

ASHMARI - AYURVEDIC REVIEW

I. MOOTRASHMARI (Urolithiasis)

Ashmari (Urinary Stone) is the most prevalent, excruciatingly painful, and distressing diseases among the *Mootravaha srotas*, and it has been known to humans since the dawn of time. Humans have been afflicted by *Mootravaha Srotovikaras*, of which *Mootrashmari* is a significant one, since *Vedic Kala*. *Acharya* Sushruta provided the first thorough, scientific description of how to handle *Mootrashmari*, which dates back to the period between 1000 and 1500 B.C. Due to its propensity to disrupt a person's urinary system and life if not treated promptly, *Acharya* Sushruta regarded *Ashmari* as one of the *Ashtomahagada* (Eight horrible diseases). The primary cause of the creation of *Mootrashmari* is *Sroto Vaigunya*, which is brought on by the localization of *Dushita Kapha* either by itself in *Basti* or in conjunction with *Pradushita Vata* and *Pitta*. *Ashmari* has been explained by *Acharya* Sushruta, including its classification, symptomatology, etiology, pathology, medical management, surgical management, complications from surgical procedures, and prognosis.

Etymology (Nirukti): The word *Ashmari* is derived from "Ash" by using the "Annebhyo Drishyate" rule, followed by the suffix "Man," which indicates the quality of the noun by which the word is created and gives it the meaning of "A stone" or a substance that resembles stone. This means the formation of *Ashma* (stone-like) substances.

Ashma = Pebble/ Stone
Rati = to present

- 'अश्मानं राति ददाति या।¹' – *Shabdakalpadruma*

II. DEFINITION

Ashmari refers to the term for compounds that occur in the urinary system that resemble stones (*Ashma*). As per various classical texts, *Ashmari* can be defined as –

- 'तुल्यतामश्मना याति तस्मात्ताम् अश्मरीं विदुः।²' (*Shabdakalpadruma*).
- अश्मरी मूत्रकृच्छ्रात् स्यात्।³ (*Amarakosha*)
- अश्मरी मूत्रकृच्छ्रभेदा⁴ (*Ayurvedic Shabdakosha*)
- रोगमार्गं स्रोतांसि वा विशेषते मूत्रमार्गं सम्भूतम् पाषाणविशेषम्।⁵ (*Ayurvedic Shabdakosha*).

III. SYNONYMS

- Sanskrit : *Ashmari, Ashmarih*
- Hindi : *Patharee*
- Gujarati : *Pathari*
- English : Stone gravel, calculus, calculi
- Latin : Calculus (singular), Calculi (plural)

IV. ETIOPATHOGENESIS

The manifestation of any disease is described by five steps in Ayurveda. These are *Nidana*, *Purvaroop*, *Roopa*, *Upashaya* and *Samprapti*. These are helpful to *Chikitsaka* (physicians/surgeons) to reach a final diagnosis⁶.

1. **Nidana:** The word "*Nidana*" refers to the causes of an illness. Knowledge of *Nidana* is required to accurately diagnose, prevent, and treat disease. *Acharya* Sushruta separately outlines the causes of *Ashmari*, however, *Acharya* Charaka and Kashyap combined them under the heading of *Mootrakrichcha*.

- **According to Sushruta :** *Ashmari* has a wide range of potential causes. *Asamshodhana* and *Apathya Sevana* are the two main causes listed among them.

‘तत्रासंशोधनशीलस्यापथ्यकारिणः प्रकुपितः श्लेष्मा मूत्रसंपृक्तोऽनुप्रविश्य बस्तिमश्मरीं जनयति’⁷

- **Asamshodhanasheela:** A person who refuses to receive *Shodhana* therapy is known as an *Asamshodhanasheela*. For example, ancient *Acharyas* mentioned that *Chaya* of *Vata*, *Pitta*, and *Kapha* occurs in *Grishma*, *Varsha*, and *Shishira Ritu*, respectively, in both healthy and diseased conditions. If these *Doshas* are not removed at this stage, they will progress to *Prakopa* and *Prashara Awastha* and ultimately to the *Bheda Awastha* of *Shat Kriyakala*, which is incurable. When correct *Shodhana* practices are neglected, the *Kitta Bhaga* of digested food and stored *Doshas* precipitate in the urinary system, causing *Ashmari* to develop.
- **Apathya Sevana:** It denotes consuming unfavorable, inappropriate, and unhealthy foods.

Dietary intake and routine have a direct impact on the development of *Ashmari*. In *Ashmari*, *Kapha* is the most prevalent *Dosha*. The use of excessive amounts of *Shita*, *Guru*, *Madhura* and *Snigdha Ahara*, *Diwaswapna*, irregular eating patterns, etc. may vitiate *Kapha Dosha*, which in turn vitiates other *Doshas* and results in *Khavaigunya* in *Mootravaha Srotasa*. Due to this, vitiated *Doshas* began to precipitate in *Mootravaha Srotasa*, eventually forming *Ashmari*.

