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A Comparative Study of Urine Examination in Tibetan and Indian System (Ayurveda) of Medicine

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ABSTRACT

Introduction- The urinalysis is a set of screening tests that can detect some common diseases. It may be used to screen for and help diagnose conditions such as urinary tract infections, kidney disorders, liver problems, diabetes or other metabolic conditions. Urine examination is mentioned in both Ayurveda and Tibetan system of medicine which plays a very important role in making diagnosis and prognosis of diseases. In Tibetan system of medicine, it is mentioned in ‘Explanatory Tantra’ after pulse examination as a separate chapter. While in Ayurveda, in Brihtrayi it is mentioned in many chapters such as in prameh chikitsa, raktapitta chikitsa, arishta prakarana in indriya sthana etc. In Yogaratnakara, Basavarajiyam, chikitsa sara (a treatment based book) have given special attention towards urine examination.

Aims & objectives- The main aim of comparing both the traditional systems is to combine together the knowledge of both the traditional systems and to expand the knowledge of urine examination so that physician could make diagnosis and prognosis of diseases in best and easiest way.

Materials and Methods- Author has either reviewed both the systems thoroughly such as brihattrayi (Charaka, Sushruta and Vagbhata samhita) and Yogaratnakara of Ayurveda and Gyue-shi (a text book of four tantra of Tibetan medicine) and compared both the systems.

Results- Both the systems have mentioned urine examination in detail and in appropriate way and are quite similar.

Discussion & Conclusions –Both the systems have mentioned about the preparation before the collection of urine, time of collection of urine, characteristics of healthy and unhealthy urine, urine indicating evil spirits which are quite similar except ‘tail bindu pariksha’ which is only mentioned in Yogaratnakara.
KEYWORDS
Ayurveda, Yogratnakara, Sowa-Rigpa, Subsequent Tantra, urine examination. Taila bindu pariksha, healthy and unhealthy urine
INTRODUCTION

The urinalysis is a set of screening tests that can detect some common diseases. It may be used to screen for and help diagnose conditions such as urinary tract infections, kidney disorders, liver problems, diabetes or other metabolic conditions. The Great Scholar Tag - Tshang Lo-Tsawa (a sakya master), venerated by many including the fifth Dalai Lama for his works, said that the diagnosis of pulse and urine didn’t come from India but was founded by Tibetan physicians, who led the Bodhicitta way of life. It is one of the most important visual diagnostic techniques that Tibetan physicians use. The Ayurveda and Tibetan medicine texts explain that urinalysis has the distinguishing feature of being able to differentiate between hot and cold nature diseases. Urine is like a mirror that reflects and interprets our state of health and deviation from the state. Therefore, urinalysis serves as a mirror to see various diseases clearly.

In Ayurveda and Tibetan system of medicine urine examination is meant mainly for the detection of vata (derived from elements of space and air), pitta (from fire element) and kapha (from water and earth element) disorders. In Ayurveda, Brihatrayi texts, it is mentioned in many chapters such as in Prameha, Raktapitta, Mutraghata disorders etc while in Tibetan system of medicine urinalysis have mentioned in 2nd chapter of Explanatory Tantra. Both the systems have mentioned about the preparation before the collection of urine, suitable time of urine collection, formation of urine, urine of healthy and unhealthy persons, urine indicative of impending death, urine of persons affected by spirits which are quite similar. In Ayurveda later on Yograta, Basavrajiam and Chikitsa Sara etc. have given special attention towards urine examination. ‘Taila bindu pariksha’ mentioned in Yograta is not mentioned in Tibetan medicine which is going to be discussed in detail later in this article.

Urine examination in Tibetan system of medicine

In Tibetan system of medicine, urinalysis is mentioned in ‘Urinalysis’, a 2nd chapter of Explanatory Tantra.

In Tibetan medicine it is described under the following eight sections:
1. Prerequisite conditions for urinalysis
2. A suitable time used to examine urine
3. The container used to examine urine
4. The transformation of food and drink into urine
5. Urine of healthy person
6. Urine of an unhealthy person
7. Urine indicative of impending death
8. Urine of persons affected by spirits

1. Prerequisite conditions for urinalysis

For instance the night before examination, the patient should refrain from excessive drinking of liquid diet such as strong tea and coffee, butter-milk or whey, Chhang (Tibetan wine made up of rice), Srings-po (last chhang drain), wine, alcohol, beer. In addition to these the patient should also kept in mind these things such as

- Should not leave thirst unquenched.
- Should avoid sexual intercourse, vigorous physical activities, mental and emotional stress, excessive vitamins, minerals and oily food, juices, strong spices and medicines.
- Should have sufficient sleep in the night.

