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A Case Study on the Effect of *Sringaveradi Choorna* in the Management of *Mootrasmari* w. s. r to Renal Calculi

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ABSTRACT

Renal calculi is one of the most common diseases of the urinary tract. It is a stone-like body composed of urinary salts bound together by a colloid matrix of organic materials. Pain is the main symptom. Majority of the patients suffer from fixed dull ache in the renal angle. Pain is also felt anteriorly in the corresponding hypochondriac region. Occasionally haematuria is the leading and only symptom. The treatment principle of renal calculi in contemporary science includes both invasive and non-invasive procedures, most of which are highly expensive.

In *Ayurveda* classics, *acharyas* have given a detailed description regarding urinary stones which is known as *mootrasmari*. According to *Ayurveda*, *asmari* is a dreadful disease similar to *anthaka* (god of death) which is to be treated with medicine if it is of recent onset and when its size increases it requires *chedana* (surgery). Many formulations with *asmari bhedaka* property have been mentioned in *ayurveda* literature which are cost effective, devoid of complications and provide wide scope for the successful treatment of *mootrasmari*.

The *asmarihara yogas* when used in the initial stage of renal stone can reduce the need of surgery. This case study with *sringaveradi choorna* proves its effectiveness in the management of Renal calculi.

Key Words *Mootrasmari, Renal calculi, Sringaveradi Choornam*

Received 20th September 2024 Accepted 22nd November 2024 Published 10th January 2025

INTRODUCTION

Renal calculi are a relatively common issue, but they are less frequent than urinary tract infections and prostate problems¹. The incidence and prevalence of this disease is rising worldwide over time². According to the National Health and Nutrition Examination Survey (NHANES) data from 2007-2010, approximately 19% of men and 9% of women will develop at least one stone during their lifetime³. Urinary calculi are hard

mineral deposits formed in the kidney or urinary tract, made up of urinary salts and colloid matrix of organic materials⁴. Stones with small size (<5mm) may pass on their own through urine with medical expulsion therapy. But large stones may require procedures such as ESWL, PCNL, ureteroscopy etc. or open surgery for their removal⁵.

The aetio-pathogenesis, clinical features, classification, prognosis, complications and

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treatment, including both medical and surgical management of the disease *Mootrasmari*, are detailed in *Ayurveda*. Although it is considered as a *mahavyadhi*, if treated in the initial stage, it offers a good prognosis, but may require surgical intervention in the later period⁶.

Currently, drug treatment and percutaneous techniques are considered the standard procedures for removing renal stones from the body. However, Shock wave lithotripsy is associated with complications like traumatic effects, infection, and persistence of residual stone fragments which can lead to recurrence. Furthermore, due to its high cost, many patients cannot afford this treatment⁷.

Sringaveradi choorna, which contains *Sringavera*, *Yavakshara*, *Pathya* and *Kaleetaka* (*Darvi*), is one of the formulations mentioned in *Bhavaprakasha* in *Asmarirogadhikara*⁸. The drugs in this *choorna* possess *mootrala*, *soolaghna*, *sothahara*, *mootrakrichrahara* and *asmanashana* properties.

CASE HISTORY

A 36 year old male patient presented with pain in both flank region, low back ache, burning sensation and painful micturition since 1 week. On USG, it was diagnosed as Renal calculi. There was no previous history of Urolithiasis or any other significant medical illness. Patient had no history of Diabetes Mellitus, Hypertension, dyslipidemia or Thyroid dysfunction. He was not under any medication for any ailments.

Family History: No relevant history

Personal History:

Bowel: Regular

Appetite: Good

Micturition: 9-11 times/day, 1 time/night

Sleep: Disturbed

Water intake: 1 ½ L/24 hours

Physical Examination: Patient was well built

B.P: 120/80 mm of Hg

P.R: 76 bpm

Height: 168 cm

Weight: 86 Kg

Systemic Examination:

CVS: NAD

CNS: NAD

RS: NAD

GIT: No organomegaly on palpation

Urinary system: Grade 1 tenderness over B/L renal angle

Symptoms and Signs

- ❖ Pain in renal angle- Grade 1 (present, in undisturbed level)
- ❖ Burning micturition- Grade 2 (unbearable)
- ❖ Dysuria- Grade 3 (constant mild dysuria)
- ❖ Tenderness in renal angle – Grade 1 (mild tenderness in renal angle)

Investigations:

❖ Urinalysis (5/09/23): Pus cells: 18-20/hpf - Grade 4

RBCs: 0-2/hpf - grade 1

Bacteria: seen/hpf

❖ Ultrasonography of abdomen & pelvis (15/09/2023):

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Table 1 Drugs of Sringaveradi choornam

