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CRITICAL REVIEW OF *MUTRASANGRAHANIYA MAHAKASHAYA* OF *CHARAKA SAMHITA* WITH SPECIAL REFERENCE TO POLYURIA

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ABSTRACT

Acharya Charaka introduced fifty *Mahakashayas* of ten *dravyas* in each *dashemani* based on their pharmacological action to put physician into ease while treating a patient. *Mutrasangrahaniya varga* is one among those fifty *vargas*. The ten *dravyas* here help in *mutrasangrahana*(collection) in excessive quantity and frequent urination condition (Polyuria). Polyuria is a persistent, large increase in urine output, usually associated with nocturia. In early stages of polyuria it can be managed through *Mutrasangrahaniya mahakashaya* drugs. On close observation it is known that plants of this group have similar *Rasa*, *Guna*, *Veerya*, *Vipaka* by which they act. This article is an attempt to describe the mode of action of *Mutrasangrahaniya mahakashaya*.

KEYWORDS: *Mutrasangrahaniya mahakashaya*, Polyuria, *Mutrasangrahana, Dashemani*.

INTRODUCTION

The concept of selecting the ten best *dravyas* (medicinal substances) with specific actions, known as *Dashemanis*, was first introduced by *Acharya Charaka*. This focus on pharmacokinetics remains one of his greatest contributions to *Dravyaguna Vijnana*. Among the many *dravyas* with particular properties, ten are considered especially noteworthy and worth remembering. *Acharya Charaka* further mentions that the list of five hundred drugs is neither too extensive nor too concise; it was compiled to assist physicians with limited

intellect (*mandabhuddi*). However, a knowledgeable physician can go beyond this list and utilize other *dravyas* as needed, based on availability and their own expertise (*yukti*). The concept of the *Mutrasangrahaniya Mahakashaya* is unique and not found elsewhere; it is mentioned in the fourth chapter of *Sutrasthana*, called *Shadvirechana Shatashritiya Adhyaya*. *Mutrasangrahaniya varga* is the 33rd varga among the fifty *Mahakashaya vargas.*[1] As the *mutrasangrahaniya* drugs are used in excessive and frequent urination condition, which in conventional science can be corelated to Polyuria.

Mutrasangrahana

- अतिमात्रं पुनः पुनश्च प्रवर्तमानं मूत्रं संगृह्णातीति मूत्रसंग्रहणीयम् ।[1]

Mutrasangrahaniya dravyas are those which does *mutrasangrahana*(collecting) in excessive quantity and frequent urination condition.

DEFINITION OF POLYURIA

Polyuria is a persistent, large increase in urine output (volume greater than 3L/day), usually associated with nocturia. It must be distinguished from frequency of micturition with the passage of small volumes of urine. Documentation of fluid intake and output may be necessary. Polyuria is the result of an excessive (hysterical) intake of water, an increased excretion of solute (as in hyperglycaemia and glycosuria), or a defective renal concentrating ability or failure of production of ADH.[2,3]

- Normal average urine output for adults is 1.2-1.5L/day.

TYPES OF POLYURIA WITH CAUSES[4]

A) Transient polyuria

1. Induced or therapeutic

- Ingestion of large amounts of fluids
- Alcohol, tea, coffee, acidifying salts like citrates or tartrates, spices, large amounts of sugar
- Diuretics
- High protein diet

2. Spontaneous

- Due to nervousness or after a nervous attack ex : examination, neurasthenia, after an attack of epilepsy, migraine, asthma, angina pectoris or paroxysmal tachycardia
- Hydronephrosis with periodic emptying of renal sac

- Attack of malaria-during the cold stage
- During convalescence from fevers like enteric
- Diminution or disappearance of oedema
  ex: recovery from acute nephritis, cirrhosis of liver
- Post-anuric diuresis
- Crisis of chronic nephrosis

B) Continued polyuria

- 1.Most important presenting symptom of Diabetes mellitus-raised plasma glucose leads to increased tubular delivery, which then exceeds the resorptive capacity of the renal tubule, leading to glycosuria
- 2.Central Diabetes Insipidus(CDI)- caused by an abnormality of the hypothalamic-hypophyseal tract
- 3.Nephrogenic Diabetes Insipidus(NDI)-denotes end organ failure i.e., the inability of the kidneys to respond normally to available ADH
- 4.Osmotic diuresis-is a form of polyuria in which large amounts of filtered, non-reabsorbable solute gain entry to the renal tubules