- **According to Charaka :** *Acharya* Charaka has mentioned the *Nidana* of *Ashmari* under the *Mootrakrichcha* description and quoted it as:

व्यायामतीक्ष्णौषधरुक्षमद्यप्रसङ्गनित्यद्रुतपृष्ठयानात्।
आनूपमत्स्याध्यशनादजीर्णात् स्युर्मूत्रकृच्छ्रणि नृणामिहाष्टौ॥⁸

- *Vyayama* (excessive exercise)
- *Tikshna Aushadha* (sharp medications)
- *Ruksha Madya Sevana* (alcohol ingestion)
- *Drutaprishthayana* (traveling on swift animals)
- *Aanupamamsa Sevana* (consuming meat)
- *Matsya Sevana* (eating fish)
- *Adhyashana* (excessive food consumption)

➤ *Ajirna Bhojana* (undigested food)

All the above states *nidana* leads to eight types of *Mootrakrichcha* (*Vata*, *Pitta*, *Kapha*, *Tridoshaja*, *Ashmari janya*, *Sharakra Janya*, *Shukraja*, and *Raktaja*)

- **According to Vagbhatta⁹**
 - *Snigdha Ahara Sevana* (intake of unctuous food)
 - *Divaswapna* (day sleep)
 - *Ajirna Bhojana* (undigested food)
 - *Madhura Ahara* (ingestion of sweet food)
 - *Adhyashana* (excessive amount of food)
- **According to Kashyapa¹⁰**: *Acharya* Kashyapa has also described the numerous *Nidanas*, but despite those *Nidanas* he also added one other *Nidana* i.e.
- ***Bharavahana on Kati and Skandha***: The development of *Ashmari* is directly related to improper nutritional intake and behavior. This is evident from the aforementioned *Nidana* which vitiates *Kapha Dosha*. In the creation of the *Ashmari*, *Kapha* is the primary *Dosha*. Thus, a diet that increases *Kapha* may result in *Ashmari*.

2. **Purvaroopo (Prodromal Symptoms)**: *Purvaroopo* means prodromal symptoms, which provide a physician with an early warning so they can begin treatment promptly. Additionally, it aids in early disease management and diagnosis at the differential diagnosis stage. The *Ashmari Purvaroopo* hasn't been addressed by *Acharya Charaka*.

According to Sushruta, the *Purvaroopo* of *Ashmari* are

तासां पूर्वरूपाणि ज्वरो बस्तिपीडारोचकौ
मूत्रकृच्छ्रं बस्तिशिरोमुष्कशेफसां वेदना
कृच्छ्रावसादो बस्तगन्धित्वं मूत्रस्येति॥
यथास्ववेदनावर्णं दुष्टं सान्द्रमथाविलम्।
पूर्वरूपेऽश्मनः कृच्छ्रान्मूत्रं सृजति मानवः॥¹¹

The following table manifests the *Purvaroopo* of *Ashmari* as mentioned in different classics.

Table 1: Purvaroopo of Ashmari

Sr. No.	Purvaroopo	Su.	A.H. ¹²	A.S. ¹³	M.N. ¹⁴	B.P. ¹⁵	Y.R. ¹⁶	G.N. ¹⁷
1.	<i>Basti Peeda</i>	+	+	+	+	+	+	+
2.	<i>Aruchi</i>	+	+	+	+	+	+	+
3.	<i>Mootrakrichchha</i>	+	+	+	+	+	+	+
4.	<i>Bastishira Vedana</i>	+	-	+	-	-	-	-
5.	<i>Mushka Vedana</i>	+	-	+	-	-	-	-
6.	<i>Shepha Vedana</i>	+	-	+	-	-	-	-

7.	<i>Jwara</i>	-	+	+	+	+	+	+
8.	<i>Avasada</i>	+	-	-	-	-	-	-
9.	<i>Basta Gandhitva</i>	+	+	+	+	+	+	+
10.	<i>Sandra Mootra</i>	+	-	-	-	-	-	-
11.	<i>Aavila Mootra</i>	+	-	-	-	-	-	-
12.	<i>Asannadesha Paritetiruka</i>	-	+	-	+	+	+	+
13.	<i>Basti Aadhmana</i>	-	+	+	+	+	-	-

3. **ROOPA:** Roopa is a phrase used in the context of diseases when a disease's signs and symptoms fully manifest and are incredibly unique to that particular condition. Modern science does, however, distinguish between symptoms known only to patients (such as pain intensity) and signs known to both the patient and doctor (such as edema, etc.). In our classics, the term *Lakshana* (also known as *Roopa*) refers to a method by which a *Vaidya* might attain his *Lakshya* of understanding the condition, which stands for disease symptoms. According to *Acharya Sushruta*, *Roopa* of *Ashmari* are –

अथ जातासु नाभिवस्तिसेवनीमेहनेष्वन्यतमस्मिन् मेहतो वेदना मूत्रधारासङ्गः सरुधिरमूत्रता
मूत्रविकिरणं गोमेदकप्रकाशमत्याविलं ससिकतं विसृजति
धावनलङ्घनप्लवनपृष्ठयानोष्णाध्वगमनैश्चास्य वेदना भवन्ति।¹⁸

The following table shows the *Roopa* of *Ashmari* according to different classical texts.

