



Review Article

AETIOPATHOLOGICAL AND ANALYTICAL EVALUATION OF *MUTRASHMARI* AND ITS MANAGEMENT THROUGH AYURVEDA

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ABSTRACT

Mutrashmari is a common problem in primary care practice. In India, more than 1 million cases are reported per annum and another report said that the expectancy of 12% of the total population is prone. *Mutrashmari* can cause severe colic radiating pain in the region of kidneys, abdomen, bladder, glands, penis or perineum gives an important clue to the presence of urinary calculi with foul smell, nausea and sometimes hematuria also. Many treatments of modern medical science are present but they are costly and the reoccurrence of the formation of stone cannot be prevented. **Introduction:** *Mutra* means urine and *Ashmari* means a structure resembling stone. In Ayurveda, due to causative factors like imbalance *Ahara*, *Vihara* (unwholesome diet and living habits) and aggravated *Kapha dosha* reaches the urinary system and dries up to form the calculus. There are many factors responsible for *Mutrashmari* formation i.e., due to bad lifestyle, sleeplessness, odd diets, heavy consumption of fast food, preserved foods etc. **Aim:** To study the etiopathogenesis of *Mutrashmari* and its Ayurvedic management. **Objectives:** To find out the causative factors behind this high prevalence and also to find out the cheap, easily available Ayurvedic modalities to treat and prevent the *Mutaashmari*. **Data Source:** Charak Samhita, Sushruta Samhita, Ashtanga Hridaya, modern medical textbooks, journals and online databases. **Results & Conclusion:** 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 *Sastra Karma*. **Conclusion:** The study concludes that we can reduce and manage this rising problem of *Mutrashmari* through modifying lifestyle, purification therapy and medication.

INTRODUCTION

Mutrashmari (urinary stone) is the disease of *Mutravaha Srotas* (urinary system) in which a substance is formed like stone. Ayurveda has a concept of *Ashtamahagada* (eight fatal conditions)^[1] in which *Ashmari* is kept among these fatal conditions. It is considered difficult to cure because of its *Marma Ashrayatwa* (vitals parts) due to the involvement of *Basti* (urinary bladder), which is one of the

Tri Marma^[2] (three vital parts), being the *Vyakta Sthana* (manifestation site). It is *Kapha* predominance *Tridoshaja Vyadhi* (all *Dosha* involved). As per the clinical features, it is compared to urolithiasis, mainly formed by the calcium may be due to lack of citrate and the low level of magnesium and pyrophosphate. It is the formation of *Gorochna pitta*^[3] (stony concretions) in the bladder and urinary system. It is the second most common urinary tract disease with a high recurrence rate. In India, more than 1 million cases are reported per annum and another report said that the expectancy of 12% of the total population is prone. *Ashmari* mainly occur in men than women around 18-40 years of age. The prevalence of urolithiasis is approximately 10% in men and 5% in women. The modern approaches to treatment involve the use of extracorporeal shock wave lithotripsy, laser techniques, open surgery and

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laparoscopy surgery etc, while Ayurveda *Sushruta Acharya, Charaka Acharya* and *Vagbhata* recommended use of drugs (herbs and formulation) followed by *Ghrita, Kshara, Vavagu, Kshir* or *Kwatha* and surgical approaches for the management of the disease.

This article aimed to deal with Ayurveda and the modern perspective of *Mutrashmari*, its complication and treatment.

MATERIALS AND METHODS

Charak Samhita, Sushruta Samhita, Chakrapani, other Ayurvedic texts, modern textbooks, journals and online databases were reviewed thoroughly for the study material.

Concept of *Mutrashmari*

In Ayurveda, many diagnoses ways present, but the *Nidana Panchak* [4] is the most important method to diagnose any disease. *Nidana Panchak* is the five *Parikshas* (5 types of examination) of *Roga* (disease). The *Nidana Panchak* of *Mutrashmari* as follows-

***Nidana* (Causative factors):** Ayurvedic classical literature has emphasized many *Nidana* (cause) of *Ashmari* i.e., *Asmashodhana* (improper body detoxification), *Apathya Sevana* (improper food habits), *Ativyama* (over-exercise), *Vidahi Ahara, Teekshnoushadha* (keen, sharp, penetrating drug), *Rooksha Ahara* (light food), *Atiadhwa* (over walk), *Nidra Alpata* (sleep deprivation), *Lavana Ahara* (salty food). [5] 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 a particular food item, long term use of a catheter, gastric surgery, obesity, infection in kidneys, geographical conditions are also responsible for *Mutrashmari*.

Purvaroop (Predromal symptoms)

Pain in the region of kidney, bladder, penis and testes, distension of bladder, dysuria, fever, anorexia and exhaustion. The urine has the odour of a goat. [6] Depending on the dominant *Dosha*, the colour of urine varies. The urine is generally thick, abnormal and is passed with difficulty.

