



## Review Article

### CONCEPT OF URINE IN *BRIHATTRAYI*

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#### ABSTRACT

From the study of ancient surgical text Sushruta samhita, it becomes evident that the urological problems form an important part of medical sciences. This article reviews the various concept of Mutra in *Brihatrayi* regarding its characteristics, formation, examination, and use for the diagnosis of various aspects of disease and diseased person. *Mutra pariksha* as such in systematic way is not described in *Brihatrayi*. Scattered references are available in these texts related to physiological and pathological state. Based on the informations scattered in various texts pertaining to the abnormalities in respect of odour, colour, quantity etc. urine can be used as important diagnostic tool. The scattered references available in *Ayurvedic* texts are compiled below in following scheme of *Sushruta's Sadhvidha pariksha*. *Sadhvidha Pariksha* includes *Panchendriya* and *Prashna Pariksha*.

Under this heading, temperature and consistency of urine can be taken into consideration. Thus on the basis of differences in touch only; one can diagnose the disease by observing the changes/abnormality in urine. It can be says that clinical diagnosis of certain diseases depends upon various characteristics of *Mutra*. It is helpful in diagnosing a number of diseases and thus its importance should not be ignored. Urine, like any other substance has its own properties and qualities and can be used rationally for treatment of certain diseases. In Ayurveda properties and uses of human urine and the urine of eight different, animals have been described.

*Mutra pariksha*, properties and uses of urine as such in systematic way is not described in *Brihatrayi*. It is an attempt to compile the various concept of *urine and its* properties regarding the diagnosis of various disease which are scattered in *Brihatrayi*.

**KEYWORDS:** Concept of Urine, Charak, Sushruta, Astanga Hridaya, Astanga sanghra, Commentators.

#### INTRODUCTION

*Mutra pariksha* as such in systematic way is not described in *Brihatrayi*. Scattered references are available in these texts related to physiological and pathological state.

#### According to Ayurveda

*Vegavarodha*, i.e. suppression of natural urges is an important cause of various diseases. *Ayurveda* states that suppression of micturition is one of the most important causes of the disease of urinary tract. With progressive urbanization and inadequate toilet facilities, this cause has assumed greater importance. The functions of *Mutravahasrotas* (urinary system) is regulated by *Apanavayu* one among the five types of *Vayu*. Obviously any derangement of *Apana vayu* leads to the pathology of the urinary system. So, the treatment principle is to correct the vitiated *Apana Vayu*, thereby attaining the normal physiology of the urinary system. This controls the symptoms of the *Mutravaha Shrotas* (urinary system). *Basti* therapy is one of modality of *Pancharma* which is specially used for pacification of *Vayu*. Any abnormality in the various stages of *Mutra* formation namely at the level of

digestion, absorption, and organs of transport, storage and excretion leads to *Vyadhi* or pathological state. For the diagnosis of various aspects of disease and diseased person, several methods have been described in *Ayurvedic* texts. These can be broadly classified into *Roga* and *Rogi Pariksha*. Several methods like *Astavidha Pariksha*, *Dasavidha Pariksha*, *Dwadashavidha Pariksha* have been described. Among these, *Astavidha Pariksha* given by *Yogaratanakara* is an important method of clinical and laboratory method of diagnosis which includes *Nadi* (Pulse examination), *Mutra* (urine examination), *Mala* (Stool examination), *Jihwa* (Tongue examination), *Shabda* (Speech examination), *Sparsha* (Examination by touch), *Drika* (Eye examination) and *Akriti* (Physical Appearance).<sup>[1,2]</sup>

*Mutra pariksha* as such in systematic way is not described in *Brihatrayi*. Scattered references are available in these texts related to physiological and pathological state. Still the time no work is done to compile *Mutra pariksha*, and properties of urine, so its need to compile them to remain update. By considering and analysis above discussion it is an attempt to

compile the various concept of *Mutra* scattered in *Brihatrayi*.

### Aim And Objectives

1. To provide details about the *urine* regarding its characteristics, formation, examination, and use for the diagnosis of various aspects of disease and diseased person.
2. To explain the Ayurvedic approach in urine examination.

### Materials and methods

1. References of urine have been collected from the classical books of Ayurveda.
2. All the data is compiled, analyzed and discussed through and in depth understanding about urine from books and other authentic sources.
3. Ayurvedic approach in urine have been compiled in this review.