Table 2: Roopa of Ashmari

Sr. No	RUPA	Su	Ch ¹⁹	AH ²⁰	AS ²¹	Ha ²²	KS ²³	M ²⁴	BP ²⁵	YR ²⁶
1	<i>Nabhi Peeda</i>	+	-	+	+	+	-	+	+	+
2	<i>Basti Vedana</i>	+	+	+	+	+	-	+	+	+
3	<i>Sevani Vedana</i>	+	+	+	+	+	-	+	+	+
4	<i>Mehana Vedana</i>	+	+	-	-	+	-	-	-	-
5	<i>Mootradhara Sanga</i>	+	-	-	+	-	-	-	-	-
6	<i>Sarudhira Mootra</i>	+	+	+	+	-	-	+	+	+
7	<i>Mootra Vikirana</i>	+	-	-	-	-	-	-	-	-
8	<i>Gomeda Prakasham</i>	+	-	+	+	-	-	+	+	+
9	<i>Atiavilum</i>	+	-	-	+	-	-	-	-	-
10	<i>Sasikatam</i>	+	-	-	+	-	+	-	-	-
11	<i>Dhavana, Plavana, Langhana, Prishtha-yana,</i>	+	-	-	+	-	-	-	-	-

	<i>Adhvagamana Vedana</i>									
12	<i>Vishirnadhara</i>	-	+	+	-	-	-	+	+	+
13	<i>Mridhnati Medhra</i>	-	+	-	-	-	-	-	-	-
14	<i>Shakrita Munchati Mehate</i>	-	+	-	-	-	-	-	-	-
15	<i>Mootrarodha</i>	-	-	+	-	+	-	+	+	+
16	<i>Sukham Mehati Vyapayat</i>	-	+	+	+	+	-	+	+	+
17	<i>Ati Mootratvam</i>	-	-	-	-	-	+	-	-	-
18	<i>Pratatam Roditi</i>	-	-	-	-	-	+	-	-	-
19	<i>Kasamana</i>	-	-	-	-	-	+	-	-	-

Despite these *Lakshana* (Symptoms), *Acharya Sushruta* has also mentioned *Pratitooni* (Intestinal colic) and *Tooni* (Renal colic) in *Vatvyadhinidan Adhyaya*.

The symptoms of *Tooni* are described as the pain manifests from the bowels or urinary system and radiating downwards and rising the bursting sensation in the anal and genital regions. This has been correlated to the colicky pain that occurs in the case of urolithiasis.

According to *Acharya Sushruta*:

मूत्रमार्गप्रवृत्ता सा सक्ता कुर्यादुपद्रवान् ।
दौर्बल्यं सदनं कार्श्यं कुक्षिशूलमरोचकम् ॥
पाण्डुत्वमुष्णवातं च तृष्णां हृत्पीडनं वमिम् ।

These symptoms can be compared with symptoms of ureteric stones. Because the formation of *Mootra* takes place in *Vrikka* i.e. kidney. So, the word *Mootramarga* can be understood as ureter.

4. *Upashaya – Anupashaya*

Upashaya refers to variables which alleviates the signs and symptoms of disease and *Anupashaya* refers to variables which make the illness worse. *Upashaya* is the prescription for combating an illness. *Aushadha*, *Ahara*, *Vihara*, and all other preventative methods that aid in the treatment of disease processes are all included in the *Upashaya*. The *Upashaya* and *Anupashaya* of *Ashmari* are not mentioned in any of the Ayurvedic scriptures. However, *Ashmari* is logically a *Kapha*-predominant illness, thus all actions that contribute to the control of vitiated *Kapha* may be regarded as *Upashaya*. Similar to this, all actions that revoke *Kapha* and all *Nidana* of *Ashmari* may be regarded as *Anupashaya*.

5. ***Samprapti***: *Samprapti* is the progression of any certain disease. It provides clear explanations of the various elements of disease, beginning with its inception and ending

with its expression. *Samprapti* is described by *Acharya Vagbhata* as the consecutive vitiation of *Dhatu* started by the vitiated *Dosha* as a result of *Nidana Sevana*. To put it another way, *Samprapti* is the term used to describe the process that runs from the *Sanchayavastha* of *Dosha* to *Vyadhi Vyaktavastha*. By *Samprapti*, one can assess the *Doshas*, *Dushyas*, *Srotodushti- Khavaiguya*, the status of *Agni*, etc. The Ayurvedic text "*Samprapti Vighatanam Eva Chikitsa*" also emphasizes the significance of *Samprapti* in the healing process.

- **According to *Acharya Sushruta***

‘तत्रासंशोधनशीलस्यापथ्यकारिणः प्रकुपितः श्लेष्मा मूत्रसंपृक्तोऽनुप्रविश्य बस्तिमश्मरीं जनयति’।²⁷
When a person neglects to cleanse (*Samsodhana*) their body's *Srotas* and has a tendency to eat unwholesome foods (*Apathyakari*), their *Dosha* is increased by their own promoting reasons and travels into their *Basti*, where it becomes saturated with urine and forms *Ashmari* in the *Basti*. Therefore, the basic cause of *Mootrashmari* should be viewed as an exuberance of disturbed *Kapha Dosha*.

