Journal for ReAttach Therapy and Developmental Diversities
eISSN: 2589-7799
2023 September; 6(7s): 1186 - 1190

Role Of Ayurvedic Treatment In The Management Of Ashmari W.S.R. To Ureteric Stone – A Case Study

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ABSTRACT

Introduction: *Acharya Sushruta* has mentioned the *Asthmahagada Roga*, one of among which is *Ashmari* (Nephrolithiasis). In this era, it has become a global problem with a prevalence rate of 15% in the northern India and a notable recurrence rate, influenced by dietary and lifestyle changes. *Ashmari* (renal stone) is one of the most common disease of *Mutravaha Strotas* (urinary system) which occurs due to improper filtration of the Kidney.
Materials and methods: In this case, a 35-year-old patient attended the OPD on 24/01/2023 with a complaint of acute flank pain which was radiating in nature and associated with indigestion, vomiting and dysuria. Before coming to the hospital, she had already a diagnosed case of renal calculi. In this case, an attempt is made to study the effect of *Aushadh* like *Trivikram Ras, Varunadi Kwatha,* Syrup Cystone along *Sheeta Prabha Vati*.
Result: There is a reduction in left renal calculi and the dilation of the left ureter is over resulting in normal size of the left ureter noticed after the USG done on 24/02/2023.
Discussion: Here, filtration is affected due to the nucleation of crystals. *Ayurvedic* treatment including *Shamana* (pacification therapy) is adopted to reduce the size of renal calculi.

Keywords: *Ashmari, Mutravaha srotas, Trivikram ras, Varunadi kwatha*

INTRODUCTION:

Renal stones, also known as Nephrolithiasis or Urolithiasis (ICD-10-CM Diagnosis Code N20.0, 2024)[1], are a prevalent condition affecting the urinary tract. In Northern India, 15% of the population suffers from renal stones[2]. The condition is more common in men (12%) than women (6%), with peak incidence between 20-40 years and a decline after 50 years[3].

It involves four stages: supersaturation, nucleation, crystal growth, and aggregation. It causes pain, lost work time, hospitalizations and renal failure too. Nephrolithiasis accounts for 2-3% of end-stage renal cases when associated with nephrocalcinosis[4]. Renal calculi have various causes, with hot and dry climates significantly contributing to their formation. This is why "Punjab, Haryana, Bihar, Rajasthan and Madhya Pradesh" are the major kidney stone prevalent states in the Indian continent[5]. Urolithiasis has a high recurrence rate of 35-50%[6]. Surgical methods for managing calculi often fail to prevent recurrences and can have side effects like renal hematoma, stricture etc. Therefore, alternative herbal medications are gaining importance in the treatment of Urolithiasis.

In *Ayurvedic* texts, renal calculi are referred to as *Mutra-Ashmari*. In *Ayurvedic* literature it is classified under *Astmahagada Roga* (disorders that are difficult to cure).[7] Since *Basti* (bladder) is one of the *Trimarma* (three vital organs), *Ashmari* is considered a serious ailment[8]. There are four main types of *Ashmari* i.e., *Vataj, Pittaj, Kaphaj* and *Shukraj*.[9]

MATERIAL AND METHODS

A. Particulars of Patient:
Name- XYZ
Age- 35 yrs/F
Place- Uttaranchal Charitable Hospital, Dehradun
Reg. No. – 5906
D.O.A.-24-01-2023
D.O.D. - 24-02-2023

B. Chief Complaint: Abdominal Pain along with nausea and difficulty in urination since 4 months.

C. History of Present Illness: The patient was asymptomatic until four months ago when she began experiencing sporadic, colicky pain on the left side of her abdomen, radiating from the loin to the groin with nausea, burning sensation,

and difficulty urinating, especially at the start of micturition. Absence of any type of past illness. Personal History shows decrease in appetite, burning sensation in urine along with dysuria and absence of any type of addiction.

D. Examination at the time of admission:
i. General Condition: Fair
ii. Respiratory System Examination – Chest B/l clear with no added sound
iii. Cardiovascular System Examination- S1 and S2 sound are normally heard with cardiac dullness within normal limits.
iv. Abdominal Examination: On Inspection- Abdomen is globular with absence of any caput medusa, **Palpation-** Abdomen is soft. Moderate tenderness present at left side renal angle, **Percussion-** No shifting of dullness is present in 9 regions of abdomen. No fluid thrill detected, **Auscultation-** Peristaltic movements present.