### Mutra Pariksha

Any abnormality in the various stages of *Mutra* formation namely at the level of digestion, absorption, and organs of transport, storage and excretion leads to *Vyadhi* or pathological state. For the diagnosis of various aspects of disease and diseased person, several methods have been described in Ayurvedic texts.

### Characteristics of Normal Urine

Characteristics of normal urine is not described separately in the medieval period texts where urine examination has been given due importance.

**Mahabhuta:** *Charaka* states predominance of *Apya bhava*.

According to *Ashtanga Hridaya*, urine is *Ashraya* or seat of *kapha*.

**Rasa :** According to *Charaka* and *Sushruta* *rasa* of normal urine is *Katu* and *Lavana*.

**Ghanatwa :** Normal urine is *Drava* (liquid), *Sara* (with low density) and *Laghu* (light).

**Vaishadya :** It is *Vishada* i.e. transparent in nature.

**Parimana :** Four *Anjali* is the normal *Parimana* of urine as described by *Charaka*. *Mutra pariksha* as such in systematic way is not described in *Brihatrayi*. Scattered references are available in these texts related to physiological and pathological state. *Charaka* has described qualities of normal urine and urinary changes in different diseases but except the group of diseases known as *Basti rogas*. Descriptions pertain mainly to physical changes and that too mostly with reference to vitiated *Dosha* in a disease, such as in *Jwara*, *Gulma*, *Arsha*, *Pandu* etc. *Sushruta* and *Vagbhata* follows more or less same pattern. Special contribution of *Sushruta* is description of mechanism of urine formation. Another contribution is that he has given characters of urine of a patient who has become free from *Prameha* i.e. *Prameha muktilakshanas*. Based on the informations scattered in various texts pertaining to the abnormalities in respect of odour, colour, quantity etc. urine can be used as important diagnostic tool. The

scattered references available in *Ayurvedic* texts are compiled below following the scheme of *Sushruta's Sadhvidha pariksha*. *Sadhvidha Pariksha* includes *Panchendriya* and *Prashna Pariksha*.<sup>[3]</sup>

### Shabdendriya Pariksha

This method of examination helps to elicit the abnormalities in various diseases by hearing. But in context of urine examination, it has little significance.

### Spareshendriya Pariksha

Under this heading, temperature and consistency of urine can be taken into consideration. Normal urine is *Ushna*, *Aruksha*, *Anavidham*, *Atanutwam* as described earlier. Thus on the basis of differences in touch only; one can diagnose the disease by observing the changes/abnormality in urine. Changes are there in different pathological states as mentioned below which are collected from various text books. This *Pariksha* includes *Picchila mutra*, *Sandra mutra*, *Ruksha mutra*, *Ushna mutra*, and *Sheeta mutra*.

### Picchila mutra

1. *Kaphaja arsha*
2. *Mutraghata (Pittajanya mutraghata)*
3. *Prameha (Udaka meha)*
4. *Prameha (Lala meha)*

### Sandra mutra

1. *Sandrimeha*
2. *Sandrprasada meha*
3. *Kasa jwara sambandhi arista*
4. *Ashmari purvarupa*

### Ruksha mutra

1. *Vatika Jwara lakshana*

### Ushna mutra

1. *Pittaja prameha (Raktameha)*
2. *Pittaja mutrakrichhra*
3. *Mutraghata (Ushnavata)*

### Sheeta mutra

1. *Kapha jwara Lakshana*
2. *Kaphaja Prameha (Seetameha)*
3. *Sannipattaja mutrakrichhra*
4. *Kaphaja prameha (Udakameha)*

### Chakshusendriya Pariksha

In *Chakshusendriya Pariksha*, one can assess colour, transparency, consistency, presence of froth, abnormal constituents etc. The *Pitta dosha* according to *Ayurveda* is responsible for the production of all colours.<sup>[4]</sup> *Tridoshas* also play an important role in affecting the colour of urine as well as other parts of body. Vitiating of *Doshas* cause changes in different colour. The *Sharira dhatus* while passing out through the urine also affects the colour of urine by giving the tinge of own colour. Some of the changes in colour which are the characteristic features of several diseases are given below.

This Pariksha includes *Krisna varna mutra*, *Aruna varna Mutra*, *Peeta varna mutra*, *Harita varna mutra*, *Shukla varna mutra*, *Shveta varna mutra*, *Rakta varna mutra*, *Bhasmodaka varna mutra* and *Gomeda varna mutra*.