Following are a few examples from *Brihatrayi* that illustrate the process of *Ashmari* creation-

- ***Sushruta's view***

अप्सु स्वच्छा(स्था)स्वपि यथा निषिक्तासु नवे घटे।
कालान्तरेण पङ्कः स्यादश्मरीसंभवस्तथा॥²⁸

In *Basti*, *Ashmari* forms when urine becomes stagnant, much like how a new pot full of clear water eventually becomes muddy.

संहन्त्यापो यथा दिव्या मारुतोऽग्निश्च वैद्युतः।
तद्वद्वलासं बस्तिस्थमूष्मा संहन्ति सानिलः॥²⁹

Another example: Similar to how thunder and its associated air and electricity cause rain to turn into snow or ice, *Pitta* located in the *Basti* unites with *Vata* and consolidates *Kapha* and form the *Ashmari*.

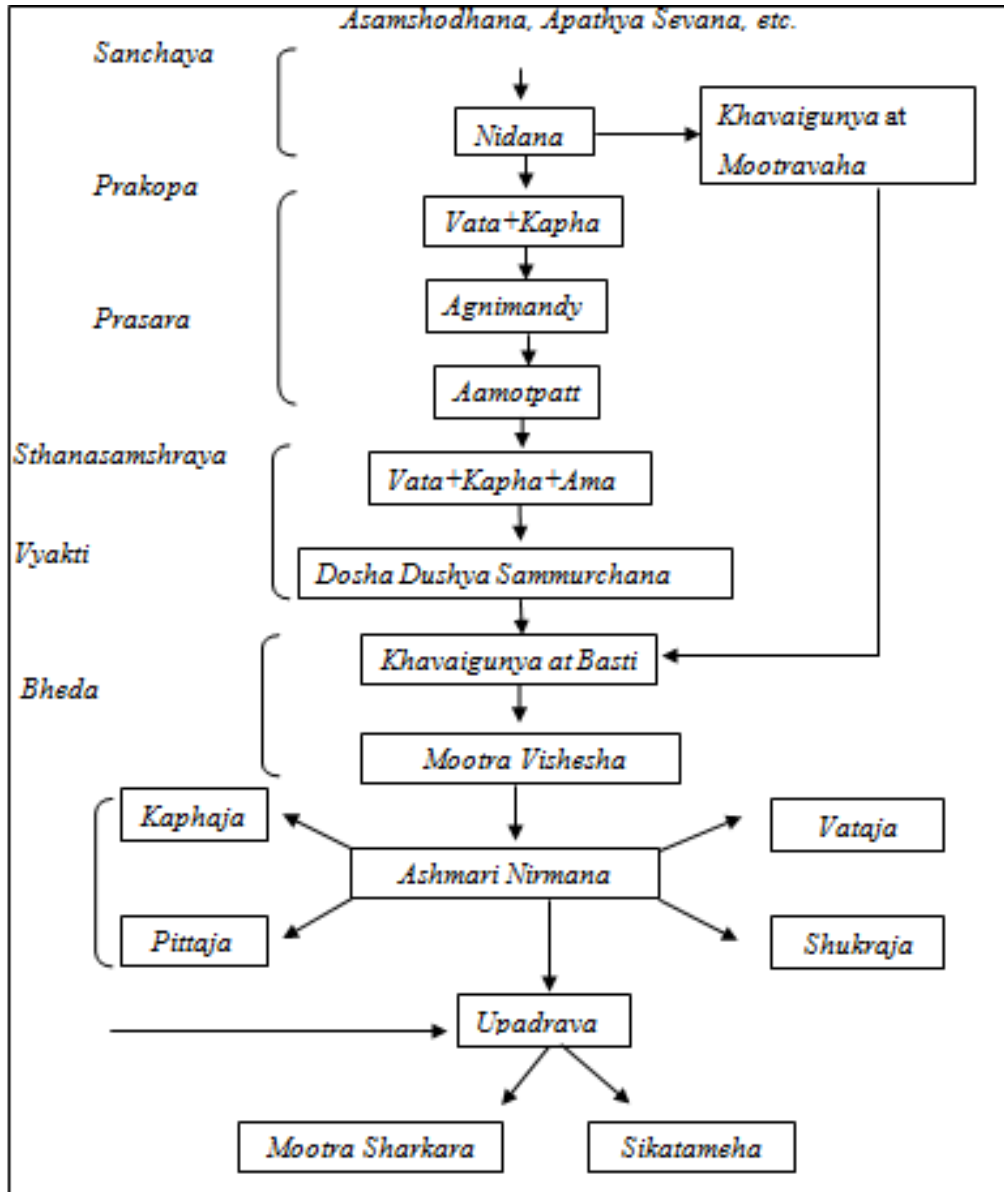
- ***Charaka's View***

विशोषयेद्वस्तिगतं सशुक्रं मूत्रं सपित्तं पवनः कफं वा।
यदा तदाऽश्मर्युपजायते तु क्रमेण पित्तेष्विव रोचना गोः॥³⁰

By using *Gorochana* as an example, *Charaka* has demonstrated how the *Ashmari* are formed. According to *Acharya*, when the *Doshayukta* or *Shukrayukta Mootra* reaches to the *Basti*, they are dried out by the action of *Vata* and *Pitta* and turn into *Ashmari*.

