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Ayurvedic management on renal calculi: A case study

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Abstract
In Ayurvedic literature, the term *Ashmari* refers to a variety of pathological stone formations, not limited to renal calculi but also including stones occurring in the gallbladder, urinary bladder, prostate gland, tonsils, nasal passages, pancreas, and other locations within the body. Classified under *Ashtamahagada* (eight grave disorders), *Ashmari* is closely correlated with renal calculi in contemporary understanding [1]. In Ayurveda, Ashmari utpatti (Ashmari production) occurs due to the vitiation of Tridoshas (Vata, Pitta, and Kapha), especially the accumulation of crystallized substances caused by factors like improper diet, lifestyle, and genetics, leading to the formation of stones in the Mutravaha Srotas (urinary tract). This process involves an imbalance in the Doshas, particularly Kapha, which results in the aggregation of earthy, solid materials that form calculi, or Ashmari [2]. Classical symptoms include *Basti shoola* (pain in the bladder region), *Arochaka* (loss of appetite), *Mutrakrichha* (dysuria), *Basti-shiro vedana* (pain in the bladder and head), *Mushka vedana* (testicular pain), *Shepha vedana* (penile pain), *Jwara* (fever), *Avasada* (fatigue), and foul-smelling urine (*Bastigandhi mutra*). In this case, a 24-year-old female reported to the outpatient department (OPD) with complaints of right flank pain, backache, nausea, headache, abdominal heaviness, and burning micturition. Based on clinical evaluation and ultrasonography, she was diagnosed with *Mutrashmari*. Imaging revealed an 8 mm calculus located in the mid-calyx of the right kidney. She was managed with an Ayurvedic regimen consisting of *Trivikram Ras*, *Hazaralyahud Bhasma*, *Shweta Parpati*, and *Varunshigru Kwath*, administered for a period of three months & Achha-snehapana for 21 days in shaman matra. This case study highlights the therapeutic potential of herbomineral formulations in the management of *Mutrashmari*, emphasizing their role in fragmentation and expulsion of calculi, supplemented with dietary regulations and lifestyle modifications.

Keywords: Trivikram ras, Hazaralyahud Bhasma, Sweta parpati and herbomineral drug

Introduction
encountered health problems. Almost all authoritative Ayurvedic texts provide detailed descriptions of this condition. The prevalence of urolithiasis varies across countries, and within India, the so-called “stone belt” is concentrated in states such as Gujarat, Rajasthan, Punjab, Haryana, Delhi, and parts of the northeast. In contrast, southern regions report comparatively fewer cases, possibly due to dietary practices such as the regular use of tamarind. Epidemiological data suggest that nearly 12% of the Indian population is affected by urinary calculi, with up to half of these cases progressing to renal damage or kidney failure. Furthermore, approximately 15% of people living in northern India experience this disorder. Among the various clinical presentations, abdominal pain is particularly distressing, often drawing both the patient’s attention and the clinician’s concern [3].

Preventive strategies emphasize dietary regulation and lifestyle modification as essential measures to reduce the recurrence of renal stones. Stone formation within the urinary tract occurs when urine becomes highly supersaturated with minerals, leading to processes of crystallization, growth, aggregation, and retention in the kidneys. Globally, about 80% of calculi are composed of calcium oxalate combined with calcium phosphate [4].

From an Ayurvedic perspective, *Ashmari* is a major disorder of the *Mutravaha Srotas* (urinary system). Classical texts recommend both *Shamana Chikitsa* (palliative measures) and *Shalya Chikitsa* (surgical management) for its treatment. All forms of *Ashmari* are considered *Tridoshajanya* (arising from the vitiation of all three doshas), and are classified into four subtypes: *Vatashmari*, *Pittashmari*, *Kaphajashmari*, and *Shukrashmari*. In modern medicine, surgical intervention is often the ultimate line of treatment, yet it carries significant risks and does not guarantee prevention of recurrence. Ayurveda, on the other hand, offers a wide range of non-invasive therapeutic options for effective management of renal calculi.