Roopa (Symptoms)

Colicky pain in the region of kidneys, abdomen, bladder, glans penis or perineum gives an important clue to the presence of urinary calculi. The flow of urine is split and bifurcated when the stone obstructs the urethra. On the other hand, the stream of urine is normal and forceful when the stone does not obstruct the urinary passage haematuria occurs when the stone causes ulceration of the mucosa. The patient passes alluvium, i.e., *Sharkara* in *Mutra*. [7]

Upshaya (Pacifying factors) & *Anupshaya* (Aggravating factors)

The pain is aggravated by running, swimming, travelling and abnormal activities. [8]

The pain is pacified by *Kulth Kwath, Kshar* like *Shiva kshar* and other Diuretics drugs.

Samprapti [9]

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

Mithyaaharavihar without *Shodhana*

↓
Vitiation of *Tridosha*, predominantly *Kapha*

↓
Vitiation of *Kledatwa* (liquidity), carried into circulation

↓
Vitiated *Doshas* are carried into *Basti* (urinary system) by *Adho Mutravaha dhamanis* (urinary tract)

↓
Shoshana (absorption) of the *Kapha dosha* *Kapha dosha* attains *Sanghatava* and becomes *Parivridhi* by *Vata* and *Pitta*

↓
Formation of *Ashmari*

↓
Development of *Ashmari* according to *Dosha prakopa*

↓
Margavrodh in *Basti Pradesh*

↓
Vyadhi Lakshan (clinical features)

↓
Upadrava of *Ashmari* (complications)

Classification

As per Ayurveda: Ayurveda described four types of *Ashmari* [10]

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.	<i>Vataja Ashmari</i>	Dusty-colored, rough, hard and irregular stones, severe pain during passage of urine and stools, it resembles uric acid stones.
2.	<i>Pittaja Ashmari</i>	Reddish, blackish, yellowish, honey colored, burning sensation and <i>Ushnavata</i> , resembles calcium oxalate, uric acid, and cystine stone.
3.	<i>Kaphaja Ashmari</i>	Whitish, dysuria, incising and pricking pain, resembles calcium phosphate stone
4.	<i>Shukraja Ashmari</i>	Mainly found in adults, frequent coitus or coitus interruption, dysuria, swelling and lower abdominal pain.

Diagnosis

Diagnosis of kidney stones 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 test.
3. Urine examination for crystals, bacteria, blood cells, and pus cells.
4. Ultrasound examination for size, shape and location of calculi.
5. X-ray of the abdomen (KUB).

Updrava (Complications)

According to *Bhav prakash Nighant*, if *Mutrashmari* not treated properly than complications like *Sliarkameha*, *Sikatameha*, *Bhasmameha* (i.e., passage of sugar-like sand and ash-like particles in urine respectively) anorexia, anaemia, thirst, vomiting, weakness, exhaustion, emaciation, pain in flanks, pain in colon and renal angle, and *Ushnavata*, i.e., pyelitis and cystitis, are appeared.

Ayurvedic Management of Mutrashmari

Ayurvedic Management of *Mutrashmari* is based on the *Nidan Parivarjan* (avoidance of disease-causing and aggravating factors), *Sanshodhan* (body purification), *Sanshamana* (a pacificatory form of treatment) and *Sastra Karma* (surgical interventions).

Ashmari Bhedan, *Patan*, *Shamana* therapy i.e., *Teekshana Ushana*, *Ashmari Bhedana*, *Mutrala Dravyas* (diuretics drugs), *Kshara* etc. *Chkardatta* gives a separate chapter on *Ashmari chikitsa*.

Acharya Sushruta mentioned that *Ashmari* is the *Vyadhirantakpratiko* (fatal disease) *Chikitsa* (by surgery)-

Nidan Privarjan

Avoiding the causative factors mentioned above is the best form of treatment. There can't be any manifestation of disease without taking a causative agent. Because the first aim of Ayurveda is always try to protect the health of a healthy person.

Sanshodhan Chikitsa

Sanshodhan is the process in which unwanted metabolic substances are removed from the body. In *Mutrashmari Tridoshashamak Shodhan chikitsa* (*Snehan*, *Swedan*, *Vaman*, *Virechan*, *Basti* as per requirement *Uttar Basti*) should be given according to the *Roga Rogi Pariksha*.

Sanshamana Chikitsa

Acharya Sushruta, *Charaka* and *Vagbhata* mentioned several types of approaches for the management of disease such as *Teekshana Ushana*, *Ashmari Bhedana*, *Mutrala Dravyas* (diuretics drugs), *Kshara*, etc. *Chkardatta* gives a separate chapter on *Ashmari chikitsa*.