- ***Vagbhata's View***: *Acharya Vagbhata* mentioned the formation of *Ashmari* same as *Acharya Charaka*³¹.

6. Samprapti



7. Samprapti Ghataka

- Nidana : Vata-Kapha Prakopaka
- Dosha : Kapha Pradhana Tridosha
- Dushya : Mootra
- Srotasa : Mootravaha
- Srotodushti : Sanga, Atipravritti
- Agni : Jatharagnimandya
- Dosha Marga : Koshta
- Udbhava Sthana : Pakvashaya
- Roga Marga : Abhyantara
- Adhishthana : Mootravaha Srotasa (Basti)

V. CLASSIFICATION OF ASHMARI

Acharya Sushruta describes four types of the disease *Ashmari* which are as below,

‘चतस्रोऽश्मर्यो भवन्ति श्लेष्माधिष्ठानाः तद्यथा श्लेष्मणा वातेन पित्तेन शुक्रेण चेति’³²

All of the *Acharyas*—aside from *Charakacharya*—have offered the same categorization of *Ashmari*. *Charaka* discussed *Ashmari* under *Mootrakrichchh Vyadhi* and characterized it in terms of consistency. They classified the *Shukraja*, *Pittaja*, and *Kaphaja* types as *Mridu Ashmari* while placing the *Vataja* type under the *Kathina Ashmari* category. Classifications of *Ashmari* described in different ancient texts are described as follows-

Table 3: Classification of Ashmari

S.N.	Types	Su.	Cha. ³³	A.H. ³⁴	A.S. ³⁵	M.N. ³⁶	B.P. ³⁷	Sh.S. ³⁸	Y.R. ³⁹
1.	<i>Shleshmaja</i>	+	+	+	+	+	+	+	+
2.	<i>Pittaja</i>	+	+	+	+	+	+	+	+
3.	<i>Vataja</i>	+	+	+	+	+	+	+	+
4.	<i>Shukraja</i>	+	+	+	+	+	+	+	+

- 1. *Shleshmaja Ashmari*:** Due to excessive consumption of *Kapha Pradhana Ahara*, it is produced by the disturbed *Kapha*. The *Shleshmaja Ashmari* becomes oversaturated and enlarges at the lower entrance of the *Basti*, obstructing the passage of the *Mootra*. A blocked urine flow causes symptoms because it puts pressure on the bladder wall.

 - **Symptoms:** *Dalyate* (Bursting pain), *Bhidyate* (incising pain), *Nistudyate eva Basti* (, cutting & pricking pain), *Shita & Guru Basti* (heaviness, coldness over the bladder)
 - **Feature Of Stone:** *Shweta* (White), *Snigdha* (slimy) and *Mahati* (bigger size), *Kukkutanda Pratikasha* (like a hen’s egg), *Madhuka pushpa Varna* (Colour like a flower of *Madhuka longifolia*).⁴⁰
- 2. *Pittaja Ashmari*:** Accompanied by the disordered *Pitta*, the vitiated *Kapha* hardens and grows the *Ashmari* in the ways already mentioned. Then it settles in the *Basti* and prevents the flow of urine. As a consequence, symptoms developed.

 - **Symptoms:** *Choosyate* (sucking type of pain), *Dahyate* (seems as exposed to the heat of fire, boiling with alkali, warmth), and *Pachyate eva Basti* (burning or throbbing pain is felt in the bladder region), symptoms of *Usnavata* (A type of *Mootraghata*).
 - **Feature of Stone:** *Sarakta* (Bloodstained), *Peetaavbhasa* (yellowish) *Krushna* (black), *Bhallatakaasthi Pratima* (appears like seeds of *Semicarpas anacardium* L.f.), *Madhuvarna* (honey like color).⁴¹
- 3. *Vataja Ashmari*:** In the aforementioned ways, the vitiated *Kapha* and the disordered *Vata* solidify and grow in size, lodge in the vicinity of *Basti*, and obstruct the course of *Mootra*. This blockage causes a variety of pain symptoms to manifest.

- **Symptoms:** *Teevra Vedana* (extreme pain), Due to extreme pain, *Dantan Khadana* (grinding the teeth), *Nabhi Peedana* (presses umbilical region), *Medhra Mrudana* (rubbing the penis), *Paayu Sparsha* (touches the perineum), *Vishardhate* (patient cries out in agony), *Vidaha* (feels burning sensation) and *Vata-Mootra-Purisha Krichchhena Mehati* (difficulty in passing of flatus, urine and stool during straining for micturition).
- **Feature of Stone:** *Shyava* (Blackish), *Parusha* (hard), *Vishama* (irregular), *Khara* (rough), *Kadamba Pushpavat Kantakachita* (full of spikes like flowers of *Neolamarckia cadamba* Roxb.).⁴²

NOTE: Often all these three types of *Ashmari* are formed in children especially because of the small size of the bladder and its thin musculature and also because of *Kapha* dominant *Ahara* and *Vihara* intake.