The transformation of food and drink into urine -

Intake of Food & drinks

Stomach

- Should not stay long hours in one place.

2. Suitable time for Urinalysis

In Tibetan medicine it is mentioned that to facilitate the clear detection of disease, the urine should be examined in morning time when the rays of the sun touch the urine container (zhogs pa snod-la nyi-mdangs byung-dus brtag) and not under electric light.

3. Containers used for examining Urine

White porcelain (dkar-yol), Bell-metal basins (Khar-gzhong), White steel containers (lcag-dkar) and Silver Bowls (dngul-phor) that does not affect the colour and appearance of the urine. The type of containers to be avoided includes - Earthen bowls (rdza-phor), Copper bowls (zanga-Phor), Brass bowls (ra-gan), Red painted bowls (rdsi-dmar-gyi phor-ba), Containers of great depth (snod-dpang mtho-ba mams-spang).

These containers may be used when appropriate containers are not available, provided reeds, white cotton or cloth is spread across the base of the container (on-kyang ‘jag-srog dkar-po’ i brtag-tu-rung).
Here in this chart ‘chhuser’ means a combined component of the waste material and the refined portion of bile and ‘kuya’ means the waste material of bile which appears in both healthy and unhealthy urine of a person. ‘Kuya’ appears more in hot disorders and less in case of cold disorders.

5. Urine of a Healthy Person

The colour of a healthy person’s urine resembles the melted butter of a “Dri” (black haired female animal, peculiar to Tibet), which retains a clear light-yellow or amber colour (kha-dog ‘fri-mar bzhus ’dra).
The odour is like the smell of a sheep-pen (sbri-dri-mnam).

The vapour or steam of moderate intensity and duration (rlangs-pa che-chung yun-ran).

The bubbles or froth is of a moderate size and quantity when stirred vigorously (me-tog snyoms).

The urine sediment or albumin is of moderate density and uniformly distributed (ku-ya snyoms-khyab).

The surface scum or oil content of a healthy person’s urine resembles that of the surface layer of an undisturbed pond (spris-ma ko-chu-tsam).

At the time the vapour vanishes, there is a change in colour of urine and a disappearance of bubbles which occurs in a circular manner, starting from the container’s rim to the centre (rlangs-yal dus-na math‘ nas sgor-mor ldog).

In short, if the urine retains a clear-light whitish-yellow, or amber colour after stirring or if changes in colour does not occur, then it indicates a healthy state (log-rjes dkar-ser dangs-pa nad-med-yin).

6. Urine of an Unhealthy Person

In Tibetan system, there are nine major means of urinalysis for an unhealthy person, which are examined under three stages of the urine’s temperature: fresh and warm, lukewarm, and cold.

During the first stage, when the urine is fresh and warm, the physician examines the disease through characteristics of colour, vapour, odour and bubbles from the urine (tshan-de’ i dus-su mdog-rlangs dri me-tog).

In the second stage, when the urine is lukewarm the physician examines the disease either through the characteristics of a cloudy substance ‘albumin’ or through the oily chyle ‘scum’ which appears in the urine (ngad-yal dus-su ku-ya spris-ma brtag).

During the third stage, when the urine is cold the physician examines the time of changes, mode of changes and the post-change characteristics of the urine (grangs-nas ldog-dus ldog-tshul log-rjes brtag). In case of unhealthy urine, urine characteristics and associated disorders are discussed in table no.1

<table>
<thead>
<tr>
<th>Nine major means of urinalysis</th>
<th>Characteristics</th>
<th>Disorders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Color</td>
<td>-Bluish like spring water</td>
<td>-Rlung (derived from elements of space and air)</td>
</tr>
<tr>
<td></td>
<td>-Yellow</td>
<td>-Mkhris-pa (derived from fire element)</td>
</tr>
<tr>
<td></td>
<td>-White</td>
<td>-Bad-kan (derived from water and earth elements)</td>
</tr>
</tbody>
</table>

