

A CLINICAL STUDY TO EVALUATE THE EFFICACY OF SHIGRUMULA KWATHA WITH YAVAKSHARA IN THE MANAGEMENT OF MUTRASHMARI W.S.R. TO UROLITHIASIS

Haritha A. H.^{1*}, Balendra Singh², Uttam Kumar Nirmalkar³, Alka Lakra⁴, Nobal Dansena⁵ and Pavan Dhangar⁶

¹MS Scholar, Department of Shalya Tantra, GAC Raipur C. G.

²Professor & HOD, Department of Shalya Tantra, GAC Raipur C. G.

³Reader, Department of Samhita Siddhant, GAC Raipur C. G.

⁴MS Scholar, Department of Shalya Tantra, GAC Raipur C. G.

⁵MS Scholar, Department of Shalya Tantra, GAC Raipur C. G.

⁶MS Scholar Govt Ayurveda College Raipur C. G.

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***Corresponding Author**

Haritha A. H.

MS Scholar, Department of
Shalya Tantra, GAC Raipur
C. G.

ABSTRACT

Since ancient times Ashmari is mentioned in Ayurvedic texts. Ashmari is a disease related to the urinary system (Mutravahasrotas). Mutrashmari is described under Asthamahagad (difficult to cure) in Ayurveda.^[1] It possesses symptoms such as Iwara (Fever), Basti Pida (Discomfort and pain in the bladder), Aruchi (Anorexia), Mutrakriccha (Difficulty in micturition), Bastishira Vedana (Pain in Urethra), Mushka Vedana (Pain in testicles) and Shepha Vedana (Pain in the penis) have been described in Ayurvedic classical texts.^[2] A 49-year-old male patient visited OPD, with complaints of pain in the left side of the back and abdomen, Nausea and Vomiting. The USG reported calculus measuring 4.8 mm in size seen in the left kidney with the normal functioning of vitals. The patient was treated with Shigramula kwatha and Yavakshara twice daily in OPD basis. The patient was

advised initially follow up after 7 days and later after every 15 days. Along with medication, the patient was also advised to follow diet and lifestyle restrictions. The patient got relief in signs and symptoms and the USG report showed no evidence of calculi in the left kidney on 45th day.

KEYWORDS: Ashmari, shigramula kwatha, Yavakshara.

INTRODUCTION

The history of Urolithiasis dates to the dawn of civilization and are chronicled in most extant ancient medical texts. In Ayurvedic classics anatomy of urinary system, formation of urine and mechanism of the stone formation are explained in detail. Ashmari specifically called as Mootrashmari is a disease of Mootravaha Srotas. It is considered as one among the eight most deadly diseases, which has been described elaborately in Ayurvedic classic. Acharya Sushruta has delt separate chapter for this disease. The symptoms of Mootrashmari, like excruciating pain over Nabhi, Vasti, Sevani and Medra during micturition, aggravation of pain during running, jumping, walking long distance etc.^[3] They can be compared with the symptoms of Urolithiasis of modern science.

According to Acharya Sushruta dietary factors, lack of proper purification of body are responsible for formation of calculi. Mootravarodha also has a role in it. The process is described that when Kapha dosha is vitiated due to improper Ahara and Vihara, it reaches urinary system and gets dried up by vitiated Vayu to form the Calculus.^[4] Diagnosis of kidney stones is made based on information obtained from the history, physical examination, urinalysis, and radiographic studies. Clinical diagnosis is usually made based on the location and severity of the pain, which is typically colicky in nature (comes and goes in spasmodic waves). Pain in the back occurs when calculi produce an obstruction in the kidney.

In Modern science management of Urolithiasis includes Analgesics, Antispasmodic, Antibiotics in case of associated infection, diuretics etc. The use of medications to speed the spontaneous passage of stones in the ureter is referred to as medical expulsive therapy. Surgical interventions like ESWL, Ureteroscopy surgery, are also the possibilities of current times but recurrence rate is still high.

Since ancient times many of the drug therapies are being used as lithotripter and diuretic to reduce the sufferers of the excruciating misery. Researchers are relentlessly pursuing their quest to identify the drugs having lithotripter action. In Ayurveda a lot of effective, easily available medicines are mentioned for Mootrashmari. Among them I choose Shigramula kwatha with Yava kshara to evaluate the efficacy in the management of Ashmari.

CASE REPORT (MATERIAL AND METHOD)

A 49 years old male has come to shalya tantra OPD of govt ayurveda college Raipur on 08/09/2023 with presenting complaints of intermittent pain on left side of back. He also had nausea and vomiting. Duration – 1 week.

History of presenting illness

The patient was alright 3 months back, afterwards he started feeling spasmodic pain on right side of back and abdomen, nausea, and vomiting. 2 months back he had an acute attack of pain and was admitted in modern hospital. He was diagnosed Urolithiasis, he got symptomatic relief by treatment. After some days he again started same issues and continued modern medicines. So, he came govt ayurveda hospital Raipur for better management.

Past history

He had no history of DM, HTN, Asthma and Hypothyroidism or any other surgery.

