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Ayurvedic management of *mutrashmari* w. s. r. to *nephrolithiasis*: a case series.

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ABSTRACT:

Background:*Mutrashmari*(urinary stones) is one among the *ashtamahagada* (eight fatal conditions) and is *kaphapradhantridoshajavyadhi*, which can be correlated with nephrolithiasis. 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.Many treatment modalities have been adopted in medical sciences, but it is quite expensive and also the pathogenesis behind recurrence of formation of stone cannot be avoided. Hence, it is necessary to find out an economical effective, easily available medicine to treat *mutrashmari*.**Objectives**: The aim of this study was to evaluate the efficacy of panchakarma like *virechana*, *yogabasti* and *shamanachikitsa* in *mutrashmari*w.r.t. to nephrolithiasis. **Materials and Methods:**In this case series 3 patients with complaints of pain in abdomen and back, which was radiating from loin to groin region; burning micturition; and dysuria were diagnosed as nephrolithiasis and treated. The patients were administered with panchakarma like *virechana*, *yogabasti*and *shaman aushadhi*. **Results:** The patient got significant results in chief and associated complaints. **Conclusion:** Satisfactory relief in symptoms were seen in patient of nephrolithiasis by ayurvedic management and there was no recurrence.

KEYWORDS:*Mutrashmari*, Nephrolithiasis, *Virechana*, *Yogabasti*, *Shamanachikitsa*.

INTRODUCTION:*Mutrashmari*(urinary stone)is one of the common diseases of urinary system yet more painful one. It is one among the *ashtamahagada* (eight fatal conditions).[(1)]It is dreadful, potential to disturb the anatomy and physiology of urinary system and once it formed in the body, it has tendency of recurrence, therefore it is not easy to cure, thus the Acharyas call it

mahagada.It is considered difficult to cure because of its *marmaashrayatwa* due to involvement of *basti*.[2]*Acharya Sushruta* has described its complete pathophysiology in *nidansthana*. [3]It is *kapha* predominance *tridoshajavyadhi*.[4]It is the formation of stony concretions in the bladder and urinary system. It is the common diseases of *mutravahastrotas* (urinary tract) that occur due to disequilibrium between stone inhibiting and promoting factors in the urinary system.The incidences of *mutrashmari*are increasing at the present era due to various reasons like altered food habits, changed lifestyle, stress, strain, environmental pollutions etc.

Mutrashmari is compared to urolithiasis or nephrolithiasis as per site of the formation of stone. In India, approximately 5-7 million patients suffer from stone disease [5] 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[6]. 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.[7] The incidence is still higher in the age group between 30-45 years and incidence declines after age of 50.

Many treatment procedures have been adopted in medical sciences to treat the disease but it is quite costly and also the prognosis behind recurrence of stone formation cannot be avoided. In alternative medicines, mainly surgery is described to treat the one. So, there is a need of such treatment which has properties like diuretic, splitting, scarification, breaking, and cutting; it facilitates the dissolution of the urinary stones. Hence, in this study, panchakarma *chikitsa* like *virechana* followed by *yogabasti* and *shamanaaushadhi* were selected for the management of *mutrashamri*.

AIM AND OBJECTIVE:

The aim of this study was to evaluate the efficacy of ayurvedic*chikitsa*in the management of *mutrashmari* with special respect to nephrolithiasis.

MATERIAL AND METHODS:

In present study, three cases with sign and symptoms of *mutrashmari* were treated with panchakarma therapy like *virechana* followed by *yogabasti* and *shamanaaushadhi*. Assessments were done in criteria like pain in abdomen, dysuria, serum creatinine and ultra-sonography investigation (USG) before and after the treatment as follows.

Pain abdomen: Pain was assessed by VAS (Visual Analogue Scale): By gradation method, Grade 0: Absence of pain/No pain; Grade I: 1 to 3 mark on scale (mild pain); Grade II: 4-6 (moderate pain); Grade IV: 7-10 (severe pain).

Dysuria: was assessed by history of pain and radiation during micturition. Grade 0-Absence of pain during micturition; Grade 1-Mild pain during micturition; Grade 2-Moderate pain during micturition; Grade 3-Severe pain during micturition.

Serum creatinine: was assessed by routine urine examination.