Patient Information

A 24-year-old female reported to the OPD on January 25, 2025, with complaints of burning micturition, acute pain in the left flank radiating from the loin to the groin, associated abdominal and back discomfort, nausea, vomiting, and dysuria. She had been diagnosed with renal calculi one month earlier and was on allopathic medication, which provided only partial and temporary relief. However, her symptoms recurred, prompting her to seek further treatment. After reporting USG (left mild hydroureter nephrosis due to 8 mm calculus), the radiologist advised them to consult an urologist for surgery. The patient was unwilling for surgery, so she came to CSMSS Ayurvedic College and Hospital, Chhatrapati sambhajinagar in the OPD department of Shalyatantra.

Clinical findings

General Physical Examination

- **Built:** Moderate built
- **Pulse rate:** 78 beats/min (rhythm and character- N)
- **Respiratory rate:** 20 breaths/min
- **B.P.:** 120/70 mm
- **Hg Appetite:** Poor
- **Micturition:** 5-6 times/day, burning
- **Bowel habit:** Regular
- **Sleep:** disturbed Clubbing: Absent Icterus: Absent
- **Lymphadenopathy:** Absent
- **Pedal edema:** Present

Dashvidha Pariksha

- **Prakriti:** Vata-Kapha
- **Vikriti:** Vishamsamveta
- **Sara:** Madhyam
- **Samhanan:** Pravara
- **Satva:** Madhyam
- **Aharashakti:** Madhyam
- **Vyayamashakti:** Avara
- **Pramana:** Madhyam
- Ashtavidha Pariksha
- **Nadi:** Regular
- **Vata-Kapha**
- **Mala:** Samanya
- **Mutra:** Burning
- **Jihva:** Samanya
- **Sparsha:** Samanya
- **Drika:** Samanya

Treatment

In Ayurvedic medicine, *Snehapana* is described as a specialized form of internal operation therapy (*Snehakarma*) particularly beneficial in the management of *Mutrashmari* (urinary calculi). It is especially recommended in the early stages of the condition.

स्नेहः स्वेदो मृदुत्वं च दोषाणां चापि सानुगाः।
मार्गान् स्नेहस्वेदसंशुद्धाः सुलभं पनुगामिनो ययुः॥ (च. सू. १३/१४)

The procedure involves the administration of Go-*ghrita for 21 days*, in a controlled dosage pattern typically 20 ml empty stomach for first 7 days then 30 ml for next 7 days & 40 ml for last 7 days. This method is believed to lubricate the urinary passages, pacify aggravated *Vata* and *pitta doshas*, and facilitate the smooth expulsion of calculi while alleviating associated pain and inflammation [5].

The treatment protocol includes medicine and diet to complete curing from Ashmari. (a) Ayurvedic medicine (Aausdadh)-Trivikram ras 250mg twice a day with Madhu, Hazaralyahud 250mg a day with Madhu, Sweta parpati 500 mg twice a day with Madhu and Varunshigru Kwath 20 ml twice in a day. Take all these medications after food. (b) Dietary habit (Aahar)-Take Kulathi Dal in powder form or make sprouts or dal. Patients should be strongly encouraged to consume enough fluids to produce 2 L/day because conservative management is the forced increase in fluid intake to achieve a daily urine output of at least 2 litres. Increased urine output may have two effects [6]. First, mechanical diuresis prevents urinary stagnation and the formation of symptomatic calculi. The creation of dilute urination alters the supersaturation of stone components. The patient is advised to avoid a protein, and calcium-rich diet (meat, egg, milk, paneer and other dairy products) and oxalate-rich food like tomato, spinach, ladyfinger, and capsicum. Salt restrictions have been widely recommended as an essential element of dietary prevention of recurrent nephrolithiasis. Carbonated water may also confer some protective benefits. Soda flavoured with citric acid may decrease risk, whereas those with phosphoric acid may increase stone risk. Citrus juices, particularly lemon and orange juices, may be a valuable adjunct to stone prevention. A diet high in fruits and vegetables imparts a reduced risk for stone formation over diets high in animal protein.

In lifestyle limitation (Vihar)-Stop long-time urine holding habit and avoid sedentary behaviour.