#### **Krisna varna mutra**

1. *Vataja gulma lakshana*
2. *Pittaja prameha (Kalameha)*
3. *Arsha lakshana*
4. *Vatika Udara roga*
5. *Vataja arsha lakshana*
6. *Vatika pandu lakshana*

#### **Aruna varna Mutra**

1. *Vata jwara*
2. *Vata gulma*
3. *Vatika udara roga*
4. *Vataja arsha lakshana*
5. *Vatika pandu*

#### **Peeta varna mutra**

1. *Pittaja jwara*
2. *Purva rupa raktapitta*
3. *Pittaja gulma*
4. *Pittaja udara roga*
5. *Pittaja arsha lakshana*
6. *Kamala lakshana*
7. *Pittaja visarpa*
8. *Pittaja trishna*
9. *Pittaja nanatmaja vikara*
10. *Pandu purva rupa*
11. *Pittaja pandu lakshana*
12. *Mutraghata (Ushna vata)*
13. *Mutraghata (Pittajanya mutraukasada)*
14. *Pittaja mutrakrichhra*
15. *Pitta vyadhi adhikara*

#### **Harita varna mutra**

1. *Pittaja jwara lakshana*
2. *Rakta pitta purvarupa*
3. *Pitta gulma lakshana*
4. *Pittaja udara lakshana*
5. *Pittaja visarpa*
6. *Pittaja nanatmaja vikara*

#### **Shukla varna mutra**

1. *Kaphaja jwara lakshana*
2. *Kaphaja gulma lakshana*
3. *Kaphaja prameha (Shuklameha)*
4. *Kaphaja udara roga lakshana*
5. *Kaphaja arsha lakshana*
6. *Kaphaja pandu*
7. *Kaphaja visarpa*
8. *Kaphaja nanatmaja vikara*
9. *Kaphaja arsha*

10. *Mutraghata (Kaphaja mutraukasada)*

11. *Kaphaja Mutrakrichhra*

#### **Shveta varna mutra**

##### **Kaphaja jwara**

1. *Mutraghata (Mutrasada)*
2. *Prameha (Udakameha)*
3. *Prameha (Pistameha)*

##### **Rakta varna mutra**

1. *Raktapitta - Purvarupa*
2. *Prameha (Rakta meha)*
3. *Pittolvana kapha vata heena sannipatta jwara*
4. *Kshata ksheena lakshana*
5. *Kamala roga lakshana*
6. *Pittaja prameha (Shonita mehi)*
7. *Pittaja mutrakrichhra*
8. *Mutraghata (Mutrasada)*

##### **Bhasmodaka varna mutra**

1. *Ashmari lakshana*
2. *Mutraghata (Mutrashukra)*

##### **Gomeda varna mutra**

1. *Ashmari lakshana*
2. *Mutraghata (Mutrasada)*

There are number of diseases where transparency and consistency is altered due to change in constituents of urine. In texts, abnormality in transparency and consistency, which were observed in various disorders has been tabulated below.

#### **Abnormal Constituents in urine**

##### **Blood in urine**

1. *Pittaja prameha (Raktameha)*
2. *Kshata kheena*
3. *Sarpa damsta*
4. *Pittaja mutrakrichhra*
5. *Ashmari lakshana*
6. *Raktapitta*
7. *Mutraghata (Usnavata)*
8. *Kshataja kasa*

##### **Shukra mutrata**

1. *Shukra meha*
2. *Shukraja mutrakrichhra*

##### **Rasendriya Pariksha**

Different Rasa of Sharira i.e. body should be examined by *Anumana pramana*. With the help of *Aptopdesha* (rasa of urine mentioned in different diseases by different Acharyas) and *Anumana pramana* we can sketch out state of rasa in various pathological conditions. Rasa of urine depends chiefly upon constituents present which may be altered by abnormal destruction of *Sharira dhatus* or by abnormal substances resulting from *Dosha-dushya samurchana* or if *Sharira dhatus* pass out as such in urine and affect its Rasa.

**Rasa Pariksha**

Rasa	Disease
<i>Ikshurasa sama</i>	<i>Ikshu meha</i>
<i>Ikshurasa sama</i>	<i>Ikshu meha</i>
<i>Kshara rasa</i>	<i>Kshara meha</i>
<i>Lavana</i>	<i>Rakta meha</i>

In present era, with the help of modern diagnostic tools we can assess *rasa* of urine up to great extent. By simply checking presence of glucose we can confirm *Madhura rasa*. *Amla rasa* and *Kshara rasa* can be detected by pH of the urine, *Tikta rasa* by presence of bile pigment and bile salts in the urine etc.