DRUG	RASA	GUNA	VEERYA	VIPAKA	KARMA
SRINGAVERA⁸	<i>Katu tiktha</i>	<i>Laghu Snigdha</i>	<i>Ushnam</i>	<i>Madhuram</i>	<i>KaphaVatasamaka Vedanasthapana soolaprasaman, sothahara vatanulomana</i>
YAVAKSHARA	<i>Katu</i>	<i>Laghu Rooksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kaphavatahara, soolahara Asmari -mootrakrichrahara</i>
PATHYA	<i>Lavanavarjitha kashayarasa pradhana pancharasa</i>	<i>Laghu Rooksha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshahara Vatasamaka Mootrajanana Asmarinasana Vedanasthapana Srothovibandhahara Soolahara sothahara</i>
KALIYAKA	<i>Tiktha kashaya</i>	<i>Laghu Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Pittasamaka Sothahara Vedanasthapana</i>

The Calculus in the left kidney of size 3.5mm and the other Calculus in right kidney of size 3.4mm were not found (Figure 01, 02). There were no e/o hydronephrosis / focal caliectasis which was present in the previous USG report (Table 02).

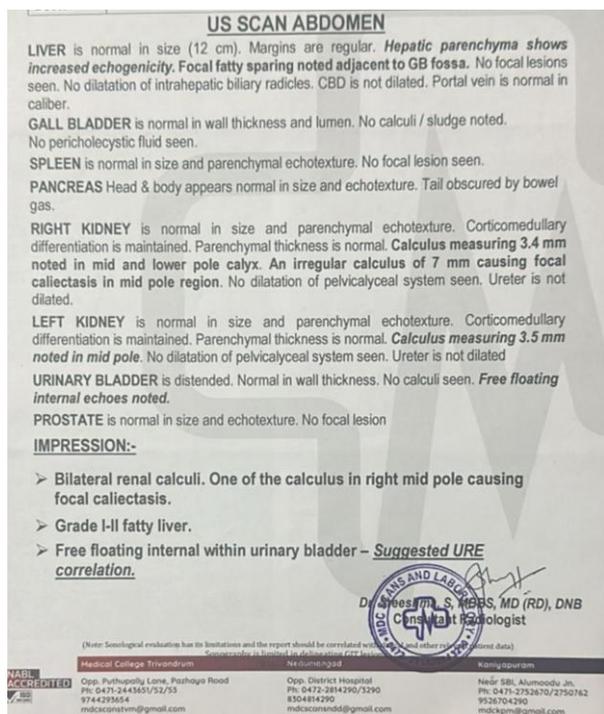


Figure 1 USG Before treatment

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Table 2 Effectiveness of the trial drug over time

Sl.no.	Assessment criteria	Before treatment	On 15 th day	After treatment
1	Pain in renal angle	Grade 1	Grade 0	Grade 0
2	Burning micturition	Grade 2	Grade 1	Grade 0
3	Dysuria	Grade 3	Grade 1	Grade 0
4	Tenderness in renal angle	Grade 1	Grade 0	Grade 0
5	Haematuria	Grade 1	Grade 1	Grade 0
6	Pus Cells	Grade 4	Grade 2	Grade 1
7	Size in USG	Rt kidney: 3.4mm,7mm Lt kidney:3.5mm		Rt kidney: Only 1 calculi-4.3mm Lt kidney: no calculi

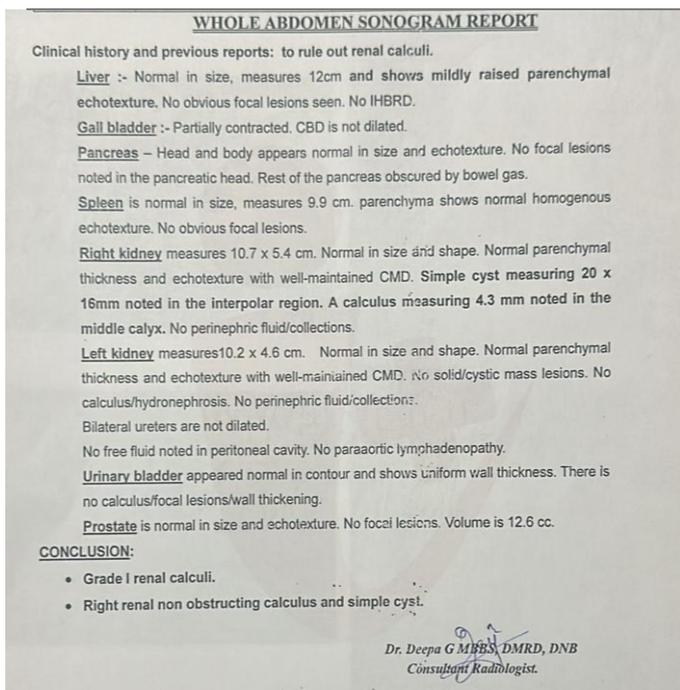
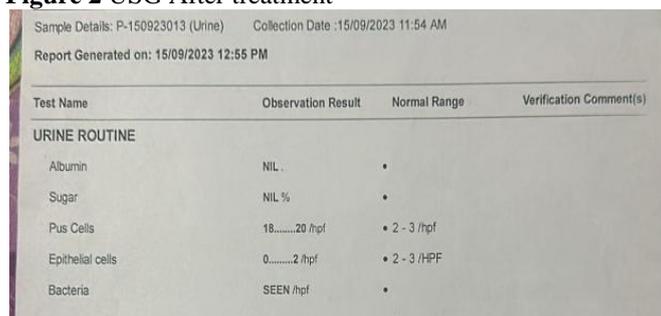