Follow UP and Result

After giving a prescription of medicine to the patient and getting an investigation, the patient was advised to regularly follow up after 15- 15 days, later two times after 30-30 days. Complete relief in the right side of flank pain, nausea, headache, heaviness in the abdomen and mild to moderate relief in burning micturition after 15 days. Mild pain remained but was on and off in nature till the fourth week. The patient was advised to further repeat ultrasonography of the whole abdomen after the fourth week. A repeat USG scan showed a smaller decrease in the size of the renal calculus of the right kidney. After the scan, the patient was counselled to continue the same treatment, diet and follow-up lifestyle confinement to complete improvement from renal calculus.

After the third visit, the patient did not complain of pain in the flank region. The patient continued with the same treatment, and another scan was performed. The last USG findings showed no renal calculus. The patient had no adverse effects during the whole treatment period. After stopping the medication, there was no need to take any Ayurvedic or allopathic drugs or undergo surgical intervention.

Discussion

The treatment regimen prescribed in this case demonstrates a wide spectrum of therapeutic actions, including *Ashmari Bhedana* (lithotriptic), *Mutrala* (diuretic), *Vedanasthapana* (analgesic), *Shothahara* (anti-inflammatory), *Bastishodhana* (supportive of renal function), *Daha Shamaka* (relieving burning sensation), and *Deepana-Pachana* (enhancing digestion and metabolism) [7]. Collectively, these properties contribute to the effective disruption of the pathogenesis of *Ashmari*. The pharmacological activities of the individual medicines are as follows:

Varuna Tvak Churna and Varunadi Kwatha
Experimental studies on albino rats with urolithiasis have shown that *Varuna* possesses strong antilithogenic and anti-crystallization properties. One of its key constituents, lupeol, has been reported to inhibit the enzyme glycolate oxidase, which is responsible for converting glycolate into oxalate. Since oxalate readily combines with calcium to form renal calculi, suppression of this enzyme reduces oxalate production and thereby decreases the risk of stone formation. Additionally, *Varuna* exhibits potent diuretic action, which prevents urinary stasis and promotes the elimination of crystals through continuous flushing of the urinary tract.

Shweta Parpati
This formulation is recognized as one of the most effective Ayurvedic alkalizers. It exerts multiple therapeutic effects, including diuretic, analgesic, anti-inflammatory, and urinary-supportive actions. By enhancing renal blood flow and promoting urine output, it improves kidney function. Its alkalizing nature also creates an unfavorable environment for bacterial growth in the urinary tract, thereby reducing the risk of infection.

Chandraprabha Vati
A classical polyherbo-mineral preparation, *Chandraprabha Vati* is widely considered to be highly beneficial for renal health. It aids in the fragmentation and expulsion of calculi due to its *Kapha-Vata Shamaka* and *Mutrala* properties. In addition, its antimicrobial and anti- inflammatory activities help in preventing urinary tract infections (UTIs) and hydronephrosis often associated with renal stones. Preclinical studies have further demonstrated that *Chandraprabha Vati* can restore elevated levels of antimicrobial peptides such as Tamm-Horsfall protein and normalize inflammatory markers in experimental models of UTI.

Hazrulyahud Bhasma
The litholytic activity of *Hazrulyahud Bhasma* is attributed to its *Ashmaribhedana* (stone-breaking) and *Mutrala* (diuretic) effects. In vitro evaluations conducted in artificial urine have shown that it significantly inhibits crystal formation and promotes dissolution of calculi, confirming its efficacy in the management of urolithiasis.

Conclusion
Patients suffering from renal calculi often experience varying levels of pain, which significantly interfere with their daily activities [8]. While surgical intervention can provide complete relief, many individuals prefer conservative approaches to avoid the physical and psychological burden associated with invasive procedures. Ayurveda provides a wide spectrum of safe and effective therapeutic options for the management of renal stones without adverse effects. The outcomes of this case study suggest that the prescribed Ayurvedic treatment protocol demonstrated considerable efficacy in relieving symptoms and facilitating the elimination of calculi, thereby highlighting its potential as a reliable approach in the management of renal calculi [9].

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