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Role of Gandhakadi Yoga in the management of Mutrashmari - A conceptual study

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ABSTRACT

Ashmari is one of the Mutravahasrotho Vikara. Acharya Sushruta has mentioned it as one among Astamahaqada due to its complications to urinary system and also it is difficult to treat and also Sushruta calls it as "Antakapratima" which means Swaroopa of Yama, because of its severe pain. In Ayurvedic literature Bheda of Mootrashmari is based on Lakshana's of Dosha & Ashma. Due to its features like dysuria, pain abdomen, haematuria and malaise in contemporary science it has been correlated to urolithiasis. Urolithiasis is 3rd most common affliction of urinary tract. The recurrence rate of urolithiasis is approximately 50% within 5 yrs. Renal calculi affects one in 20 at some time or other in their lives to a negligible or noticeable extent. Conservative management of contemporary sciences are not that much helpful in preventing recurrences and surgical management is quite expensive and invasive. In Ayurveda, many Kalpas have been explained for the same and one among is Gandhakadi yoga. So this study has been taken up to explore the effect of Gandhakadi Yoga in Mutrashmari.

Key words: Mutrashmari, Urolithiasis, Ashtamahagada, Gandhakadi Yoga.

INTRODUCTION

In Ayurveda the term Mutra implies to urine and Ashmari implies to stone, hence the process of formation of stone in Mutravahastortas (urinary system) is called as Mutrashmari which is more commonly known as kidney stones or urinary stones. The oldest evidence regarding Ashmari Vyadhi can be traced right from Vedic period itself. Detailed description of Nidana Panchaka is mentioned by Sushruta. Due to Ashraya in Marma Sthana and involvement of Bahudoshas etc. Sushruta and considered

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Ashmari as one among Ashtamahaqada.^[1]

Sushruta divided Mutrashmari as

SN	Ashmari	Sites of stones	Types of stones on the basis of composition
1.	Kaphaja Ashmari Kukkutanda Sama (slighter larger in size), pulling type of dull pain, obstructs urine or intermittent flow of urine	Kidney stones Renal pain occurs when stone located in kidney, fixed pain and not radiating type.	Phosphate stones
2.	Vataja Ashmari Kadamba Pushpavat Kanataachita, Pain radiation from Nabhi, Basti, Sevani & Mehana	Uretric stones The pain occurs at loin and radiates to groin, when stone descends down further pain radiates to testicles (male)	Calcium oxalate stones

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		and labia major (female)	
3.	Pittaja Ashmari Bhallataka Beejavath, When Pitta along with Kapha obstructs urinary passage associated with burning sensation type of pain in Basti region.	Vesical stones Burning and sucking type of pain observed and when stone approaches to bladder vesical irritability observed which mimics like acute cystitis	Uric acid stones, urate calculus, cystine calculus.
4.	Shukraja Ashmari	The stone formed in seminal vesical due to suppression of <i>Shukra Vega</i> and it usually lodges in between <i>Vrushana</i> and <i>Medra</i> . There is pain in suprapubic region and dysuria.	-

Urolithiasis is consequence of complex physiochemical process which involves sequence of events in the formation of any urinary stones. It is as follows

Urinary saturation - super saturation - nucleation crystal growth - crystal aggregation - crystal retention stone formation. Ureter has 3 constrictions, one is uretro pelvic junction, another near common iliac artery bifurcation and lastly vesicouretric junction.

Distal ureter is the most common site of ureteric stone. Urolithiasis is a worldwide problem sparing no geographical, cultural or racial groups. It is one of the most prevalent types of urinary disorder. The treatment principal of uroliothiasis in contemporary science is flush therapy, non-surgical procedures like ESWL & Dormia basket procedure & surgical procedures like PCNL, ureteroscopy, Nephrolithotomy, Nephrostomy which is quite expensive and needs hospitalisation.

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MATERIAL

Study will be taken upto explore the efficacy of *Gandhakadi Yoga*.^[2]

Gandhaka	1 part
Jeeraka	1 part
Kantakari	1 part
Haritaki	1 part
Amalai	1part
Vibhitaki	1part

All the drugs mentioned above will be taken in equal part and made into *Sukshma Churna* form and stored in air tight container.

METHODS

The subjects fulfilling the inclusion criteria and presenting with signs and symptoms of *Mutrashmari* will be selected randomly. The subjects will be administered with *Gandhakadi Yoga* 4gms BD with hot water before food for 21 days and observation will be made on 7th day, 14th day & 21st day and the observations will be recorded in case Performa for the proposed study. Duration of study will be for 21 days and Duration of 3 months will be fixed for observing possible recurrences.

RESULTS

The observations will be statistically analysed and results will be drawn.

DISCUSSION

Mutrashmari has been considered as Astamahagada by acharyas due to its complications and involvements of Bahudoshas in Basti which is Sadyo Pranahara Marma. The Ingested food is digested completely by the Pachak Pitta and again its separation is done by the Pachak Pitta and Samana Vata. Here the function of separation of Sara and Kitta can be understood by the formation of urine. Thus, Pachaka Pitta and Samana

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Vata are related with the formation of urine whereas *Apana Vata* regulates the excretion of urine.