4. **Shukraja Ashmari:** Only this kind of *Ashmari* can develop in adults due to their genital organs produce semen. As a result of intermittent or prolonged coitus, semen tends to escape from its original container in the body and be directed into the incorrect tract. The *Vayu* collects the fluid (*Shukra*), deposits it towards the intersection of the penis and scrotum (*Medhra-Vrushana*), and removes the dampness. The *Shukra Ashmari* (seminal stone), which results from this formation, condensation, and hardening of the substance, causes symptoms when it obstructs the urine channel.

- **Symptoms:** *Mootrakrichchha* (dysuria), *Basti Vedana* (bladder pain), *Vrushana Shvayathu* (scrotal swelling).

This type of *Ashmari* can easily be dissolved by applying mild pressure by hands over it⁴³.

- **Sadhya-Asadhyata:** Sushruta has considered *Ashmari* under *Ashtomahagada* (disorders that are exceedingly challenging to treat). In children, the prognosis of the *Ashmari* is better due to the smaller lesions and less subcutaneous fats⁴⁴.

अश्मरी दारुणो व्याधिरन्तकप्रतिमो मतः।
औषधैस्तरुणः साध्यः प्रवृद्धश्छेदमर्हति॥⁴⁵

It can be as dangerous as death itself because the *Ashmari* is an awful condition. When the *Ashmari* is newly developed and tiny in size, medications may cure it. However, surgery needs to be performed to treat chronic conditions. The *Ashmari* that are linked to complications and *Arishta Lakshana* shouldn't be managed.

- **Upadrava:** *Acharya* Sushruta is the only one to describe the *Upadrava* of *Ashmari*. The formation of *Mootra Sharkara*, which is regarded as one of *Upadrava*. Otherwise, *Upadrava* hasn't been discussed concerning *Ashmari* in any of the Ayurvedic classics.

शर्करा सिकता मेहो भस्माख्योऽश्मरिवैकृतम्।⁴⁶

In Sushruta Samhita *Sutrasthana*, *Avarniya Adhyaya*, Sushruta has mentioned *Ashmari* as one of the *Ashtomahagada*, he gave some exclusive features of *Ashmari* i.e.

- *Prashunanabhivrushshna*⁴⁷
- *Ruddha Mootram*
- *Ruka*

VI. CHIKITSA

In *Sushruta Samhita, Uttara Tantra– 1/25 (Netra Roga Chikitsa Adhyaya)*, Sushruta has stated that

‘संक्षेपत क्रियायोगो निदानपरिवर्जवन्’ (सु. सां. उ. १/२५)

i.e. the best therapy for any disorder is to avoid the causes and take the greatest preventative measures i.e. prevention is better than cure.

But as it progresses, it requires medical and surgical intervention. The management of *Ashmari* can be classified into the following four types:

- *Aushadha Chikitsa*
- *Basti Chikitsa*
- *Kshara Chikitsa*
- *Shastra Chikitsa*

1. ***Aushadha Chikitsa***: *Ashmari* is described as a terrible and deadly disease. The disease must be identified and treated as soon as possible. Starting the treatment when the condition persists in the *Purvaroop*a stage is Sushruta's recommendation.

Different types of *Ashmari Chikitsa*

- ***Vataja Ashmari Chikitsa***: For treatment of *Vataja Ashmari* below mentioned formulations should be advised- *Pashanabheda*, *Vasuka*, *Vashira*, *Ashmantaka*, *Shatavari*, *Gokshura*, *Bṛihati*, *Kantakari*, *Brahmi (Kapotvanka)*, *Artagala*, *Ushira*, *Kubjaka*, *Vrikshadani*, *Bhalluka*, *Varuna*, fruits of *Shaka*, *Barley*, *Kulattha*, *Kola* and *Kataka* fruit. *Ghrita* should be made from the above-mentioned *Dravya*'s decoction, to which *Ushakadi Gana Dravya* may be added. This *Ghrita* effectively treats the *Vata*-related *Ashmari*. *Kshara*, *Yusha*, *Yavagu*, *Kwatha*, milk preparations, and food made from this *Vata*-allaying medicine classes should be consumed.⁴⁸
- ***Pittaja Ashmari Chikitsa***: For treatment of *Pittaja Ashmari* following mentioned formulations should be advised.,
Kusha, *Kasha*, *Shara*, *Gundra*, *Itkata*, *Morata*, *Pashanabheda*, *Shatavaree*, *Vidari*, *Shalimula*, *Trikantaka*, *Bhalluka*, *Patala*, *Patha*, *Pattura*, *Kuruntika*, *Punarnava* and *Shirisha*, in which *Shilajatu*, *Madhuka*, seeds of *Indivara* (blue lotus), *Trapusha* and seeds of *Ervaruka* etc. should be added. *Ghrita* should be made from the decoction of these drugs. This recipe quickly disintegrates the *Pittaja Ashmari*.

Kshara, Yusha, Yavagu, Kwatha, milk (preparations), and food made from these *Pitta-allying* groups of drugs should be given⁴⁹.