USG: was assessed before treatment and after treatment and was presented with Present (1) and Absent (0), size of stone was seen.

CASE SUMMERIES:

CASE 1 – A 22 years male patient came with complaints of pain in abdomen associated with difficulty in urination from 1 month. Patient was asymptomatic one month ago. One day he suddenly felt severe pain in the abdomen and vomiting and fever. He took allopathic treatment and got temporary relief from the complaints. Later he observed that pain in abdomen and flank region, dysuria and decreased in frequency of urination. Patient stated that the pain was intermittent and colicky in nature. Dysuria felt by patient normally at beginning of urination which was pricking type. Diet history revels that his food intake was irregular and had junk food. His occupation was quite stressful. On examination the abdomen there was tenderness elicited in the both side of lumbar region and right side of renal angle. He was advised USG of abdo-pelvis revealed that in right kidney calculus of size 6.2 mm was present at night renal lower pole. Mild hepatomegaly with diffuse fatty changes was seen. There was no obstruction and hydronephrosis. In haematological investigation level of serum creatinine was found to be increased (Table no. 2).

CASE 2 – A 47 years old male patient came with complaint of severe pain in right flank region associated with nausea, burning micturition, pain radiating to groin region intermittently from 2 months. Pain started gradually with increase in pain intensity. Patient was taking modern analgesics tablets but didn't get relief. USG abdomen was advised suggestive of right renal calculi of size 4.2 mm in mid and 7.5 mm at upper pole with hydronephrosis. Left kidney showed simple cortical cyst of size 25 x 26 mm upper pole (Table no. 2) Patient was taking milk in diet frequently and has sedentary lifestyle. He was known case of hypertension and was on medication from 5 years.

CASE 3 – A 50 years old male patient came with complaints of abdominal pain and it was found that pain was intermittent and colicky in nature and it was present on right side of the abdomen which was radiating to groin region, difficulty in micturition normally beginning of urination which was pricking type, burning micturition sometimes and occasionally dark yellow coloured smoky urine from past 1 month. He has known case of diabetes mellites and was on regular medication from 5 years. Patient has taken allopathic medicines but was not satisfied. In personal history, it was found that patient was non-vegetarian, insufficient water intake, sedentary lifestyle and suppression of natural urges. He has addiction of alcohol from past 20 years. USG abdomen showed a 7.2 mm calculus at mid pole of right kidney. There was no hydronephrosis or calculus on left side. Mild multiple irregularity with multiple echogenic foci seen in urinary bladder. In haematological investigations, serum creatine was seen to be increased (Table no. 2).

TREATMENT MODALITY

Table no. 1: Treatment given in *Mutrashmari*

Sr. No.	*Chikitsa*	Drug	*Anupan*	Dose	Duration
1	*Deepan - pachana*	*Amapachakavati*	*Koshnajala*	500 mg after meal BD	5 days
2.	*Snehapana*	*Mahatiktaghrita*	*Koshnajala*	50ml- 100 ml-150 ml	3 days
3.	Gap days	-			1 day
4.	*Virechana*	*TriphalaKwath* *Erandtaila* *Madhu* *Abhayadimodak* *Ichhabhedi rasa*		20 ml 40 ml 30 ml 2 tab 3 tab	1 day
	Sansarjana krama	*Peyadi krama*			5 days
5.	*Yogabasti* *Niruha* *Anuvasana*	*Mutralkashay+ Madhu+ Tilataila+ saindhav* *Tilataila+ mutralkashay*		500 ml 100 ml	8 days
6.	*Shamanachikitsa*	1. *Chandraprabhavati* 2. *Gokshuradi guggul* 3. *Shwetparpati* 4. *Tankanbhasma*		120 mg 120 mg 5 gm 5 gm	

OBESERVATION AND RESULT:

Table no 2: Assessment before and after treatment in nephrolithiasis

Sr. no.	**Criteria**	**Case 1**		**Case 2**		**Case 3**	
		BT	**AT**	**BT**	**AT**	**BT**	**AT**
1.	Colic pain	Grade IV	Grade 0	Grade III	Grade I	Grade IV	Grade I
2.	Dysuria	3	1	3	0	3	1
3.	Burning micturition	Present	Absent	Present	Absent	Present	Absent
4.	Serum creatinine	3.1	2.3	7.47	3.9	1.47	0.92
5.	Size of calculi	6.2 mm	No calculus	7.5 mm	No calculus	7.2 mm	No calculus
6.	USG	1	0	1	0	1	0

