



## AN AYURVEDIC PERSPECTIVE OF URINE ANALYSIS IN PRAMEHA

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### ABSTRACT

Diabetes Mellitus has now become the fast growing life style disorder. Changing life style of human population is the main cause of its rapid evaluation. The sign & symptoms are not so much pronounced in its early phase so, it starts growing rapidly in our body without further noticed. Hence, it is termed as silent killer disease. Urine is a metabolic by-product eliminated by the excretory system of our body. Normally Urine is straw yellow in colour, does not have a strong smell except slight ammonia scent when it is concentrated, transparent in appearance, daily output is about 1200 ml in 24 hours with a frequency of 6-8 times per day. The abnormal colour, odour, appearance, frequency of micturition play a significant role to have a better understanding regarding the homeostasis of our body and its

abnormality. The knowledge of typical characteristic of urine with respect to all 20 different types of *Prameha* explained in *Ayurveda* will be very much beneficial for early diagnosis of this silent killer disease Diabetes Mellitus & will be very much helpful to prevent its further grow as well as treatment purpose of the disease.

**KEYWORDS:** *Ayurveda, Prameha, Pariksha.*

## INTRODUCTION

The *Vyadhi Prameha* is considered as one of “*Astamahagada*” in Ayurveda. The *Acharyas* of Ayurveda have described about this diseases in their respective *Samhitas* in which almost all have classified *Prameha* as 20 types which includes 10 in *shleshmic Prameha*, 6 in *Paittik Prameha* & 4 in *Vatik Prameha*. All the clinical features of 20 different types of *Prameha* have been described in details. Diagnosis of diseases is made by clinical examination of the patient. In Ayurveda *Rog-Rogi Pariksha* is one of basic concept regarding *Vyadhi Vinischaya*. *Rogi Pariksha* is done by *Trividha Pariksha*, *Sathvidha Pariksha*, *Asthavidha Pariksha*, *Dashavidha Pariksha*. *Acharya Yogaratnakara* has considered *Mutra* in *asthavidha Pariksha*. *Mutra* is one of *Trimala* i.e. *Sweda, Mutra & Purisha*. Urine (*Mutra*) is one of waste products, which is eliminated by excretory systems of our body. The quantity, the frequency & characteristic of urine play a major role for diagnosis of various diseases. The properties of Urine in *Prameha* are of unique quality. The *Acharyas* of Ayurveda have described in details about the properties of *Mutra* regarding the *doshic* predominance of *Prameha* (Diabetes Mellitus).

In general, the specific gravity of Urine is 1.003-1.030 & Volume is about 600-2500 (avg.1200ml) any variation in number definitely is an abnormal condition. The Inorganic constituents per 24 hours of Urine can be measured as Iron: 0.06-0.1mg, Chloride: 6 gm (4-10gm) on usual diet, Sodium: 4gm on usual diet, Phosphate: 0.8-1.3 on usual diet, Sulphur: 2gm, Calcium: less than 150mg. Like that, the Organic constituents per 24 hours are Nitrogenous: 25-35gm, Urea: 15-30gm, Creatinine: 1.4(1-1.8) gm, Ammonia: 0.7(0.3-1) gm, Uric acid: 0.45(0.3-0.6) gm, Protein (albumin) 0-0.1gm, Glucose (fasting range): 2-20mg percentage diabetic may lose up to 100gm/day, Amylase: 40-260 units/hour. Other cells are RBC Casts, Leucocytes, Epithelial cells, squamous cell epithelium.<sup>[1]</sup>

Normal Urine is clear & pale yellow (straw) in colour. It may be Colourless in Diabetes mellitus/ Insipidus, Diuretics, alcohol intake. Milky appearance are seen in purulent genitourinary tract diseases, Chyluria whereas Orange colour urine seen in Urobilinogenuria, fever, excessive sweating, concentrated urine. The Urine appears to be Red in Beetroot ingestion, hematuria, haemoglobinuria, pyridinium sulfonate. Greenish colour urine are seen in Jaundice & Phenol poisoning whereas Dirty blue or green Urine found in Putrefying urine, in typhus or cholera, methylene blue. Dark brown, brown red or yellow suggest very concentrated urine, acute febrile illness, bilirubinuria & Brown, brown black or black in Hemorrhage & UTI.<sup>[2]</sup>

Here there is an effort has been made to compile all the properties of Urine in 20 different types of *Prameha* as per described in various classical text of Ayurveda.

