



Research Article

A STUDY ON SOCIO-DEMOGRAPHIC PROFILE OF *ASHMARI* VIS-À-VIS UROLITHIASIS PATIENTS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Objective: To assess the socio-demographic profile of *Ashmari* vis-à-vis Urolithiasis patients in a tertiary care hospital.

Methods: This was a cross-sectional 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. The diagnosis was made by radiological (plain X-ray, intravenous urography) and sonological (ultrasonography).

Results: More than one third of *Ashmari* patients were between 31-40 years (40%). More than half of *Ashmari* patients were males (53.3%). Desk work occupation was most common (36.7%). More than half of *Ashmari* patients were educated high school & above (63.3%). Majority of *Ashmari* patients were married (83.3%) and belonged to above poverty line (96.7%). Majority of *Ashmari* patients took routine food (80%) and were mixed type of diet (70%). Fluid intake was <3 liters per day among majority of *Ashmari* patients (73.3%).

Conclusion: Males formed the majority of patient with *Ashmari*/urolithiasis with commonest age group of 31-40 years. Larger studies are however recommended to confirm this observation.

KEYWORDS: *Mutrashmari*, *Ashmari*, Urolithiasis, Demographic Profile.

INTRODUCTION

In India, approximately 5-7 million patients suffer from stone disease^[1, 2] and at least 1/1000 of Indian population needs hospitalization due to kidney stone disease. Thus, the disease is as widespread as it is old, particularly in countries with dry, hot climate^[3]. These are "stone belt regions". The incidence of calculi varies as per geographical distribution, sex and age group. The recurrence rate is 50 to 80%. Males are more frequently affected than the female and their ratio is 4:3. The incidence is still higher in the age group between 30-45 years and incidence declines after age of 50.^[4]

Since ancient times human race is constantly challenged by disease & it is a uphill task to compact them in the present scenario. *Mutrashmari* is one among them which has been delineated as a "Mahagadha" in Ayurveda^[5]. The phenomenon of lithification termed as *Ashmari Sanghatana*, has been clearly explained in all the Ayurvedic texts since ancient times. In these texts, four types of *Ashmari* have been described.^[6, 7]

In Ayurveda, renal calculi is compared to *Mutrashmari* which is a stone like structure

anywhere in the *Mootravahasrothas*. The word *Ashma* means the stone & *Ari* means the enemy. The formation of stone which cause great pain & suffering to the body like an enemy is called *Ashmari*. It has been estimated that 5% of global population suffer from urinary calculi. At some period of their life it has also been noted that men are twice as likely as women to develop calculi. Researchers discover that Global warming would increase its incidence by 30% in the near future. The disease is very well compared to urolithiasis mentioned in modern medical literatures. Urolithiasis constitutes one of the commonest afflictions requiring surgical interventions. Urinary calculi is estimated to be present in about 5-7 million patients in our country.^[8]

The present study was conducted to assess the socio-demographic 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 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. Patients who did not want to undergo surgery and those who were unfit for surgical intervention had been also included in the study. Patients with stones size less than 8 mm. in diameter in any part of urinary system were included in the study. Patients below 21 years and calculi measuring more than 8 mm in size were excluded from the study. Patients having staghorn calculus, severe haematuria, bilateral hydronephrosis, pyelonephritis, diabetes Mellitus, malignancy, renal failure, immediate surgical requirement and acute retention of urine were excluded from the study. The diagnosis was made by radiological (plain X-ray, intravenous urography) and sonological (ultrasonography).

Analysis

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

RESULTS

More than one third of *Ashmari* patients were between 31-40 years (40%) followed by 21-30 years (23.3%), 41-50 (20%) and 51-60 (16.7%) years. More than half of *Ashmari* patients were males (53.3%). Majority of *Ashmari* patients belonged to Hindu community (90%). Desk work occupation was most common (36.7%). More than half of *Ashmari* patients were educated high school & above (63.3%). Majority of *Ashmari* patients were married (83.3%) and belonged to above poverty line (96.7%) (Table-1).

Majority of *Ashmari* patients took routine food (80%) and were mixed type of diet (70%). More than half of *Ashmari* patients took mixed diet ≥ 2 times per month (66.7%). Fluid intake was <3 liters per day among majority of *Ashmari* patients (73.3%) (Table-2).

Table1: Socio-demographic profile of Ashmari vis-à-vis Urolithiasis patients

Socio-demographic profile	No.(n=30)	%
Age in years		
21-30	7	23.3
31-40	12	40.0
41-50	6	20.0
51-60	5	16.7
Gender		
Male	16	53.3
Female	14	46.7
Religion		
Hindu	27	90.0
Muslim	1	3.3
Sikh	2	6.7
Occupation		
Desk work	11	36.7
Field work	10	33.3
House work	9	30.0
Education		
Primary school	3	10.0
Middle school	8	26.7
High school and above	19	63.3
Marital status		
Married	25	83.3
Unmarried	5	16.7

Socio-economic status		
Below poverty line	1	3.3
Above poverty line	29	96.7

Table2: Dietary habit of Ashmari vis-à-vis Urolithiasis patients

Dietary habit	No. (n=30)	%
Type of food		
Routine food	24	80.0
Fast food	6	20.0
Type of diet		
Vegetarian	9	30.0
Mixed	21	70.0
Frequency of mixed diet	n=21	
<2 times/month	7	33.3
≥2 times/month	14	66.7
Fluid intake		
<3 liters/day	22	73.3
≥3 liters/day	8	26.7

DISCUSSION

Though *Ashmari* can occur at any age yet middle age group are more prone for occurrence of *Ashmari*. In females, stone formation is less because of low serum testosterone level^[9]. *Ashmari* has no relation with religion, but this might be due to geographical dominance of Hindu population in Jamnagar and surrounding area of research place. Peoples who are in service spent maximum time in works place and ignore to take sufficient water and mostly they are the victim of irregular dietetic habit. Middle class peoples are mostly having stressful life and irregular dietary habits leads to vitiation of *Agni* and *Doshas* resulting in diseased condition. Up to 1.5 liters water intake is not sufficient for a normal person according to the climatic conditions of *Saurashtra* and causes over saturation of urine which leads to formation of *Ashmari*.

In the present study, more than one third of *Ashmari* patients were between 31-40 years (40%) followed by 21-30 years (23.3%). More than half of *Ashmari* patients were males (53.3%) in this study. In a study^[10], the age of *Ashmari* patients was 26-40 years among 46.7% and most were males (68.8%). In another study^[11], the ages ranged from 3 to 87 years with a median of 42 years and a mean of 43.5 years (SD 17). Only 3 patients (4.5%) were aged below 18 years. Males were the majority comprising 79% of the patients. Our findings are also consistent with previous studies from various parts of the world^[12,13].

In the present study, desk work occupation was most common (36.7%). More than half of

Ashmari patients were educated high school & above (63.3%). However, Chauhan and Gupta^[10] reported that service (31.3%) was the most common occupation among *Ashmari* patients and educated upto higher middle class (52.1%).

In this study, fluid intake was <3 liters per day among majority of *Ashmari* patients (73.3%). Chauhan and Gupta^[10] reported that 50% of *Ashmari* patients took >2 liters water per day.

CONCLUSION

Males formed the majority of patient with *Ashmari*/urolithiasis with commonest age group of 31-40 years. Larger studies are however recommended to confirm this observation.

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