CLINICAL APPROACH OF POLYURIA[5]

A) History

1. Chief complaint-duration, volume and number of voids/day & night, fluid consumption, alleviating & aggravating factors

2. Associated symptoms-polydipsia, urgency, frequency, nocturia & incontinence

3. Medications & Habits-diuretics, IV fluids, intake of caffeine, alcohol, salt & protein

4. Additional considerations-head trauma, post-obstructive diuresis, psychiatric illness, malignancy, Diabetes Mellitus, Addison's disease, renal failure

5. Family history-Diabetes Mellitus, malignancy, Nephrogenic Diabetes Insipidus

6. Water diuresis-primary polydipsia, Central Diabetic Insipidus, Nephrogenic Diabetes Insipidus.

B) Physical examination

1.Evaluate the volume status(i.e., BP, pulse, skin turgor, urine output)

2.Evaluate for target organ involvement(ex: retinopathy, neuropathy) associated with DM

3.Evaluate for Malignancy(ex: lymphadenopathy, cachexia, palpable masses)

4.Kidney examination: assess for enlargement

5.Neurologic examination: rule out encephalopathy or mass lesions

6.Genitourinary examination : check for penile, testicular, scrotal, prostate, & vulvar/adnexal masses.

DIAGNOSTIC EVALUATION OF POLYURIA[5]

- ❑ Laboratory studies
  - General tests-serum sodium, potassium, calcium, glucose, total protein etc
  - Urine tests
    - ➢ Glycosuria
    - ➢ 24-hour urine specimen
    - ➢ Urine osmolality
  - Specific tests of ADH function
    - ➢ Water deprivation test
    - ➢ Plasma vasopressin levels
- ❑ Imaging studies-limited scope in polyuria

COMPLICATIONS OF POLYURIA[4]

- ➢ Hypovolemia due to excessive water losses
- ➢ Rapid changes in serum sodium concentration leading to neurologic manifestations
- ➢ Dilation of the bladder, ureters and kidneys.

Table 1: List of *Mutra Sangrahaniya Mahakashaya Dravyas.*

Dravyas	**Botanical Name And Family**	**Part Used**
1.Jambu	*Syzgium cumini* Linn. Myrtaceae	Fruit, Seed, Bark, Leaf
2. Amra	*Mangifera indica* Linn. Anacardiaceae	Fruit, Leaf, Bark
3.Plaksha	*Ficus lacor* Buch-Ham. Moraceae	Bark, Latex
4.Vata	*Ficus bengalensis* Linn. Moraceae	Bark, Latex, Leaf, Root
5.Kapitana (Shirisha)	*Albizzia lebbeck* Benth. Fabaceae	Bark, Seed
6.Udumbara	*Ficus racemosa* Linn. Moraceae	Bark, Latex, Fruit
7.Ashwatta	*Ficus religiosa* Linn. Moraceae	Bark, Fruit, Latex

8.Bhallataka	*Semecarpus anacardium* Linn. Anacardiaceae	Fruit
9.Ashmantaka	*Ficus rumphii* Blume. Moraceae	Bark, Latex, Fruit
10.Somavalka (Khadira)	*Acacia catechu* Willd. Fabaceae	Heart Wood