E. Modern parameters: BP- 126/80mm Hg, Pulse-76/min, RR- 18/min. Water intake- 2-3ltrs/day

F. *Ayurvedic* Parameters: ***Prakriti*** *– VP*, ***Vikriti****-Prakriti sam samvet*, ***Sara*** *- Madhyam*, ***Samhanan****- Madhyam* ***Aahar****-Aalp (Abhyavarana shakti*-less than 2-3 meals per day, *Jaran shakti*=absence of all *Jirna Ahar lakshan* upto 5 hrs.after meal intake), ***Satmya****-Deepan-Pachan Dravya* , ***Satva*** *- Aalp* , ***Vyay****-Madhyam* , ***Vyayam*** *- Aalp* , ***Pramana****-Madhyam* (BMI= 23.5)

G. Assessment criteria:
After Non contrast computed tomography of the abdomen and pelvis region, Ultrasonography is the safe and standard examination for detecting Urolithiasis[10].

Table 1. Subjective Parameters

1. **Pain (*Vedna*)**	**Grades**
No pain	0
Occasional pain relieved spontaneously	1
Occasional pain relieved by treatment	2
Constant dull ache	3
2. **Dysuria (*Mutrakrichhrata*)**	**Grades**
No dysuria	0
Occasional dysuria	1
Occasional dysuria relieved by treatment	2
Constant dysuria	3
3. **Tenderness in Renal angle (*Basti Vedna*)**	**Grades**
No tenderness	0
Mild tenderness	1
Moderate tenderness	2
Severe tenderness	3
4. **Turbid Urine (*Atiavila Mutrata*)**	**Grades**
Crystal clear fluid	0
Faintly cloudy or smoky	1
Turbidity clearly present but newsprint easily read through test tube	2
Turbidity present newsprint not easily read through test tube	3

L) Therapeutic Intervention:
After obtaining informed written consent and following ICH-GCP guidelines, the patient underwent the following intervention.

Table 2. Oral Medications for 1 month

Sr.No.	Name of Drug	Dose of Drug	*Aushadh Kala*	Frequency
1.	*Trivikram Rasa* (*Ras trangini*)	125mg	After meal intake	B.D (Bis a day)
2.	*Sheetprabha Vati*	250mg	After meal	B.D
3.	*Varunadi Kwatha*	40 ml	Before meal	B.D
4.	Tb. Cystone	250 mg	After meal	B.D

Table 3. *Aahar Chikitsa* for 1 month

Aahar	***Pathya***	***Apathya***
Diet	Plenty of water, *Amla rasa Pradhan bhojan*	Protein & Oxalate rich food, Calcium supplements

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OBSERVATION AND RESULT:

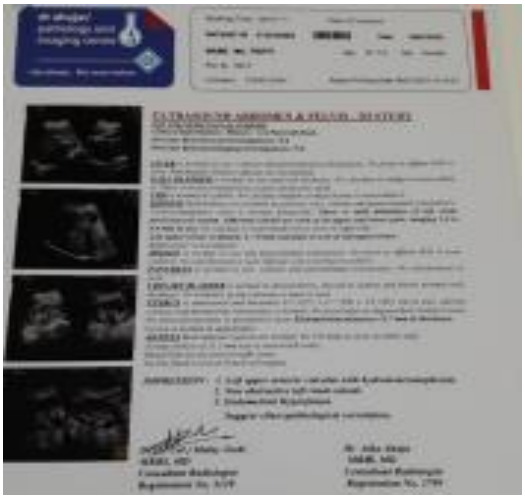
After 1 month of treatment, observations showed improvement. The differences before and after the treatment are detailed in the provided tables.

Table 4. Improvement in subjective and objective Parameters:

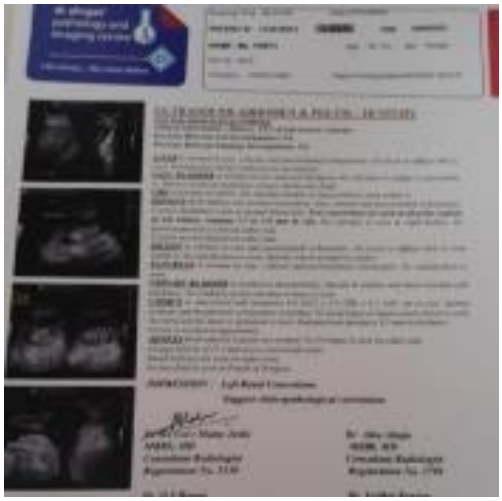
Sr. No.	Subjective Parameters	(BT)	(AT)
1.	*Vedna*	3	1
2.	*Mutrakrichhrata*	2	0
3.	*Basti Vedna*	2	0
4.	*Atiavila Mutrata*	1	0

Table 5.

Objective Parameters		
1. Investigations		
	18/1/23	**24/2/23**
Red blood cells	Occasional/hpf	Occasional
Pus cells	9/hpf	2-3/hpf
Cast	-	-
Epithelial cells	1-2/hpf	1-2/hpf
Protein	-	-
2. USG Findings		
· Left upper ureteric calculi with hydro-ureteronephrosis. · Non-obstructive left renal calculi.	· Left renal concretions. · No Hydronephrosis.	