- **Shleshmaja Ashmari Chikitsa:** The decoction of drugs of *Varunadi Gana, Guggulu, Ela, Harenu, Kushtha*, drugs of *Bhadradi Gana, Maricha, Chitraka*, and *Devadaru, Ghrita* from goat's milk should be processed by adding the drugs of *Ushakadi Gana*. The recipe quickly destroys the calculi caused by *Kapha*. *Kshara, Yusha, Yavagu, Kwatha*, milk preparations, and food prepared from these *Kapha* allaying groups of substances should be given.⁵⁰
- **Shukraja Ashmari Chikitsa:** Seminal concretions that enter the urinary tract on their own and become obstructed should be flushed out naturally with urine. If this is not feasible, the pathway should be made open and the *Ashmari* should be removed using *Badisha Shastra*, a device like a hook. Following wound healing, patients should be instructed to refrain for a year from coitus, horseback riding, riding in an elephant chariot, and climbing trees and mountains. They should refrain from swimming and large meals.⁵¹

Different classical formulations for *Ashmari*⁵²

- **Kwatha Kalpana:** *Viratarvadi Kwatha, Shvadamshtadi Kwatha, Shunthyadi Kwatha, Shigrumooladi Kwatha, Varunadi Kwatha, Pashanabhedadi Kwatha, Nagaradi Kwatha* etc.
- **Churna Kalpana :** *Trikantakadi Churna, Pashanabhedadi Churna, Trapushabijadi Yoga* etc.
- **Ghrita Kalpana :** *Sharapanchamuladi Ghrita, Pashanabhedadi Ghrita, Varunadi Ghrita, Kushadya Ghrita, Kulatthadi Ghrita*, etc.
- **Taila Kalpana :** *Viratarvadi Taila, Varunadi Taila* etc.
- **Rasa Aushadha :** *Trivikrama Rasa, Pashanavajraka Rasa*, etc.

2. **Basti Chikitsa:** Sushruta has mentioned *Uttarabasti* for the management of *Ashmari*.

क्षीरवृक्षकषायस्तु पुष्पनेत्रेण योजितः।
निर्हरिदशमरीं तूर्णं रक्तं बस्तिगतं च यत्॥⁵³

According to *Acharya Sushruta*, the decoction of *Ksheeri Vriksha* (latex plants) given through the *Mootramarga* (urethral route) instantly flushes out the *Ashmari* with the blood that has accumulated in the *Basti*. Nearly all *Acharya* have recommended *Basti* treatment in *Ashmari*.⁵⁴

3. **Kshara Chikitsa:** To prepare *Ghrita* according to *Dosha*, *Sushruta* has recommended to prepare *Kshara* from the medications mentioned above. It eliminates calculi, urinary gravel, and abdominal bloating.

तिलापामार्गकदलीपलाशयवकल्कजः॥
क्षारः पेयोऽविमूत्रेण शर्करानाशनः परः।
पाटलाकरवीराणां क्षारमेवं समाचरेत्॥⁵⁵

Kshara prepared from the paste of the drugs like *Tila*, *Apamarga*, *Kadali*, *Palasha*, and *Yava* should be administered with *Avi Mootra* (sheep's urine) to destroy *Ashmari* (urinary gravel). *Kshara* prepared from *Patola* and *Karavira* should be used likewise.

4. *Shastra Chikitsa*

घृतैः क्षारैः कषायैश्च क्षीरैः सोत्तरबस्तिभिः।
यदि नोपशमं गच्छेच्छेदस्तत्रोत्तरो विधिः॥⁵⁶

Shastra Karma is the most effective treatment when the *Ashmari* is impervious to *Ghrita*, *Kshara*, *Kashaya*, *Ksheer* preparations, and *Uttarabasti*.

कुशलस्यापि वैद्यस्य यतः सिद्धिरिहाधुवा।
उपक्रमो जघन्योऽयमतः संपरिकीर्तितः॥
अक्रियायां ध्रुवो मृत्युः क्रियायां संशयो भवेत्।
तस्मादापृच्छय कर्तव्यमीश्वरं साधुकारिणा॥⁵⁷

Surgery should be the very last alternative when a skilled surgeon's success is unclear. Surgery should only be used as an ultimatum when there is no other option left and death is unavoidable with non-operative care. After obtaining the consent of the authorities and patients, it should be carried out by legitimate surgical experts.

