A comprehensive review article on ayurvedic approach of Mutrashmari and its treatment through Herbal formulations.

Dr. Ajinkya Vilas Tapkir[1], Dr Ravindra Prabhakar Dhandge[2]
[1,2]*Associate professor, Kayachikitsa, Dr. Vedprakash Patil Ayurved College, And Research Center*

***Abstract*—Ayurveda is the only science which gives more importance on prevention of disease and maintenance of health rather than treating a disease. Mutra means Urine and Ashmari means a structure resembling stone. Etiopathogenesis, clinical features, type and prognosis of Ashmari are well described in Charaka Samhita and Susrutha Samhitha and other classical texts. Due to causative factors like imbalance Ahara Vihara (unwholesome diet and living habits) aggravated Kapha dosha reaches in urinary system and dries up to form the calculus. According to Acharya Vagbhata suppression of urge of passing urine results in crystallization and precipitates into calculus formation. There are many factors responsible for Mutrashmari formation i.e., Due to bad lifestyle, sleeplessness, odd diets, heavy consumption of fast food, preserved foods, Deficiency of Vitamin A, Intake of antacid drugs, Thyroid disease, Excess intake of particular food item, long term use of catheter, Gastric surgery, Obesity, Infection in kidneys. Geographical conditions are also responsible for Mutrashmari. There are many formulations in texts to treat Mutrashmari i.e., Pashanbhedadi Kwath, Pashanbhed Churna, Gokshur Churna, Gokshuradi Guggulu, Varanadi kashayam, Veerataradi kashaya, Chandraprabha vati, Punarnavashtaka kashaya, Punarnavadi guggulu, Elakanadi kwatha, Trivikrama rasa, Shilajatu vati, Jawaharmohra pishti, Godanti (karpoora shilajatu) bhasma are medicine used to treat Mutrashmari in Ayurveda. We can reduce and manage this rising problem of Mutrashmari through modifying lifestyle, purification therapy and medication.**

***Index Terms*—Mutrashmari, Ayurveda, Ahara Vihara, Kashayam**

I. INTRODUCTION

Ayurveda the science of life provides the extensive knowledge about each and every aspect of life. Many ayurvedic texts – Ashtanga Hridaya, Sushruta Samhita etc also explained in detail the causes, symptoms, diagnosis, precautions and treatment. The formation of stone is one of the common problems of urinary system and as per modern science only few medicines are available for such condition along with surgery. It is second most common disease of urinary tract with high recurrence rate. Ayurveda described Mutrashmari as urinary calculus disease of Mutravaha Srotas and considered as Asthamahagada. Charak has explained the samprapti of Mutrashmari in Trimarmiyadhyaya of chikitsa sthan. Along with kapha dosha in mutravaha strotas vitiated vata dosha lead to ashamari formation. Ayurvedic classical literature has emphasized many Nidana of Ashmari i.e., Asmashodhana (Improper body detoxification), Apathya sevana(Improper food habits), Ativyama, Vidahi ahara, Teekshnoushadha, Rooksha ahara, Atiadhwa, Nidra alpata, Lavana ahara. Ayurveda described various treatment approaches for the management of disease; use of herbs, ayurvedic formulations and Kshara etc. This article presents a review on Mutrashmari. It is believed that in India approximately 5% to 8% people are suffering from the disease now a day. This article aimed to deal with ayurveda and modern perspective of Mutrashmari, its complication and treatment.

II. MATERIAL AND METHOD

Ayurvedic classics named Charak samhita, Sushruta samhita, Astang hridya, textbooks and online data bases have been studied thoroughly to understand the concept of Grahani.

III. CONCEPT OF MUTRASHMARI

Samprapti: According to Ayurveda

Ashmari involve development of a calculus as a foreign body inside the urinary system; kidney, ureter and bladder.