Fig. 1: Drugs of *Mutrasangrahaniya Mahakashaya.*

Table 2: *Rasapanchaka, Doshaghnata and Karma.*

Sl.No.	*Dravya*	*Rasa*	*Guna*	*Virya*	*Vipaka*	*Doshaghnata*	*Karma*
1.	*Jambu*	*Kashaya Madhura Amla*	*Laghu, Ruksha*	*Shita*	*Katu*	*Vatakara, Kaphapittahara*	*Sangrahi, Lekhana, Madhumehahari, Stambhana*
2.	*Amra*	*Kashaya*	*Laghu, Ruksha*	*Shita*	*Katu*	*Kaphapitta Hara*	*Mutrasangrahana, Atisarahara*
3.	*Plaksha*	*Kashaya*	*Guru, Ruksha*	*Shita*	*Katu*	*Kaphapitta Hara*	*Mutrasangrahana, Stambhana, Vranaropana*
4.	*Vata*	*Kashaya*	*Guru, Ruksha*	*Shita*	*Katu*	*Kaphapittahara*	*Mutrasangrahana, Pramehagna, Yonidoshahara*
5.	*Kapitana (Shirisha)*	*Kashaya Tikta Madhura*	*Laghu Ruksha Tikshna*	*Anushna*	*Katu*	*Tridosha Hara*	*Vishagna, Shotagna, Sangrahi*
6.	*Udumbara*	*Kashaya*	*Laghu Ruksha*	*Shita*	*Katu*	*Kaphapitta Hara*	*Mutra Sangrahana, Shvitraghna*
7.	*Ashwatta*	*Kashaya Madhura*	*Guru Ruksha*	*Shita*	*Katu*	*Pittakapha Hara*	*Mutra Sangrahana, Raktashodaka*
8.	*Bhallataka*	*Katu Madhura*	*Laghu Tikshna*	*Ushna*	*Madhura*	*Kaphavata Hara*	*Rasayana, Kushtagna, Mutra Sangrahana*
9.	*Ashmantaka*	*Kashaya*	*Laghu Ruksha*	*Sita*	*Katu*	*Kaphapitta Hara*	*Mutra Sangrahana*
10.	*Somavalka (Khadira)*	*Tikta Kashaya*	*Laghu Ruksha*	*Shita*	*Katu*	*Kaphapitta Hara*	*Kushtagna, Dantya, Mutrasangranha*

***AMAYIKA PRAYOGA*[6]**

1. *Jambu* – Fresh juice of *Jambu* is used in *Puyameha*.
2. *Amra* - Bark of mango is pounded and added with milk and sugar. This is efficacious in *Puyameha* if taken for a fortnight.
3. *Vata* – Its bark powder has *mutrasangrahaniya* property, therefore used in *prameha* and *madhumeha*.
4. *Ashwatta*

a) Decoction of *aswattha* should be administered in *Nilameha*.

b) Seeds of *ashwattha*, mixed with stag-horn and honey is taken with buttermilk. It alleviates *prameha*.

5. *Bhallataka*- It is used in *Kaphaja* and *Santarpanajanya prameha.*
6. *Ashmantaka- Sushruta* quoted the utility of *ashmantaka* fruit in *prameha chikitsa.*
7. *Khadira* - In *shanairmeha*, decoction of *khadira* and in *madhumeha* decoction of *khadira* and *kramuka* is useful.

DISCUSSION

Mutrasangrahaniya dashemani is one of the important *vargas* in clinical practice. It can be utilised in polyuria caused due to various causes. The drugs in *mutrasangrahana mahakashaya* are having *Kashaya rasa* which is *sangrahi, shoshaka, stambhaka, shareerakledasyopayokta* (absorbs the fluid). These drugs possess *Laghu guna* which causes *mala kshaya, lekhana*; *Ruksha guna* which causes *mala-shoshana, stambhana*. Most of the drugs possess *Shita Virya* which causes *stambhana* and *Katu Vipaka* which causes *badhamutrata*. The *Kaphashamaka Karma* of these drugs leads to *mutrakshaya* as *kapha* and *mutra* have *Ashraya-Ashrayi sambandha*. Tannin the common phytoconstituent present in these drugs is an astringent substance, having the capacity to combine with tissue proteins and precipitate them.[7] Tannins are having *mutra shoshana* property and proven for anti-diabetic property by reducing polyuria.

CONCLUSION

Mutrasangrahaniya Mahakashaya is an important category in *Charaka Samhita*, consisting of ten drugs primarily aimed at restoring normal urine volume (anti-diuretics). Most of the drugs in this group possess *Kashaya*(astringent) taste and *Sheeta virya* (cooling potency), which helps absorb excess *kleda* (moisture) from the body, thereby normalizing urine output.

This property also gives these drugs an antidiabetic effect, as the main symptom of *Prameha* (diabetes) is excessive and turbid urination (*prabhutaavila mutrata*).

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