**Ghranedriya Pariksha**

Odour of urine is also altered in different pathological states.

**Gandh pariksha**

Characteristics of odour	Disease
<i>Visra gandha</i>	<i>Pittaja arsha</i>
<i>Arishta gandha</i>	<i>Ashubha mutra gandha</i>
<i>Arishta gandha</i>	<i>Mutra purisa sama gandha</i>
<i>Vasta gandha</i>	<i>Purvarupa of Ashmari</i>
<i>Vita tulya gandha</i>	<i>Mutraghata (Vitvighata)</i>
<i>Gandha rahita</i>	<i>Udaka meha</i>
<i>Kshara gandha</i>	<i>Kshara meha</i>
<i>Ama gandhi</i>	<i>Manjistha meha</i>
<i>Ama gandhi</i>	<i>Rakta meha</i>

**Prashna Pariksha**

It includes information related to frequency and amount of urine, flow of urine and associated symptoms like burning sensation, pain etc which can be obtained by interrogating patients.

**Bahu Mutrata**

1. *Pittaja arsha*
2. *Mutravaha srotodusti*
3. *Vridhi, Upadamsa*
4. *Sosha rogi*
5. *Sama jwara*
6. *Arsha purva rupa*
7. *Prameha samanya lakshana*
8. *Udakameha*
9. *Sheeta meha*

**Mutra avarodha**

1. *Vataja jwara*
2. *Shukra vegarodhaja mutrakrichhra*
3. *Kosthasrita vata lakshana*
4. *Gudagata vata*
5. *Mutravrita vata*
6. *Mutravaha sroto dusti*

7. *Shukra vega dharana janya roga*
8. *Apana vata dharana janya roga*
9. *Ashmari lakshana*
10. *Gulma purva rupa*
11. *Mutra shula*
12. *Mutraghata (vatasthila)*
13. *Mutra ghata (Vata basti)*
14. *Mutrakrichhra (Shakrita vighata)*

It can be inferred from the above description that clinical diagnosis of certain diseases depends upon various characteristics of *Mutra*. It is helpful in diagnosing a number of diseases and thus its importance should not be ignored.

In *Ayurvedic* texts, examination of urine has been limited mainly to the physical characteristics like colour, quantity, odour, froth, consistency etc. A specialized technique of urine examination, *Taila bindu pariksha* has been described in *Ayurvedic* texts during medieval period. In *Taila bindu pariksha*, urine is taken in a vessel over which an oil drop is dropped and characteristic of oil spread is noted down. The spread is indicative of prognosis of diseases. It was popular method of investigation till 17<sup>th</sup> century but thereafter it has almost become a part of history. There are few *Ayurvedic* texts in which *Taila bindu pariksha* has been described.<sup>[5]</sup>

**Properties and therapeutic use of urine**

Urine, like any other substance has its own properties and qualities and can be used rationally for treatment of certain diseases. In the last few decades advocates of auto-urine therapy have claimed that drinking one's own urine can cure any disease. However like any other drug, one should careful use it only in certain conditions, where it is indicated. In *Ayurveda* properties and uses of human urine and the urine of eight different, animals have been described. Urines of cow, buffalo, goat, sheep, elephant, horse, ass, and camel, are used in the treatment of various disease.<sup>[6]</sup>

In general, urine is sharp, slightly non uncutious pungent saline (in properties) and is useful in anointing, pasting, non-uncutious enema, purgative, fermentation, for *Anaha*, poisoning, *Udar*, *Arsha*, *Gulma*, *Kustha* and *Kilasa*. This is also promoting appetite and digestion, antipoison and antihelmintic and most beneficial for those afflicted with *Pandu roga*.

Urine of cow, she buffalo, goat, sheep, elephant, horse, ass and camel are sharp, hot, pungent, bitter with salty as subsidiary taste, light, evacuating, alleviate *Kapha*, *Vata*, worms, fate, poison, *Gulma*, piles, *Udararoga*, *Kustha*, oedema, anorexia and anemia are beneficial for heart and stimulate digestive fire.