## METHODOLOGY

Review of *Brihatrayee* (*Charak Samhita, Sushruta Samhita & Vagabhatta*) along with *Bhava Prakash, Madhav Nidana* & various classical *Chikitsa Granthas* (Medicine books) of Ayurveda like *Yoga Ratnakara, Bangasena, Kashyap Samhita, Bhela Samhita* have been carried out to compile the classical features of Urine (*Mutra*) in different types of *Prameha* & comprehensive data has been generated regarding the typical characteristic of Urine with respect to various stages of Diabetes Mellitus (*Prameha*).

### *Charaka Samhita*<sup>[3]</sup>

#### *Kaphaja Prameha*

1. ***Udakameha (Hydruria)***: Transparent, Whitish, Cold & without any smell.
2. ***Ikshubalikameha Glycosuria)***: Exceedingly sweet, Cold, Slightly saline & turbid, Resembles like Sugarcane juice.
3. ***Sandrimeha (Chyluria)***: Overnight Increased Viscosity of urine.
4. ***Sandrprasadammeha (Belluria)***: Partly viscous & partly clear Urine when kept overnight.
5. ***Shuklameha)***: Urine white in colour like pasted flour, frequent micturition.
6. ***Sukrameha (Spermaturia)***: Semen like Urine or Urine mixed with semen, frequent micturition.
7. ***Sheetameha (Phosphaturia)***: Frequent micturition, exceedingly sweet & cold.
8. ***Shikatameha (Graveluria)***: Urine in form of hard & small things.
9. ***Shanermeha)***: Small quantity of Urine with difficulty & very slowly.
10. ***Alalameha (Pyuria)***: Urine resembles like phlegm and full of threads.

#### *Pittaja Prameha*

- a. ***Ksharameha (Alkalinuria)***: Urine having smell, colour, taste & touch like of alkalis.
- b. ***Kalameha (Melanuria)***: Large quantity of Black Urine.
- c. ***Neelameha (Indigouria)***: Urine having sour taste & colour like that of feather of *Chasha* Bird.
- d. ***Raktameha (Hematuria)***: Red colour Urine, saline taste, smell of raw flesh.
- e. ***Manjisthameha (Hemoglobinuria)***: Frequently passes urine, smell of raw flesh, colour like juice of *Manjistha*.

- f. **Haridrameha (Urobilinuria):** Urine having pungent tastes & colour like of curcuma.

#### **Vataja Prameha**

- a. **Vasameha:** Urine like Muscle mass, Increased Frequency of Micturition.  
b. **Majjameha:** Marrow like Urine, Increased Frequency of Micturition.  
c. **Hasthimeha:** Excessive quantity of Urination, Increased Frequency of Micturition.  
d. **Madhumeha:** Sweet & Astringent in taste, Pale in colour, ununctous.

#### **Sushruta Samhita<sup>[4]</sup>**

##### **Kaphaja Prameha**

- a. **Udakameha:** Urine resembles like water, white in colour without any pain/discomfort.  
b. **Ikshubalikameha:** Urine resembles like juice of sugar cane.  
c. **Surameha:** Urine resembles like *sura* (beer).  
d. **Sikatameha:** Urine resembles like sand (Gravel), painful micturition.  
e. **Shanemeha:** Urinate slowly, mixed with *kafa* and is slimy.  
f. **Lavanameha:** Urine resembles salt in taste & non-slimy.  
g. **Pisthameha:** Urine resembles like solution of flour accompanied with horripilation.  
h. **Sandrameha:** Urine that is turbid & thick.  
i. **Shukrameha:** Urine resembles like Semen.  
j. **Phenameha:** Urinate little by little, being frothy & clear.

