



## Research Article

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### A CROSS-SECTIONAL STUDY ON CLINICAL PROFILE OF ASHMARI VIS-A-VIS UROLITHIASIS PATIENTS IN A TERTIARY CARE HOSPITAL

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#### ABSTRACT

To find the clinical profile of Ashmari vis-à-vis Urolithiasis patients in a tertiary care hospital. This was a cross-sectional study conducted at O.P.D. and I.P.D. of a tertiary care hospital during the period of 2010-2011. The study was approved by the Ethical Committee of the Institute. The consent was taken from each participant before including in the study. Patients suffering from silent features of Mutrashmari described in Ayurvedic and Modern texts attending the O.P.D. and I.P.D. of a tertiary care hospital were selected (age 21-60 years) for the study. A total of 30 urolithiasis was included in the study. A detailed clinical history was noted. All the patients were undergone on radiological (plain X-ray, intravenous urography) and sonological (ultrasonography) examinations. Tea (60%) addiction habit was most common among the patients of urolithiasis. Vataj prakriti was among more than one third (40%) patients. Ureter site of stone was among majority of patients (70%). Single no. of stone and unilateral side was also found to be in majority of patients each constitute 93.3%. Dull low back ache was found to be most common symptom (70%). Increased frequency was the second most common symptom (60%). This study showed that the majority of the calculi were located in the ureters. The single number of stones and unilateral side were also more common.

**Keywords:** Ashmari, Urolithiasis Clinical symptoms

#### INTRODUCTION

Ashmari (calculi) comprises of two words, i.e. 'Ashma' and 'Ari.' 'Ashma' meaning stone and 'Ari' meaning enemy. Ashmari (calculi), specifically called as Moothrashmari (urolithiasis) is a disease of Moothravahasrota (urinary tract). This involves formation of stone resulting into severe pain as given by enemy. The stone can be formed at any level of the urinary tract. Most frequently, it occurs in kidney. It may pass down the urinary tract from ureters to the urinary bladder. These are intensely painful when they pass along the ureters and out via urethra. It is considered as Mahagada<sup>1</sup> because, it is Tridosha, has Vasti (urinary bladder) as its Vyakthasthana (area of presentation or site) i.e. Marmashrayee (situated at vital area) which is considered as Pranayatana in Ayurveda<sup>2</sup>.

The severity of its pain is compared with the labor pain during child birth. Ashmari has been mentioned in all the ancient texts. However, Acharya Sushruta has been described it elaborately in Sushruta Samhita along with its medicinal and surgical management. He has clearly mentioned the site, character and severity of pain as well as its aggravating and relieving factors. The pattern of pain mentioned in the classics resembles renal and ureteric colic given in modern texts which is among the main causes of abdominal pain. It is estimated that every individual has 1% chance of developing this in lifetime<sup>3</sup>.

The symptoms of Mutrashmari like agonizing pain over Nabhi, Vasti or at Sevani, Medhra during micturition, sudden cessation of urine flow, blood stained urine, twisting and slitting of urine, aggravation of pain during running, jolting etc., are similar to the symptoms of urolithiasis. Therefore, urolithiasis can be correlated with the Mutrashmari as mentioned in Ayurveda literatures<sup>4</sup>.

Urolithiasis Ouron (Urine) + lithos (stone) is the construction of urinary calculi. These are calculi formed or located anywhere in the urinary system. It occurs more frequently in men than in women. Urinary salts bound together by colloid matrix of organic materials. It consists of a nucleus around which concentric layers of urinary salts are deposited.

The aim of this study was find the clinical profile of Ashmari vis-à-vis Urolithiasis patients in a tertiary care hospital.

#### MATERIAL AND METHODS

This was a cross-sectional study conducted at O.P.D. and I.P.D. of Post Graduate Department of Shalya Tantra Jammu Institute of Ayurveda & Research, Jammu during the period of 2010-2011. The study was approved by the Ethical Committee of the Institute. The consent was taken from each participant before including in the study. Patients suffering from silent features of Mutrashmari described in Ayurvedic and Modern texts attending the O.P.D. and I.P.D. of a tertiary care hospital were selected (age 21-60 years) for the study. A total of 30 urolithiasis was included in the study.

A detailed clinical history was noted. All the patients were undergone on radiological (plain X-ray, intravenous urography) and sonological (ultrasonography) examinations.

#### Analysis

The results are presented in frequencies and percentages. SPSS 16.0 version (Chicago, Inc., USA) was used for statistical analysis.

## RESULTS

Tea (60%) addiction habit was most common among the patients of urolithiasis. Alcohol intake was the second most common addiction habit (26.7%). Coffee intake was least common among the patients of urolithiasis (3.3%) (Table 1).