The surgical process can be divided mainly into three steps

- ❖ ***Purvakarma***: In order to lower body weight and eradicate *Doshas*, the patient should first be offered *Snehapana*. Patients should be oiled (*Abhyanga*), sudated (*Swedana*), and give *Anna* (meal). After making sacrifices and reciting auspicious hymns, patients should desire for their well-being and collect everything mentioned in the *Agropaharaniya* chapter.⁵⁸
- **Position of the Patient**: The patient, who is well-built and serene, should be positioned on the lap of a strong person who is sitting on the knee-high plank and should be facing east. His waist should be elevated by pillows, patient's knees and ankles should be flexed and secured with straps or ropes.
- **Pre-Operative Manipulation of the Stone**: The stone should then be forced downward by applying pressure with a fist below the umbilicus on the left side of well-oiled umbilical region. Introduce the greased, peeled-nail index and middle finger into the rectum and lower them to the perineal raphe. The stone should next be manipulated into being placed between the rectum and penis. The stone should be gently squeezed by fingers so that it protrudes outward like a tumor while maintaining a taut and distended bladder in order to eliminate the folds.
- ❖ ***Pradhana Karma***: Then, on the left side, a barley-width incision should be made roughly the size of a stone, *Yava* (one barley) width away from the perineal raphe.⁵⁹ Because it is more convenient technically, some *Acharya* prefer to make their incisions on the right side. To prevent stones from being broken or crushed, safety

measures must be adopted. All particles should be fully removed with the *Agravakra* (curved forcep) *Shastra* because even a small particle is left, it grows in size once more. Due to the proximity of the uterus to the urinary bladder posteriorly in females, the incision should be made upwards; otherwise, urine will leak from the wound (*Mootrasravi Vrana*). Urine dripping in men can result from damage to the *Mootrapraseka* (trigone of the bladder).⁶⁰ An injury to the bladder is not about to heal unless it is made for the purpose of removing a stone. Patients with stone whose bladder has been damaged won't recover. For the surgical elimination of the Ashmari, only one bladder incision needs to be made. Following removal, the patient should be advised to sit in a hot water tub for a sitz bath. Therefore, blood does not collect in the bladder.

However, if the bladder becomes brimming with blood, it must be irrigated with a catheter and a decoction of latex trees. "The decoction of the *Ksheeri Vriksha* (latex plants) irrigated via a catheter which removes the calculi and the blood from the urinary bladder quickly."⁶¹

- ❖ ***Pashchata Karma***: The patient needs to be given enough jaggery following surgery to cleanse the urinary tract. Once the patient is out of the tub, *Madhu-Ghrita* should be applied over the wound and warm *Yavagu* administered with *Mootrashodhaka* (Urine-purifying) ingredients should be given with *Ghrita* twice daily for three nights. After three nights, milk along with jaggery and small amounts of well-cooked rice should be administered for ten nights (so that the urine along with blood gets cleaned and the wound may remain moist). After that, it is recommended to administer citrus fruits and juices made from wild animal meat. Following that, sudation therapy with either liquids or oils should be administered for ten nights. The decoction made from latex trees should then be used to cleanse the patient's wound. then applying the paste made from *Rodhra*, *Madhuka*, *Manjishtha*, and *Prapaundarika*. Along with applying *Haridra* to the wound, *Taila* or *Ghrita* made from these medications is also recommended.

Bladder washing is the recommended treatment for blood coagulation. The wound should be treated with fire cautery if urine doesn't exit the normal path after seven nights. When urine begins to move through the *Srotasa* (natural passage), the patient should be treated with bladder wash and an enema of medicinal decoctions and oils made from sweet and astringent medications.⁶²

- ***Pathyapathya***: The *Ahara* and *Vihara* that treat the condition without propagating it are known as *Pathya*, whereas those that render the disease worse by adding complications are known as *Apathya*. *Pathyapathya* of *Ashmari* has not directly detailed by Sushruta, but it has been addressed by the Charaka Samhita, Bhaishajya Ratnavali as well as Harita Samhita.
- ***Pathya*⁶³**: *Langhana*, *Vamana*, *Virechana*, *Basti*, and *Avagaha Sweda* are helpful in *Ashmari*. The dietetic items are *Yava*, *Purana Shali*, *Kulattha*, *Mudga*, meat of the *Krauncha* bird, ginger, *Tanduliyaka*, *Kushmanda*, *Yava Kshara*, and all the *Vatanashaka Ahara* should be used. These items are mostly *Vatanulomana* and *Mootrala*. Further, it is said to take the medicines like *Gokshura*, *Yava Kshara*, *Varuna*, *Punarnava*, and *Pashanabheda*.

- **Apathya⁶⁴:** *Ativyayama* (excessive exercise), *Adhyashana*, *Samashana*, *Shita*, *Snigdha*, *Guru* (heavy meals), *Madhura Ahara*, and *Vegavarodha* are considered as *Apathya* for *Ashmari*. *Sushka Ahara*, *Kapittha*, *Jamuna*, *Bisamrinala*, dry dates, *Kashaya Rasa Sevana*, etc. are also mentioned as *Apathya* for *Ashmari*.

VII. USEFUL RECOMMENDATION IN ASHMARI

1. **Grains:** *Yava*, *Shali*
2. **Pulses:** *Mudga*, *Kulattha*
3. **Vegetables:** *Kushmanda*, cucumber, *Chirabhat*, Bamboo.
4. **Fruits:** *Amlavetasa*.
5. **Meat:** *Jangala Mamsa*, sea turtle.
6. **Food Preparation:** *Jivanti*, *Nimbu*, *Saindhava*, *Asava-Arishta*.
7. **Others:** *Langhana*, *Vamana*, *Swedana*, *Basti*, *Avagaha sweda*, and *Virechana* etc.

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