##### **Pittaja Prameha**

- a. **Neelameha:** Urine, which is frothy, clear & blue in colour.  
b. **Haridrameha:** Urine resembles as turmeric accompanied with burning sensation.  
c. **Amlameha:** Urine that has sour taste & smell.  
d. **Ksharameha:** Urine resembles like solution of alkali.  
e. **Shonitameha:** Urine resembles like blood.  
f. **Manjisthameha:** Urine resembles like decoction of *manjihista*.

##### **Vataja Prameha**

- a. **Vasameha:** Urine resembles like muscle-fat.  
b. **Kshoudrameha:** Urine resembles like honey in taste & colour.  
c. **Hasthimeha:** Urinate continuously like an elephant.  
d. **Sarpimeha:** Urine resembles like Ghee.

*Astanga Hridaya*<sup>[5]</sup> & *Astanga Sangraha*<sup>[6]</sup>:

***Kaphaja Prameha***

- a. ***Udakameha***: Transparent, whitish, Cold & without any smell, partly viscous partly clear.
- b. ***Ikshumeha***: Exceedingly sweet, resembles like Sugarcane juice.
- c. ***Sandrameha***: Overnight Increased Viscosity of urine.
- d. ***Surameha***: Urine resembles like *sura* (beer) partly viscous & partly clear Urine.
- e. ***Pisthameha***: Urine white in colour like pasted flour.
- f. ***Shukrameha***: Semen like Urine or Urine mixed with semen.
- g. ***Sikatameha***: Urine in form of hard & small things like stone.
- h. ***Sheetameha***: Exceedingly sweet & cold.
- i. ***Sharnemeha***: Very slowly Small quantity of Urine.
- j. ***Lalameha***: Urine resembles like phlegm and full of threads.

***Pittaja Prameha***

- a. ***Ksharameha***: Urine having smell, colour, taste & touch like of alkalis.
- b. ***Neelameha***: Urine having sour taste & colour.
- c. ***Kalameha***: Urine resembles like Blackish.
- d. ***Haridrameha***: Urine having pungent tastes & colour like of curcuma.
- e. ***Manjisthameha***: Urine resembles like smell of raw flesh, colour like juice of *Manjistha*.
- f. ***Raktameha***: Red colour Urine, saline taste, smell of raw flesh.

***Vataja Prameha***

- a. ***Vasameha***: Urine like Muscle mass, frequent Micturition.
- b. ***Majjameha***: Marrow like Urine, frequent Micturition.
- c. ***Hashtimeha***: Excessive quantity of Urination, Increased Frequency of Micturition.
- d. ***Madhumeha***: Urine resembles like Honey.

*Bhava Prakasha*<sup>[7]</sup>, *Madhava Nidana*<sup>[8]</sup>, *Yoga Ratnakara*<sup>[9]</sup> & *Bangasena*<sup>[10]</sup>

***Kaphaja Prameha***

1. ***Udakameha***: Transparent, whitish, Cold & without any smell, partly viscous partly clear.
2. ***Ikshumeha***: Exceedingly sweet, resembles like Sugarcane juice.
3. ***Sandrameha***: Overnight Increased Viscosity of urine.
4. ***Surameha***: Urine resembles like *sura* (beer) partly viscous & partly clear Urine.
5. ***Pisthameha***: Urine white in colour like pasted flour, cold, excessive in amount.
6. ***Shukrameha***: Semen like Urine or Urine mixed with semen.

7. **Sikatameha:** Urine in form of hard & small things like stone.
8. **Sheetameha:** Exceedingly sweet & cold.
9. **Sharnemeha:** Very slowly Small quantity of Urine.
10. **Lalameha:** Urine resembles like phlegm and full of threads.

#### ***Pittaja Prameha***

- a. **Ksharameha:** Urine having smell, colour, taste & touch like of alkalis.
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- e. **Manjisthameha:** Urine resembles like smell of raw flesh, colour like juice of *Manjistha*.
- f. **Raktameha:** Red colour Urine, saline taste, smell of raw flesh.

#### ***Vataja Prameha***

- a. **Vasameha:** Urine like Muscle mass or mixed with muscle mass, frequent Micturition.
- b. **Majjameha:** Marrow like Urine, frequent Micturition.
- c. **Kshoudrameha:** Sweet & Astringent in taste, Pale in colour resembles like honey.
- d. **Hashtimeha:** Excessive quantity of Urination, Frequent Micturition just like elephant.