Follow-up and Outcome After treatment, patient got relief in all symptomswith also improvement of associated complain. Reduced in Pain, relief in burningsensation during urination, relax during forcible urination, lower abdomen is softno tenderness at renal angle,vomiting was stop, digestion was good, no weakness, fever was subsided. During follow-up period patient had informed that after days the calculus was expelled out and he experienced extreme pain and disturbance in the urine flow and no signs of recurrence were noticed. (figure no. 1, 2)

Figure no 1: Size of calculus before and after during treatment

Figure no 2: USG reports before and after treatment

DISCUSSION:

In case of *mutrashmari* we need therapy and medicine which act as*tridoshashamak, mutral, deepanpachan, nirama,shoolaghna, chedaniya, bhedaniya* and *lekhaniya,ashmaribhedana, mutrapravrittikarak, sadhya*. So according to *Samprapti*, *virechana*, *yoga basti karma*(~combination of medicated enema) with combination of shaman *aushadhichandraprabhavati*, *gokshuradi guggul*, *shwetparpati* and *tankan bhasma* gives best result in this disease.In the classics this is mentioned in *pramehachikitsa*, *mutrakricchrachikitsa* and *ashmarichikitsaadhyaya*combinely act on *mutravahasrotasvyadhies* having the properties *doshakarmata* (~action on vital forces) *tridoshashamaka*, *dhatu karmata* (action on body elements) act on *medohara*, *balya*, *vrishya*, *rasayana*, *agnikarmata* (action on digestive fires) *deepanapachana*, *mala karmata* (action on excretory system)*mutral*, *vibandhhara*, *srotokarmata* (action onchannels) *srotoshodhana*, *lekhan*. The action of every drug is determined by the dominant pharmacodynamics factors. The line of treatment in Ayurveda is mainly based on *doshachikitsa*(treatment).

As *shodhanachikitsa*in *yogabastikarma mutralkwatha* was used as a *niruha karma*. Its actionsdepend on the ingredients of *basti*.The main ingredient

of *basti* includes*saindhava,makshika, Sneha, kalka*and*kwatha*. It reaches up to micro channels of body due to *sukshmaguna*It breaks morbid mala and *doshasanghaat*due to *tikshnaguna*and liquefies the *doshas*due to *snigdhaguna*property.*Kalka*by its irritant property eliminates the *basti* (induce colonic distension due to irritant property), *kwatha*up to homogeneous mixture. It facilitates the absorption of endotoxin and produce detoxification during elimination.[8]*Kwatha-mutralkwatha*possess all the needful properties like *kaphahara*(~antiphlegmatic), *lekhana*(~sraping)and *mutrala*(~diuretics). The possibility of the absorption of *bastidravyas* (~drugs) through colon works due to its fat-soluble property.*Snigdhaguna*of *basti* produces softness and wetness in body which in turn help for easy eliminations of *doshas* and *mala* with increases permeability of cell membrane. Apart from these functions, it also protects the mucus membrane. By taking all the above-mentioned discussion into consideration that the overall effect of all treatment regimen planned in this patient was diuretic, splitting, scarification, breaking and cutting, it facilitates the dissolution of the urinary stone.

ChandraprabhaVati -It hasproperties like *tikta, katu, kashya, lavanakshar rasa pradhan, laghu, ruksha, vishada, sukshma, sitoshna* and *prabhava karma aushadha, kaphahara, jantughna, puyahara, shula hara, mutral*. It has multi-dimensional action and effective for acute and chronic cases. Broad spectrum antibiotic, tonic (Strengthen nerves) for urogenital system, anti-inflammatory, immunomodulator etc.[9]

Gokshuradi guggul- diuretic, anti-inflammatory, and muscle relaxation actions, which has been used in genitourinary infections, painful micturition, dysuria and benign prostatic hyperplasia.[10]

COCLUSION:

This study provides an example of successful management of nephrolithiasis with Ayurveda treatment alone and without using any modern analgesics. This study also gives leads for the experiments on role of panchakarma in the management of pain. Clinical trials on Ayurveda management of *mutrashmari*(nephrolithiasis) are warranted.

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