Excretion of Urine regulated by Apana Vata

Susruta has further explained about the function of *Apana Vata* that when there is urge for micturition it releases urine and in absence of urge for micturition it retains the urine into the bladder. This function could be understood as a micturition reflex and regulation of the micturition mechanism and the innervations of the bladder and the urethra.

So, "Dysfunction of *Pittadhara Kala* due to vitiation of *Pachaka Pitta* and *Samana Vayu* plays an important role in the formation of *Ashmari*, so *Ashmarihara Dravyas* should act upon above factors successful rectification of pathogenesis". The drug should possess *Agnideepaka, Anulomaka, Mutrala* and *Bhedana* properties.

The symptoms mentioned under *Vataj Ashmari* mimics calcium oxalate stones whereas uric acid calculi and urate calculus appear yellowish brown in appearance resemblance to authoritative explanations of *Pittaja Ashmari* also cystic stones after exposure to external environment changes its colour from yellow to green again compares with colour representation of *Pitta*. Phosphate stones are quite larger in size, smoother surface and dull pain when compared to other stones.

The incidences of urolithiasis in present era is increasing gradually due to various reasons like changed lifestyle, altered food habbits, occupational hazards, pollution etc.

In its early stages, conservative management is helpful when size of calculi is small but it requires surgical intervention in later stages. Use of *Snehana Karma*, *Kshara*, *Ghrita*, *Kashayas* are also mentioned.

Probable Mode of Action of Gandhakadi Yoga

Gandhakadi yoga contains Gandhaka, Jeeraka, Kantakari and Triphala described in Rasendra Sara Samgraha and Basavarajeeyam in the management of Mootrashmari.

Gandhaka

It is having Katu Tikta Rasa, Ushna Veerya, Snigdha and Sara Guna, Kapha-Vata Hara properties, Deepaka and

Pachaka and pharmacologically it is having bactericidal and fungicidal properties. Katu Tikta Rasa helps in rectification of Pachakagni by doing Deepana -Pachana and Snigdha - Sara Guna helps in Anulomana of Vayu.

Jeeraka

It is having Katu-Tikta Rasa, Ruksha-Laghu Guna, Ushna Veerya, Pittala & Vatakapha Hara, Deepaka-Pachaka Guna, Chardigna, Ajeerna, Shopha, Jwaraghna, Mutrala,^[3] It has also got potent Antiurolithiatic and Anti-oxidant properties.^[4]

Kantakari

Kantakari described under Lagu Panchamula and it is having Katu Tikta Rasa, Laghu-Rooksha Guna, Ushna Veera, Katu Vipaka and it is having properties like Vedanasthapana (pain reliever), Shothahara (reduces swelling), Deepana (appetizer), Pachana (digestive), Bhedana, etc are the therapeutic activities of Kantakari. Bhavaprakasha mentioned it under Mutrashmarihara Dravyas.^[5] Solanum xanthocarpum has pharmacological actions such as it decreases hyperoxaluria, calcium, and uric acid, improves renal function, and also produces antioxidant effects, It has been used for treatment of many infectious and degenerative diseases potent antiurolithiatic.^[6]

Haritaki

Haritaki is having Laghu-Ruksha Guna, Kashaya Pradhana Pancharasa, Madhura Vipaka, Ushna Veerya and Prabhava is Tridosha Hara. It is Deepaka-Pachaka, Mutrala, Mutrakrichra, Ashmarihara & Anulomaka.^[7] Terminalia chebula is a potential candidate for phytotherapy against urolithiasis as it not only has the potential to inhibit nucleation and the growth of the CaOx crystals but also has a cytoprotective role.

Amalaki

Amalaka is having Amla & Kashaya Rasa Pradhana Pancharasa and Guru, Ruksha, Sheeta Guna, Sheeta Veerya and Madhura Vipaka. Due to its Amala Rasa (Sour) it alleviates Vata, Due to Madhur Vipaka (Sweet) it alleviates Pitta, Due to Kashaya Rasa (Astringent) and Ruksha (Dry) Guna it alleviates Kapha, so it is

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Tridosha Hara and it is *Mutrala, Saaraka* and used as *Rasayana. Yogaratnakar* mentioned it under management of *Vataja Ashmari, Bhavaprakasha* described it under *Mutrashmari Hara Drava*.

E. officinalis commonly called as *Amla* (Indian gooseberry) is one of the most studied plant. *E. officinalis* has shown antibacterial, antioxidant, antiulcerogenic, nephroprotective, and chemo preventive properties.^[8]

Vibhitaki

It belongs to Combretaceae family; it is having *Rooksha-Laghu Guna* & *Ushna Veerya*, having an *Anulomaka* property which helps in the disintegration and expulsion of stones. *Vibhitaki* also prevented the depletion of GSH level and decrease in the level of SOD in ethylene glycol induced renal injury from glycol induced calculi in rats.

CONCLUSION

The successful results can be derived if a patient follows *Pathya Ahara* along with *Nidana Parivarjana* and *Beshaja Sevana* which indeed plays a crucial role in the *Samprapti Vighatana*. Many treatment modalities have been mentioned in *Samhita* for the same. Early detection helps in the management of disease with *Aushadha Chikitsa* despite opting for surgical procedures. So *Gandhakadi Yoga* is among those treatment modalities advocated in *Ashmari* in *Rasendra Sara Samgraha*. Further clinical study can help in the scientific validation of this *Yoga*.

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