Table 2: Formulations described in Urinary calculi in various Ayurvedic Texts

<i>Churna</i> (Powder)	<i>Pasanbhedadi Churna</i> , <i>Trutyadi Churna</i> ^[11,12] , <i>Trikantak beeja Churna</i> <i>Trikantaka churna</i> with <i>Makshik</i> and <i>Aaviksheer</i> ^[13]
<i>Ghrita</i>	<i>Pasanbhedadyam ghrita</i> for <i>Vataj ashmari</i> <i>Kusadayam ghrita</i> for <i>Pittaja ashmari</i> <i>Varunadyam ghrita</i> for <i>Kaphaja ashmari</i> ^[14,15,16] , <i>Kulathadyam Ghrita</i> <i>Sarpanchmoolaadi Ghritam</i> , <i>Varun Ghritam</i> ^[17,18,19]
Different drugs <i>Yoga</i>	<i>Goksuradi Yoga</i> , <i>Punarnavadi Yoga</i> , <i>Karpasmutryadi Yoga</i> ^[20,21,22] <i>Pichukadi Yoga</i> , <i>Kronchaadi Yoga</i> ^[23,24]
<i>Kasaya</i> (Decoction)	<i>Varunadi Kwath</i> , <i>Sunthadi Kwath</i> , <i>Nagradya Kasaya</i> , <i>Sringyadi Kasaya</i> and <i>panak</i> , <i>Ashmararyadiavlehelaadi Kwath</i> ^[25]
<i>Gana</i>	<i>Mutravirechaniya mahakasay</i> ^[26] , <i>Varunadi Gana</i> for <i>Kaphamedaonivarano</i> , <i>Veertaradi gana</i> , <i>Taranpanchmoola gana</i> ^[27]

Ekala Dravya (single drug)	Gokshura, Varun, Sigru Prayog, Pashanabheda, Punarnava
Kshara	Swet Prapati, Apamargkshara and Yavakshara
Taila (oil preparations)	Veertaradyam Taila, Varunadyam Taila ^[28]
Others	Gokshuradi Guggulu, Punarnavadi Guggulu, Elakanadi kwatha, Trivikrama rasa, Shilajatu vati, Jawaharmohra pishti, Godanti (Karpooora shilajatu) bhasma, Kushmand Swaras.

Shastra Karma

Acharya Sushruta mentioned that Ashmari is the Vyadhirantakpratiko (fatal disease) Chikitsa (by surgery).^[29] Acharya Charaka has explained the Bhedan-Patan Karma for Ashmari.

अक्रियायां ध्रुवो मृत्युः क्रियायां संशयो भवेत्^[30]

Basti region is considered among the three important Marm Pradesha (vital regions) so, Acharya Sushruta described the surgical part as an emergency procedure.

Acharya Sushruta has explained in detail the indication of surgery and surgical procedures to be adopted in the case of urinary calculi in

अथ रोगान्वितमुपस्रिग्धम..... बस्तिगुदविद्धलक्षणं प्रागुक्तमिति^[31]

After completing previous procedures, the stone should remove through the lateral portion of the perineum by incising that area similar to the stone diameter, then withdrawn the stone by curved forceps. The wound should be managed with proper antiseptic precautions. The post operative management should be followed.

Pathya (Do) and Apathya (Don't) in Mutraashmari

Table 3: Pathya and Apathya in Mutraashmari

Pathya (Do) in Mutraashmari	Apathya (Don't) in Mutraashmari
Fluid Intake 3litres of water per day and other liquid	Suppression of Mootra and Shukra Vega (urges)
Pulses- Kulath daal (horse gram), Mudga (green gram) Cereals- Yava, old rice	Avoid over exercise
Vegetables- Kusmanda (wax gourd) swarasa, Adrak (ginger), Choulai (Amarnath)	Intake of sour, Ruksha (dry), Pishtaanna (heavy)
Diet rich in fiber (leafy green vegetables) etc	Tomato etc
Disciplinary lifestyle	Kashaya (astringent) Rasa
Regular bases Shodhan (body purification)	Virudhaahara (Not according to time, place etc)
Food is rich in Vit. A (carrot, fish etc.) and Mg (almonds, bean etc.)	Calcium tablets and other supplements
Yavkshar, Varun Patrashak, Pasanbheda, Gokshura, Shaliparni	Pickles, salt, cold drinks etc

CONCLUSION

Ayurveda system of medicine and lifestyle explains several ways to prevent the occurrence of Mutraashmari. 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 of the formation of kidney stones as well as worsening of the disease. Ayurveda described various treatment approaches for the management of the disease; use of herbs, Ayurveda formulation and Kshara etc. The good conduct of life (Ahara-Vihara) also plays a vital role in the management of the disease.

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