Vataj prakriti was among more than one third (40%) patients followed by Kaphaj (33.3%) and Pittaj (26.7%). Ureter site of stone was among majority of patients (70%). Single no. of stone and unilateral side was also found to be in majority of patients each constitute 93.3% (Table 2).

Dull low back ache was found to be most common symptom (70%). Increased frequency was the second most common symptom (60%). Intermittent colicky pain and nausea were the third most common symptom each constituted 56.7%. Pain increased with Jerks was in 53.3% patients (Table 3).

**Table 1: Distribution of Urolithiasis patients according to addiction habit**

Addiction habit	No. (n=30)	Percentage
Tea	18	60.0
Coffee	1	3.3
Tobacco	0	0.0
Alcohol	8	26.7
Smoking	3	10.0

**Table 2: Distribution of Urolithiasis patients according to general profile**

General profile	No. (n=30)	Percentage
<b>Prakriti (dominating)</b>		
Vataj	12	40.0
Pittaj	8	26.7
Kaphaj	10	33.3
<b>Site of stone</b>		
Kidney	9	30.0
Ureter	21	70.0
<b>No. of stones</b>		
Single	28	93.3
Multiple	2	6.7
<b>Side</b>		
Unilateral	28	93.3
Bilateral	2	6.7

**Table 3: Distribution of Urolithiasis patients according to signs and symptoms**

Signs and symptoms*	No. (n=30)	Percentage
Dull low back ache	21	70.0
Intermittent colicky pain	17	56.7
Pain increased with Jerks etc.	16	53.3
Nausea	17	56.7
Vomiting	6	20.0
Dysuria	6	20.0
Increased frequency	18	60.0
Burning micturition	11	36.7
Fever	1	3.3
Hematuria	5	16.7

\*Multiple response

## DISCUSSION

Urolithiasis or formation of urinary calculi decades of life<sup>5</sup>. The description of Ashmari is the specific contribution of Acharya Sushruta. He has included it in the Astha Mahagada. The cause of disease is still unknown. But in Ayurveda, Kapha dosha in excessive quantity has been accepted as the main reason for the formation of Mutrashmari. The main factor of Ashmari formation is Agnimandhya which causes obstruction in urinary system (Mutravaha Srotasa) and is responsible for formation of urinary calculi. Most of the ingredients of Gokshuradi Guggulu have the property of Ama pachana and Agni sandipana<sup>4</sup>.

In the present study, tea (60%) addiction habit was most common among the patients of urolithiasis. Alcohol intake was the second most common addiction habit (26.7%). The finding of this study in regard to alcohol habit was consistent with the study by Prakash et al<sup>6</sup> in which alcohol habit among the patients of urolithiasis was 26.3%.

In this study, burning micturition was in 36.7% patients of urolithiasis. This finding was lower than the study by Prakash et al<sup>6</sup> in which burning micturition was in 60.6% patients. This difference might be due to different socio-demographic conditions between both the studies. The occurrence of dysuria (20%) was also lower in the present study than the study by Prakash et al<sup>6</sup> in which dysuria was present among 42.1% patients. The percentage of hematuria (16.7%) was much higher in this study than other study (2.6%)<sup>6</sup>. In another study, most common clinical features were found as flank pain (91%), dysuria (19%), nausea/vomiting (15%) and haematuria (15%). The majority of the patients (92.5%) had only one site of lodgment involved<sup>7</sup>. Taralekar and Sharma<sup>8</sup> reported that haematuria was the commonest problem in patients (54.29%).

Sharma et al<sup>9</sup> reported that majority of patients were admitted with the complaint of burning micturition (85%) and fever (77.5%). 30% of patients had gross haematuria and around 11.25% of patients were admitted as acute retention of urine. In the study conducted by Sepahi et al<sup>10</sup>, the main clinical presentations were fever, pain, irritability, dysuria and haematuria which is also similar to the results obtained by the present study. In the study done by Ali and Rifat<sup>11</sup>, haematuria was present in 44.6% patients and pain in 28.4% patients.

In the present study, the majority of the stones were located in the ureter. This finding is consistent with a previous study by Ngugi et al<sup>12</sup> and Wathigo et al<sup>7</sup> that showed the ureter and renal pelvis to be the commonest anatomical sites of involvement.

Till date, various cities of India have been studied for urolithiasis such as in Manipur, Udaipur, Bombay, Vijayawada, Dhule, Karad, Patiala, Aurangabad. The observations strongly suggest the multifactorial etiology of stone disease in these regions such as imbalanced nutrition and urinary tract infection. Dietary habits revealed principal dependence on cereals, lack of animal proteins, consumption of oxalate rich vegetables and widespread consumption of tea. Majority patients belonged to the lower-middle or poor income groups having a cereal based diet with minimal or poor protein intake<sup>13</sup>.

## CONCLUSION

This study showed that the majority of the calculi were located in the ureters. The single number of stones and unilateral side were also more common.

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