATE:** Prostate appears normal in size and shows normal parenchymal echoes.  
 No evidence of free fluid in peritoneal cavity at present.  
 Bowel wall thickness is within normal limits  
 No evidence of Intra-abdominal lymphadenopathy.

  
 Dr. J.D. REDDY  
 M.D. (RADIOLOGY)

USG Report After Treatment

 <b>Kapil Imaging Center</b> Dr. Janardhana M. Reddy M.D. (Radiology)	
Siddhi Vinayak Complex, Ground Floor, Nr. Kush Surgicare Hospital, Highway, Radhanpur	
<b>Name :</b>	<b>M / 35 Years</b>
<b>REF. By : Dr Malwana</b>	<b>Date: 27/02/2023</b>

**SONOGRAPHY OF ABDOMEN & PELVIS**

**LIVER:** Liver appears normal in size and shows normal parenchymal echoes.  
 No evidence of focal or diffuse lesion in seen. No evidence of dilated IHBR is seen. Portal vein appears normal at porta and normal at confluence.

**GALL BLADDER:** Gall bladder is physiologically distended and appears normal. CBD appears normal at porta.

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 Dr. J.D. REDDY  
 M.D. (RADIOLOGY)