#### ***Bhela Samhita***<sup>[11]</sup>

##### ***Shleshma Prameha***

- **Udakameha:** Urine resembles like water.
- **Pistamehi:** Urine resembles like whitish-pasted flour.
- **Ikshumeha:** Urine resembles like sugar cane juice.
- **Shuklamehi:** whitish Urine.

##### ***Kafa-Pitta Pradhan Prameha***

- **Lavanameha:** Urine resembles like Salt.
- **Surameha:** Urine resembles like *sura* (beer).
- **Sandrameha:** Urine partly viscous partly clear.
- **Raktameha:** Red colour Urine, saline taste, smell of raw flesh.

#### ***Kashyap Samhita***<sup>[12]</sup>

- Urinate suddenly.
- Urine that is viscous & white.

- Flies attracted towards urine.

## DISCUSSION

If all the above data will be analyzed then we can assess that almost all the properties of *Prameha* are of similar qualities as described in *Charak Samhita*, *Astanga Hridaya* & *Astanga Sangraha* likewise in *Bhava Praksh*, *Madhav Nidan*, *Yogaratanakara* & *Bangasena* the features are almost same with slight variation but in *Sushruta Samita* there is some variation like '*Shuklameha*' & '*Alalameha*' is missed and "*Lavanameha*" & "*Phenameha*" has been added in the context of *Kafaja Prameha* likewise in *Pittaja Prameha*, '*Kalameha*' has been replaced by "*Amlameha*" & in the context of *Vataja Prameha* '*Majjameha*' has been replaced by "*Sarpimeha*" whereas '*Madhumeha*' has been renamed as "*Kshoudrameha*". *Acharya Bhela* has unique concept regarding division of *Prameha* in which there is no description of *Vataja Prameha* whereas *Acharya Kashyapa* has not given any division regarding *doshik* Predominance of *Prameha*.

By analyzing the data of various characteristic of Urine concerning Diabetes Mellitus, we can assess the Following typical features of Urine (*Mutra*) in different types of *Prameha*.

(Common features of *Prameha* based on characteristic of Urine)

<i>Kafaja Prameha</i>	Properties of Urine & Micturition
<i>Udakameha</i>	Transparent, Whitish, Watery
<i>Ikshumeha</i>	Exceedingly sweet, like Sugar cane juice
<i>Sandrameha</i>	Increased Viscosity of urine
<i>Surameha</i>	Partly clear partly Viscous
<i>Shuklameha</i>	Like pasted flour, whitish
<i>Sukrameha</i>	Like semen
<i>Sikatameha</i>	Like small & hard things
<i>Sheetameha</i>	Exceedingly sweet & cold
<i>Sanehmeha</i>	Very slowly & small amount
<i>Alalmeha</i>	Like phlegm & Thread

<i>Pittaja Prameha</i>	Properties of Urine & Micturition
<i>Ksharameha</i>	Like Alkalis
<i>Kalameha</i>	Blackish
<i>Neelameha</i>	Bluish like feather of <i>chasa</i> bird
<i>Raktameha</i>	Raw flesh smell, Warmth, salty, Red like
<i>Haridrameha</i>	Astringent in taste, Like juice of Curcuma
<i>Manjihstameha</i>	Raw flesh smell, Like juice of <i>manjistha</i>



<i>Vataja Prameha</i>	<b>Properties of Urine &amp; Micturition</b>
<i>Vasameha</i>	Resembles like muscle mass, Frequent Micturition
<i>Hashtimeha</i>	Continuously urinate like elephant
<i>Madhumeha</i>	Resembles like Honey
<i>Majjameha</i>	Resembles like marrow, Frequent Micturition

## CONCLUSION

The metabolic waste product like Urine always play a significant role to diagnose various diseases in our body. In the context of diseases Diabetes Mellitus, the colour, the odour, the appearance & the frequency of Urine signify various stages of Diabetes Mellitus. So, the knowledge of these Properties of Urine will definitely helpful for early diagnosis as well as stage of the Diabetes Mellitus, So that early prevention as well as associated treatment will be given accordingly for the beneficial of humanity.

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