All urine is pungent, sharp, hot with salty as subsidiary taste, light, evacuative, pacifies *Kapha* and *Vata*, alleviates warms', fate, poison piles, *Udararoga*, *Gulma*, oedema, anorexia and anaemia is purgative, beneficial for heart, appetizer and digestive.<sup>[7]</sup>

### Sheep urine

Sheep urine is slightly bitter, unctuous and non-antagonist of *Pitta*. Sheep's urine is bitter, pungent, alkaline, and hot, pacifies *Vata* and is useful in cough, splenomegaly, dyspnoea, consumption and constipation.

### Goat urine

Goat urine is astringent-sweet, beneficial for channels and alleviates all *Dosha*. Goats urine is pungent and bitter, slightly aggravates and alleviates coughs dyspnoea, oedema, jaundice and anemia.

### Cow urine

Cow urine is slightly sweet, somewhat alleviates *Doshas*, destroys *Krimi* and *Kustha*, removes itching and taken internally, is beneficial in *Udar* caused by *Tridosha*. Cow urine is pungent, sharp, hot does not increase *Vata* because of alkalinity, is light promotes digestive power and intellect, increase *Pitta* while decreases *Kapha* and *Vata*.

In colic, *Gulma*, *Udararoga*, hardness of bowels, purgative, nonunctuous enema etc. where when urine is indicated cow urine should be used.

### Buffalo urine

Buffalo urine is slightly alkaline, laxative and alleviates piles, *Sopha* and *Udar*. Buffalo urine is useful in piles, *Udararoga*, colic, *Kustha*, *Prameha*, and incomplete evacuation, hardness of bowels, oedema, *Gulma* and anaemia.

### Elephant urine

Elephant urine is salty beneficial for patients of *Krimi* and *Kustha* and commended for retention of urine and faeces, poisons, disorder of *Kapha* and piles. Elephant's urine is slightly bitter, salty, sharp, purgative, *Vata*- alleviating and is useful in alkali and vitiligo.

### Camel urine

Camel urine is slightly bitter, destroyer of dyspnoea, cough and piles. Camel's urine alleviates oedema, *Kustha*, *Udararoga*, insanity, *Vata*, worms and piles.

### Horse urine

Horse urine is bitter, pungent, and destroyer of *Kustha*, wounds and poisons. Horses urine is pungent sharp, hot, pacifies *Kapha*, stimulates digestive power, alleviates disorders of *Vata* and mind is useful in worm and ringworm.

### Ass urine

Ass urine is destroyer of epilepsy insanity and *Grahas* (seizures). Ass urine is sharp, alleviates artificial poison and mental disorders and also *Grahani* disorders, stimulates digestive power, pacifies *Vata* and *Kapha* and is anthelmintic.

**Human urine** Human urine destroys poisons.

### DISCUSSION

*Mutra pariksha* as such in systematic way is not described in *Brihatrayi*. Scattered references are

available in these texts related to physiological and pathological state. *Charaka* has described qualities of normal urine and urinary changes in different diseases but except the group of diseases known as *Basti rogas*. Descriptions pertain mainly to physical changes and that too mostly with reference to vitiated *Dosha* in a disease, such as in *Jwara*, *Gulma*, *Arsha*, *Pandu* etc. *Sushruta* and *Vagbhata* follows more or less same pattern. Special contribution of *Sushruta* is description of mechanism of urine formation.

Another contribution is that he has given characters of urine of a patient who has become free from *prameha* i.e. *Prameha muktilakshanas*.

Based on the informations scattered in various texts pertaining to the abnormalities in respect of odour, colour, quantity etc. urine can be used as important diagnostic tool. The scattered references available in *Ayurvedic* texts are compiled below following the scheme of *Sushruta's Sadhvidha pariksha*. *Sadhvidha Pariksha* includes *Panchendriya* and *Prashna Pariksha*.

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It can be inferred from the above description that clinical diagnosis of certain diseases depends upon various characteristics of *Mutra*. It is helpful in diagnosing a number of diseases and thus its importance should not be ignored.

In *Ayurvedic* texts, examination of urine has been limited mainly to the physical characteristics like colour, quantity, odour, froth, consistency etc. A specialized technique of urine examination, *Taila bindu pariksha* has been described in *Ayurvedic* texts during medieval period. In *Taila bindu pariksha*, urine is taken in a vessel over which an oil drop is dropped and characteristic of oil spread is noted down. The spread is indicative of prognosis of diseases. It was popular method of investigation till 17<sup>th</sup> century but thereafter it has almost become a part of history. There are few *Ayurvedic* texts in which *Taila bindu pariksha* has been described.

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