Family history

Father has HTN, hemorrhoids. Mother – nothing.

Personal history

Occupation – construction work

Appetite – poor

Bowel- 0-1 times daily- irregular bowel habit

Water intake – nearly one Ltr before calculi diagnosis. After 2-3 Ltr

Urine output- 4-5 times daily.

Sleep- disturbed.

Clinical examination**Ashtavidha pariksha**

Nadi – Vatapitta

Mutra- 5-6 times daily

Mala – 0-1 times daily

Jishva- not coated

Shabda- clear

Sparsha- ushna

Druk- normal

Akriti – Madhyama

Inspection

No abnormality detected.

Palpation

Elicited tenderness on left lumbar region of abdomen and back. No other abnormality detected during the general and systemic examination.

Vital parameters were found normal.

USG of Abdomen & Pelvis– 10/09/2022

A small 4.8mm non- obstructing calculus is seen in lower pole pf left kidney. No evidence of mass or Hydronephrosis is seen in either kidney.

Diagnosis

Mootrashmari (Urolithiasis).

Therapeutic intervention

Shigrumula kwatha 50ml + Yava kshara 500mg BD for 30 days

Followup- Every 7 days for 1 month then Every 15 days for next month.

Along with medication, diet and lifestyle changes were also advised strictly. He was advised to take plenty of water and avoid protein rich food like egg, meat soybean, dairy products and oxalate rich foods like spinach, tomatoes, lady finger, chocolates. Cold drinks processed foods were also restricted. Avoid calcium supplements and avoid suppression of urinary urges.

1. Shigru^[5]

Botanical name	Moringa oleifera Lamk
Family	Moringaceae
Rasa	Katu, Tikta
Guna	Ruksha, Laghu, Teekshna
Virya	Ushna
Vipaka	Katu
Parts used	Roots
Doshaghnata	Vatakapha samaka
Roghaghnata	Ashmari, Vranshotha, Gulma, Vidradhi, Agnimandya, Shoola, Krimi,

	<i>Mutrakrichchhra, Shirashoola, Amavata, Sandhivata, Nadidaurbalya, Pakshaghata, Ardita, Aruchi, Udararoga, Hriddaurbalya, Kasa, Rajorodha, Kashtartava, Medoroga, Netraroga, Visha, Chharmaroga.</i>
<i>Karma</i>	<i>Medohara, Dipana, Rocana, Vidahakara, Sangrahi, Sukrala, Hridya, Caksusya, Swayathuhara, Krimigna, Visagna, Vranahara, Kusthahara, Soolahara, Swasahara, Jwaragna Vedanasthapana, Shirovirechana.</i>
<i>Dose</i>	<i>Swarasa 20-30ml Decoction 40-50ml</i>

Chemical Constituents

Aqueous and alcoholic extracts – Urolithiatic activity. Also possesses both preventive and curative property.^[20]

Methanolic extracts – Stimulate kidney and Liver function.^[21] Methanolic and aqueous extracts – Anti-inflammatory action.^[22] Campesterol, Stigmasterol, Avenasterol – Diuretic Activity.^[22]

Other chemical contents of Root bark^[19] – 2 Alkaloids, moringine and moringinine, Root – Spirochin, stem – 4 hydroxy mulleins.

- Drug sample Authentication done by CSIR- National Institute of Science Communication and Policy Research - Authentication No: NIScPR/RHMD/Consult/2022/4302-03-1.
- Drug Analysis done by DRUG TESTING LABORATORY AVAM ANUSANDHAN KENDRA, RAIPUR, CHHATTISGARH.

Loss of drying- 4% Total Ash – 8.66% Acid insoluble ash- 2%

Water soluble extractive- 1.4% Alcohol soluble extractive- 1.8%

2. Yava^[6]

Botanical name	Hordeum vulgare
Family	Gramineae
Rasa	<i>Madhura, Kashaya</i>
Guna	<i>Laghu , Ruksha</i>
Virya	<i>Ushna</i>
vipaka	<i>Madhura</i>
Parts used	<i>Whole plant</i>

<i>Doshaghnata</i>	<i>kaphapitasamaka</i>
<i>karma</i>	<i>Mutrala, Mutrakrichchra, Lekhna, Medohara. Rogaghnata: Prameha, Vrana, Medoroga, Sthoulya, Ashmari, Amashula, Mutrakrichha, Vatodara, Pliharoga, Gulma, Grahani, Hridroga, Arsha.</i>
Dose	Kshara : 500mg per day

Chemical Constituents

Ethanolic extracts – Anti-Urolithic potential and antioxidant activity.^[28,29] L-leucine and L-glutamine- Diuretic activity.^[30]

Hordenine and its derivatives, Pyrrolidine, Cynoglucosides, Tannins, Flavonoids, Glycosides - Luteolin and Orientin.

- LABORATORY AVAMANUSANDHAN KENDRA, RAIPUR, CHHATTISGARH.