Pt. report 18/1/23



24/2/23

DISCUSSION:

Modern science identifies two main aspects of Urolithiasis pathogenesis: physiochemical changes in urine (pH, stone matrix, protective substances) and increased urinary excretion of stone-forming substances (calcium, phosphorus, uric acid)[11]. In Ayurveda, the major factors responsible for *Ashmari Roga* are *Asamshodhana* (improper detoxification) and *Apathya sevan* (unwholesome diet and lifestyle). *Dusti* of *Apan Vayu* causes unvoiding of *Mala* and reduced urine volume due to *Kapha Dosha* saturation, leading to *Mala* accumulation and stone formation. Hence, medicine which are *Tridoshshamak, Deepan-pachan, Mutral, Chedan and Ashmari Bhedan* are useful in the treatment of *Ashmari*.

Probable Mode of Action of intervention:
The intervention proved highly effective for calculi ranging in size from 3.4 to 4.4 mm in the left upper pole and lower pole calyx and 7 mm in the left upper ureter causing a back pressure effect on the left kidney.

1. ***Sheetprabha Vati*:[12]** It contain *Sweta Parpati* & *Hajrul yahood bhasma* as active ingredients. *Shweta parpati* is mainly indicated in *mootravaha srotovikara* & *hajrul yahood bhasma* is having *Mootrala* and *Ashmari Bhedana* actions. It contains *Surya Kshara, Sphatika and Navsadara*. *Kshar* possess *Bhedan* and *Lekhan* properties and it neutralize the acidic media and prevent hyperconcentration of urine. *Sphatika* is a *Mutrakrichragahn Dravya* which helps in breakdown of *Ashmari*. As E. coli is a significant contributor in Urolithiasis formation. It also possesses anti-microbial, diuretic and anti-inflammatory actions. *Hajrul yahood bhasma* shows antilithiatic actions. *Sheetaprabha vati* decreases and prevents the growth of the calcium oxalate crystals in urinary tract and thus renal calculi formation.

2. ***Trivikram Rasa*:[13]** Its main ingredients are *Tamra bhasm, Parad* and *Gandhak*. According to *Ras Trangini*, it possesses *Lekahan* and *Ropan* properties. *Tamra Bhasm* having *Kshaya, Madhura, Amla Rasa* and *Laghu, Ruksha, Ushna guna* with *Ushna Virya*. It is a rich source of copper and reduces *Kapha* which is the main *dosha* of *Ashmari.* Acc.to a research study took place on the role of copper on renal calculi, there is non-linear negative association between dietary copper intake and kidney stones.[14]

3. ***Varunadi Kwatha*:** The main ingredients of *Varunadi Kwatha* are *Varuna, Gokshur, Shunthi, Pashanbheda* and *Yavakshara*. Bark of *Varuna* contains saponin and tannin which is diuretic, demulscent and helps in pacification of *Kapha Dosha*.[15] *Yavkshar* is alkaline having pH of 11.73 which helps in reducing acidic media and prevent calculi. *Pashanbheda* meaning "Stone breaker" helps in treatment of *Ashmari* due to its diuretic and lithotropic action.[16] Due to presence of *Katu, Tikta rasa, Shunthi* act as *Deepan-Pachan dravya* and helps in pacification of *Kapha Dosha* and *Amotpatti*.

4. **Cystone:** The main ingredients of Cystone tablet are *Shilapushpa, Hajrul yahood bhasma, Shilajeet, Apamarga and Pashanbheda etc.* Its hypotheical effect is to "prevent supersaturation of lithogenic substances, correct the crystalloid-colloid imbalance and control oxamide which is a substance that precipitates stone formation from the intestine. Cystone inhibits lithiogenesis by reducing oxalic acid, calcium hydroxyproline, etc, and causes their expulsion. It also results disintegration of the calculi and crystals by acting on the mucin, which binds the particles together.[17]Cystone also shows antispasmodic and anti-inflammatory activities which helps in relieving ureteric colic and alleviate symptoms".

CONCLUSION:

The intervention proved effective. A 7.0 mm calculus in the left upper ureter with hydro-ureteronephrosis, present before treatment, was relieved along with concretions and no hydronephrosis after 1 month of treatment. This formulation also significantly reduced pain intensity (76%), stone size, and dysuria. After observing this satisfactory type of result, we can say that extension of duration of this intervention may result full reduction in size of stone and complete relief of symptoms.

FINANCIAL SUPPORT: Nil

CONFLICT OF INTEREST: There are not any conflicts of interest.

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