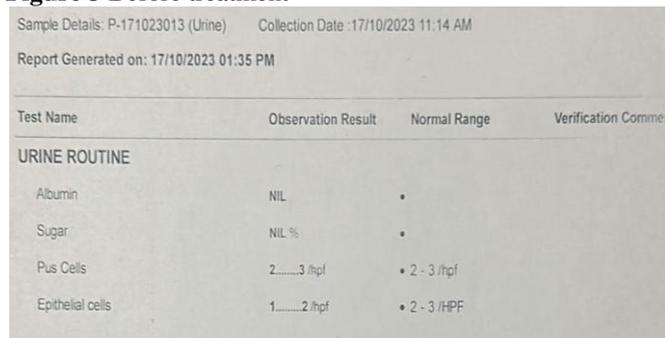
Figure 2 USG After treatment



Sample Details: P-150923013 (Urine) Collection Date :15/09/2023 11:54 AM
Report Generated on: 15/09/2023 12:55 PM

Test Name	Observation Result	Normal Range	Verification Comment(s)
URINE ROUTINE			
Albumin	NIL	•	
Sugar	NIL %	•	
Pus Cells	18.....20 /hpf	• 2 - 3 /hpf	
Epithelial cells	0.....2 /hpf	• 2 - 3 /HPF	
Bacteria	SEEN /hpf	•	

Figure 3 Before treatment



Sample Details: P-171023013 (Urine) Collection Date :17/10/2023 11:14 AM
Report Generated on: 17/10/2023 01:35 PM

Test Name	Observation Result	Normal Range	Verification Comment
URINE ROUTINE			
Albumin	NIL	•	
Sugar	NIL %	•	
Pus Cells	2.....3 /hpf	• 2 - 3 /hpf	
Epithelial cells	1.....2 /hpf	• 2 - 3 /HPF	

Figure 4 After treatment

DISCUSSION

- *Asmari* is a *kapha pradhana tridoshaja vyadhi* in which *kapha* acts as the substratum for stone formation, vitiated *vata* is responsible for the development of *teevra vedana* and *kricchra mootra nissarana* (dysuria) whereas vitiated pitta causes *sadaha* (burning micturition) and *saraktha mutrata* (haematuria). Stagnation of urine for prolonged time in urinary system leads to an increase in concentration of urine and infection which further speed up the process of stone formation. So *mootrasmari* must be treated by using drugs with *tridoshaghna* especially *vatasleshmahara*, *anulomana srotosodhana*, and *mootrala* properties.
- *Yavakshara* possesses the properties regarding to disintegration and expulsion of stones (*asmarihara*) and can produce total relief in signs and symptoms of renal calculi (*mootrakrichrahara*)⁹.
- *Hareethaki* and *dadhimastu* are having *srothomargavisodhana* property might have resulted in clearing of the obstruction of the channels.
- The *Mootrajanana* property of *hareethaki* helps in reducing the solute concentration of

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urine, inhibits the bacterial growth and helps in expelling the stone out. Hareethaki also have mutrakrichrahara and asmari nasana properties¹⁰.

- *Sulaprasamana, sothahara, anulomana* and *mootrala* properties of the drugs might have helped to relieve the spasm, pain and localized inflammation of urinary tract.

- *Rasayana* property of hareethaki may help to prevent the recurrence of stone formation and improves overall health of the patient.

Hence from the study it can be assumed that the drug have lithotriptic, antispasmodic, antimicrobial, anti-inflammatory, analgesic and antioxidant properties. The drug proved its role in reducing the signs and symptoms of calculi ie; pain and tenderness over renal angle, dysuria, burning micturition, hematuria and puscells in urine and also disintegration, reducing the size and expulsion of the stones.

CONCLUSION

The current case study reveals the effect of Sringaveradi choorna in reducing the size of the renal stone and its symptoms. The drug was able to reduce the dull aching pain in the renal angle, burning micturition, dysuria, tenderness in the renal angle, hematuria, and pus cells in urine. After 30 days of intake of medicine, the USG report showed no evidence of renal calculi of size 3.5mm in the left kidney and 3.4mm in the right kidney which showed its effectiveness in disintegration and expulsion of the renal stone. One calculi of 7mm size reduced to

4.3mm. Definitely this is an easily available, simple to use, and cost-effective yoga and can be advised for the management of renal calculi.

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