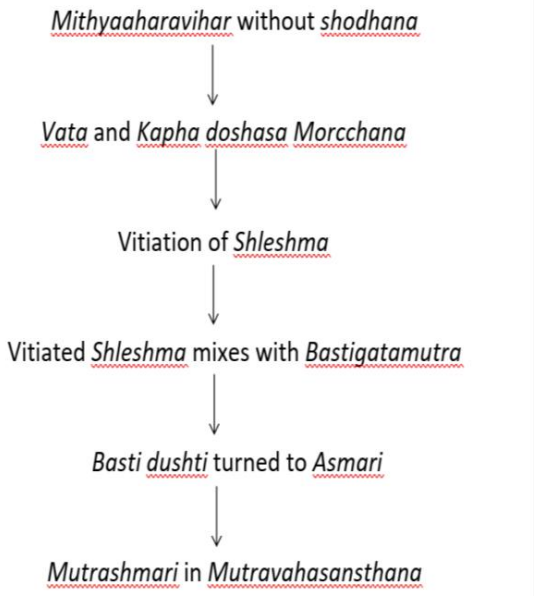

Fig. 1 Samprapti of Ashmari

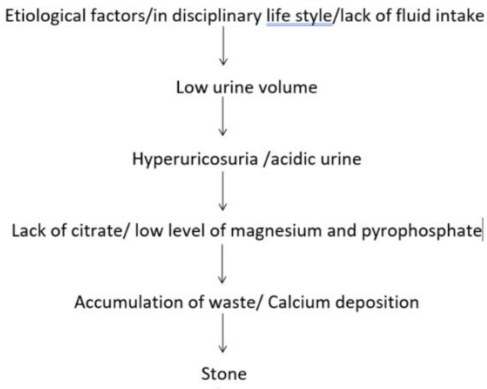

Fig. 2- Pathogenesis as per Modern Science

IV. CLASSIFICATION

As Per Ayurveda: Ayurvedic science described four types of Ashmari.

1. Vataja Ashmari
2. Pittaja Ashmari
3. Kaphaja Ashmari
4. Shukraja Ashmari

As Per Modern Science: There are mainly five basic types of stones.

1. Calcium oxalate stone
2. Calcium phosphate stone
3. Ammonium stone
4. Uric acid stone
5. Amino acid stone

Table 1 – Types of Mutrashmari

S. No.	Types of Mutrashmari	Description
1.	Vataja Ashmari	Dusty coloured, rough, hard and irregular stones, Severe pain during passage of urine and stools, it resembles uric acid stones.
2.	Pittaja Ashmari	Reddish, Blackish, Yellowish, Honey coloured, burning sensation and ushnavata, resembles calcium oxalate, uric acid, cystine stone.
3.	Kaphaja Ashmari	Whitish, Dysuria, incising and pricking pain, resembles calcium phosphate stone
4.	Shukraja Ashmari	Mainly found in adults, frequent coitus or coitus interruption. Dysuria, swelling and lower abdominal pain.

Ashmari mainly occur in man than women around 18 – 40 years of ages. The modern approaches of treatment involve use of extra corporeal shock wave lithotripsy, leaser techniques, open surgery and leproscopy surgery etc, while Ayurveda Sushruta Acharya, Charaka Acharya and Vagbhata recommended use of drugs (herbs and formulation) followed by Ghrita, Kshara, yavagu, kshir or kwatha and surgical approaches for the management of disease.

V. DIAGNOSIS

Diagnosis of kidney stone is possible by physical examination and other laboratory investigations.

1. Physical examination by observations of pain sites.
2. Blood investigation for calcium, phosphorus, uric acid, electrolytes, blood urea nitrogen, creatinine, kidney function.
3. Urine examination for crystals, bacteria, blood cells, pus cells.
4. Ultrasound examination for size, shape and location of calculi.
5. X-ray of abdomen.

VI. UPADRAVA

Panduta – as diseased kidney cannot secrete erythropoietin, anemia occurs
Karshya – longstanding dormant renal calculi may give rise to wasting of muscle Ushnavata, kukshishoola, trushna, hrutpeeda, aruchi, vami

Asadhya Lakshana

- Prashuna nabhi vrushan
- Baddhamutra
- ruja
- ashmari sikata sharkaranvita.

VII. AYURVEDIC MANAGEMENT OF MUTRASHMARI

Aushadhi Yojana
Drugs acting with following properties should be used.

- Ashmari bhedana – promotes crushing of ashmari
- Ashmari paatana – helps in flushing out of ashmari of small size
- Mutrala /bastishodhak – promotes diuretic action
- Mutra shulaghna/ basti shulaghna – relieves pain (spasmolytic action)
- Mutrakrichrahara – soothing and antimicrobial action against urinary pathogens
- Mutranulomak/ mutravibandhaghna – helps in relieving the barrier caused by ashmari
- Pittashamak – soothing action
- Kshiprameva bhinnati – promotes crushing of stone quickly
- Chirakari ashmari/ praghadha ashmarihara – helps in flushing chronic and dormant stones located in kidney.