Loss of drying-1.5%

Total Ash – 95%

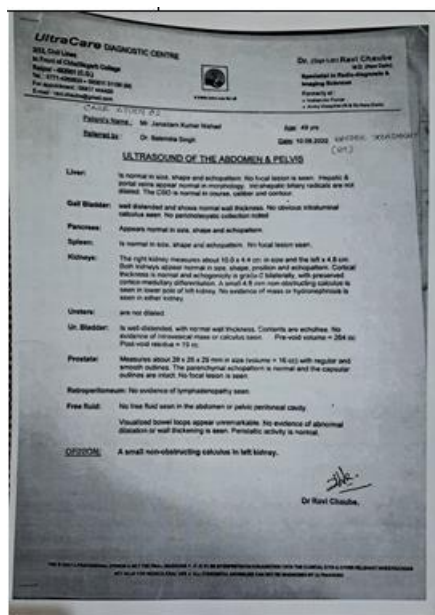
Acid insoluble ash- 45%

Water soluble extractive- 61.2%

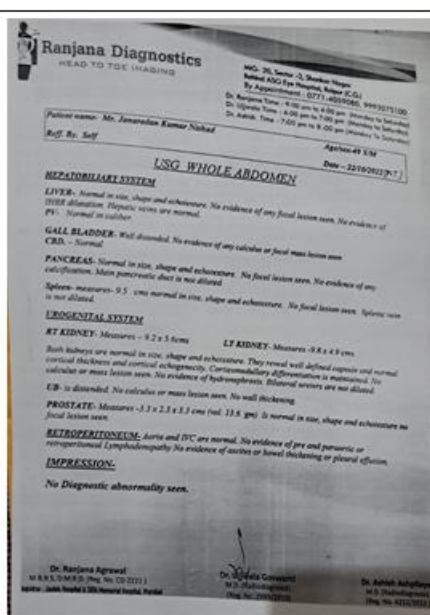
Alcohol soluble extractive- 2%

Follow up timeline

Date	Details
17/09/2022	Nausea and vomiting was relieved. Left side back pain was still there. Continue with same medication.
24/09/2022	Frequency of pain and intensity was mildly decreased. Continue with same medication.
02/10/2022	Intensity of pain is decreased. Continue with same medication.
11/10/2022	He had no pain and tenderness on left side of back. Continue with same medication.
16/10/2022	He was free from pain and other associated symptoms. Continue with same medication. Advised to do repeat USG.
22/10/2022	On USG- No diagnostic abnormality seen. Continue with same medication.
30/10/2022	Stop medication.



Before treatment



After treatment

Discussion on Mode of Action of Medicine

1. Shigrumula kwatha

Shigru is Katu, Tikta Rasa, Ruksha Laghu and Teekshna in guna. It is Ushna veerya and Katu Vipaka. This drug is VataKapha shamaka in nature. Deepana pachana property of Shigru helps to resolve ama avastha which precipitate Srotorodha and there by calculus formation. In every treatment the first point is Nidana parivarjjana and Samprapti vighattana.

The Antimicrobial activity- Krimigna guna of Shigru helps to reduce Urinary infection caused by retension of urine. Shigru has specifically Vedanasthapaka and Shoolahara karma and this itself reduces pain. Shigru has Swayathuhara property means anti-inflammatory in action, this is due to the presence of Methanolic and aqueous extracts as chemical components. In Samhitas there mentioned the Mutrakrichhrahara guna of Shigru in detail.

Methanolic extracts, Campesterol, Stigmasterol and Avenasterol these chemical constituents of Shigru have diuretic activity^[7] and there by resolves Mutrakrichchhra or Dysuria and Burning micturition. Vrana hara property helps to resolve the trauma maid by calculi in ureter and Rajorodha action is effective in Hematuria. Aqueous and alcoholic extracts of Shigru have Urolithiatic activity.^[8,9] Also possesses both preventive and curative property of Urolithiasis.

2. Yava kshara

Yava has Madhura Kashaya rasa, Laghu Ruksha guna, Ushna veerya and Madhura vipaka. This drug is Kaphapitta shamaka in nature. Antimicrobial activity of Yavakshara helps to reduce urinary tract infection and that reduces pain also. Yava kshara has Mutrala, Mutrakrichchhara property according to Ayurveda.

By Studies it is proved that L-leucine and L-glutamine chemical contents present in this drug is responsible for diuretic action.^[10] Thus, Yavakshara resolves dysuria and burning micturition. Yava kshara has Lekhana bedhana property that is why this is mentioned in the management of Mootrashmari.

According to studies Ethanolic extracts present in Yavakshara possess Anti-Urolithic potential and antioxidant activity^[11] and thus the points in the Samhita in the context of Ashmari chikitsa became valuable. Yavakshara also has Vranahara and Shoolahara property so this is helpful in reducing pain and hematuria.

CONCLUSION

Shigrumula kwatha and Yavakshara effectively disintegrated the pathogenesis of Ashmari, providing complete relief in pain and expulsion of calculus. This case shows an effective conservative management of Ashmari by Ayurvedic medicines with no adverse effects.

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