Acharya Sushruta, Charaka and Vagbhata mentioned several types of approaches for the management of disease such as; Shamana therapy i.e. Snehana, Teekshana ushana, Ashmari bhedana, Mutrala dravyas, Shodhana therapy, Kshara.

Formulations useful in Urinary calculi:
1. Pashanbhedadi Kashaya
2. Pashanbhed Churna
3. Gokshur Churna
4. Gokshuradi Guggulu
5. Varanadi kashayam
6. Veerataradi kashaya
7. Chandraprabha vati
8. Punarnavashtaka kashaya
9. Punarnavadi guggulu
10. Elakanadi kwatha
11. Trivikrama rasa
12. Shilajatu vati
13. Jawaharmohra pishti
14. Godanti (karpoora shilajatu) bhasma
15. Apamargkshara and Yavakshara

Surgery:
Acharya Sushruta has explained in detail about the indication of surgery and surgical procedures to be adopted in case of urinary calculi in Chikitsa sthana – 7th chapter.
Acharya Vagbhata also explained the surgical procedures based upon the ideology of Sushruta in Ashtanga hridaya Chikitsa sthana – 11th chapter.

YOGA – For Mutrashmari
1. Varunasana
2. Paschimothanasana
3. Dhanurasana
4. Pawanmuktasana
5. Utta padasana

Pathya-Apathya in Mutrashmari:

Table 2: Pathya- Apathya Ahara Vihara

Pathya Ahara	Pathya Vihara
Cereals- Puraan Shali, Puraan Sathi (old varieties of rice), Rakta-Shali (red variety of rice), Syamaka (Sanwa-barnyard millet), Kodrava (Kodo millet rice), Trina-dhanya, Godhuma (wheat), Yava (Barley).	Basti-Karma Virechana Vamana Langhana Swedana
Pulses- Kulattha (Horse gram), Moonga (split green gram), Aadhaki (split pigeon peas).	Playing in water
Vegetables- Old fruit and leaves of Kushmanda (pumpkin) plant, Chaulai saag (Amaranthus).	Removing of Ashmari with the help of Yantra
Aushadha- Gokshura, Varuna, Aardraka, Pashanabheda, Yava-kshara, Renuka, Shalaparni, Punarnava.	
Other- Ghrita, drinking water	
Apathya Ahara	Apathya Vihara
Citrus, constipating, sour and heavy to digest eatables and drinks.	Ativyayama, holding the force of micturition and ejaculation

The modern approach for treatment:

1. Conservative treatment:
- Increased fluid intake to dilute the urine
- Specific antibiotic to prevent and cure infection
- Adequate balanced diet eg. Vitamin A, diet quantity

2. Non operative mechanical methods:
- ESWL
- Ultrasonic lithotripsy
- PCNL

3. Surgical treatment:
- Pyelolithotomy
- Nephrolithotomy

VIII. DISCUSSION

From the study of ancient surgical treatise, it becomes evident that the urological problems form an important part of medical deliberations. Perhaps, this can be the reason for detailed description of the urinary system related disease i.e., Mutrashmari -Urolithiasis in our Ayurvedic texts. Old literature gives a clear idea of disease that it has come into existence from the very beginning. Ayurveda has a broad spectrum of modalities of Mutrashmari by which not only cures the disease but can also prevent it through various types of treatments as-Nidanprivarjana Sanshodhan, Sanshaman, and Shastra Karma.

The clear-cut cause of the disease is still unknown. But in Ayurveda, Kapha dosha in increased quantity has been accepted as the main reason for the formation of Mutrashmari. Where as in Modern Science they have considered so many causative factors for the stone formation, but stone has been seen even in those patients also, where those factors were not present. So, in total, the etiology of the disease is still unknown.

IX. CONCLUSION

Ayurveda system of medicine and lifestyle explains several ways to prevent the occurrence of Mutrashmari. Ashmari (Urinary calculi) is a dreadful disease and its pain is intolerable and is often irritant and disturbs normal day-to-day activities. The altered food habits, sedentary life, geographical conditions, consumption of salty food and less intake of water are the main cause for the formation of kidney stones as well as worsening of the disease. Ayurveda described various treatment approaches for the management of disease; use of herbs, ayurveda formulation and Kshara, etc. The good conduct of life (Ahara- Vihara) also play vital role towards the management of disease.

REFERENCE

[1] M. J. Thun and S. Schober, “Urolithiasis in Tennessee: An occupational window into a regional problem,” *American Journal of Public Health*, vol. 81, no. 5, pp. 587–591, May 1991.

[2] S. R. Khan, M. S. Pearle, W. G. Robertson, G. Gambaro, B. K. Canales, S. Doizi, O. Traxer, and H. G. Tiselius, “Kidney stones,” *Nature Reviews Disease Primers*, vol. 2, Art. no. 16008, 2016.

[3] B. Tripathi, Ed., *Ashtanga Hridaya of Vagbhat*, Sutrasthana, Ch. 4, Verses 5–6. Reprint ed. New Delhi: Chaukhamba Sanskrit Pratishthan, 2013, p. 55.

[4] V. Shukla and R. Tripathi, Eds., *Charaka Samhita of Charaka*, Chikitsasthana, Ch. 26, Verse 36. Reprint ed., p. 630.

[5] Y. Trivkamji, Ed., *Sushruta Samhita of Sushruta* with *Nibandha Sangraha* Commentary by Dalhana, Nidanasthana, Ch. 3, Verse 4. Reprint ed. Varanasi: Chaukhambha Subharati Prakashan, 2009, pp. 45–46, 144, 277, 279, 436.

[6] N. H. Sofia, K. Manickavasakam, and T. M. Walter, “Prevalence and risk factors of kidney stone,” *Global Journal for Research Analysis*, vol. 5, pp. 183–187, 2016.

[7] P. Sadanand Sharma and M. Banasarajidas, Eds., *Rasatarangini*, Ch. 24, Verses 59–61, 11th ed. Delhi: Motilal Banarsidass, p. 337.

[8] A. Shastri, Ed., *Sushruta Samhita of Sushruta*, Nidanasthana, Ch. 3, Verse 3. Reprint ed. Varanasi: Chaukhambha Subharati Prakashan, 2001, p. 311.

[9] H. Mohan, *Textbook of Pathology*, 5th ed. New Delhi: Jaypee Brothers Medical Publishers, 2015, p. 715.

[10] N. S. Williams and C. J. K. Bulstrode, *Bailey & Love’s Short Practice of Surgery*, 25th ed. London: Hodder Arnold, 2010, Ch. 71.

[11] K. R. Srikantha Murthy, Ed., *Madhava Nidanam* with *Roga Viniscaya* Commentary, 6th ed. Varanasi: Chaukhambha Orientalia, 2004, p. 115.

[12] B. Mishra, Ed., *Bhavaprakasha*. Reprint ed. Varanasi: Chaukhamba Prakashan, 2010.
[13] S. Mishra, Ed., *Bhaishajya Ratnavali* with *Siddhiprada* Commentary, Part II. Reprint ed. Varanasi: Chaukhambha Subharati Prakashan, 2007, p. 690.
[14] P. Sadanand Sharma and M. Banasarajidas, Eds., *Rasatarangini*, Ch. 24, Verses 24 and 72, 11th ed. Delhi: Motilal Banarsidass, p. 340.
[15] B. Mishra Shastri, Ed., *Bhava Prakash* with *Vidyotini* Hindi Commentary, Uttarardha, *Ashmari Rogadhikara*, 6th ed. Varanasi: Chaukhambha Sanskrit Sansthan, 1997.
[16] A. D. Shastri, Ed., *Bhaisajya Ratnavali* of Kaviraj Govind Das Sen, Revised 18th ed. Varanasi: Chaukhambha Sanskrit Sansthan, 2005, p. 718.
[17] L. Sastri, Ed., *Yogaratnakara*. Reprint ed. Varanasi: Chaukhambha Prakashan, 2015, p. 75.
[18] H. P. Tripathi, Ed., *Harita Samhita*, 2nd ed. Varanasi: Chaukhambha Krishnadas Academy, 2009, p. 397.
[19] N. S. Williams and C. J. K. Bulstrode, *Bailey & Love's Short Practice of Surgery*, 25th ed. London: Hodder Arnold, 2010, Ch. 72.