Table 1 The urine characteristics and disorders.
2. Steam
- Unstable
- Thick and long lasting
- Light and quick disappearing

3. Odour
- Smell of undigested food
- Foul
- Light

4. Bubbles
- Large
- Tiny
- Saliva-like

5. Sediments
- Like hair
- Like cotton thrown in water
- Like tip of the hair

6. Scum
- Scattered
- Thick
- Thin

7. Time of changes
- Urine turns from clear to turbid before disappearance of the vapour.
- Urine turns from turbid to clear before disappearance of the vapour.

8. Modes of changes
- Transformation of urine from centre bottom to top like boiling water.
- Transformation of urine from edges of container to centre.

9. Post-changes qualities
- More turbid
- More clear

Later it is concluded from the above table that if the following are present they signify a hot disorder such as red or yellow colour, turbid with foul smell, long lasting big vapour, quickly disappearing tiny yellowish bubbles, thick scum, convergence of thick sediments to the centre, brownish and more turbid prior to the disappearance of vapour and warmth.

If the following are present they signify a cold disorder; whitish and bluish in colour and clear, light vapour and odour, big bubbles that disappear slowly, light sediments and scum, bluish and clear post changes qualities.

The following signify a r-lung disorder; whitish-blue in colour like water, large bubbles when stirred.

The following signify a mkhris-pa disorder; Yellowish red with profuse steam, fetid and quickly disappearing tiny bubbles

The following signify a badkan disorder; White with distinct odour, Saliva like bubbles

7. Death urine or urine impending death

In Tibetan system, following qualities indicate imminent death from various disorders which are shown in table no.2. In the absence of kidney disorders, if the urine transforms within the body and body excretes putrid urine, in Tibetan system it is known as ‘dhuwa khungrul’ and thus death of person is imminent.
## Table 2  Characteristic of Death Urine

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Characteristics of urine</th>
<th>Death from diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Passing of urine like blood, thick sediments, rotten leather-like smell, non-change of color, odor and sediments despite undertaking the four remedies (wholesome diet, proper behaviour, medicines, and accessory therapies).</td>
<td>Hot disorders</td>
</tr>
<tr>
<td>2.</td>
<td>Odourless bluish colour, light vapour and sediments, non response to treatment.</td>
<td>Cold disorders</td>
</tr>
<tr>
<td>3.</td>
<td>Urine like spoiled vegetable soup</td>
<td>Long disorders</td>
</tr>
<tr>
<td>4.</td>
<td>Like decoction of <em>chhu tsa</em> (Rheum emodi)</td>
<td>Tripa disorders</td>
</tr>
<tr>
<td>5.</td>
<td>An appearance of separate pattern of <em>tshel</em> (Cinnabar)</td>
<td>Blood disorders</td>
</tr>
<tr>
<td>6.</td>
<td>Urine resembling spoiled milk</td>
<td>Baekan disorders</td>
</tr>
<tr>
<td>7.</td>
<td>Resembling ink</td>
<td>poisoniing</td>
</tr>
</tbody>
</table>

8. **Evil spirits urine**

### a) Evil Spirits Urinalysis for a Male Subject

In Tibetan system, to determine which harmful spirit is present, an example of a female tortoise lying on its back is given (*chu-de-srid-p’irussblgan-rkyalgnas*). For a male subject, the examination is always conducted from the eastern side of the body of female tortoise (*gdon-chu gang btangngos-de shar-turtsi*).

First, the patient urinates into a container. Then a grid of nine houses is depicted on a female tortoise (*Tig:Ling-tse-dgu*) over the urine container adjusting the east side of the grid to direction in which the patient urinates. Then, leave the urine specimen overnight ensuring that it’s not touched during that period. The nine sections of the grid represent the places of the nine spirits. The procedure of preparing a grid for this practice is as follows:

- Turtle lying on its back
  - East, Right side of the turtle
  - South, Head of the turtle
  - North, Tale of the turtle
  - West, Left side of the turtle
  - Location of Evil spirits
  - South-East, Deities
  - East, Humans
  - North-East, Spirits
  - South-East, Cementary
  - West, Home
  - North-East, Fields
  - South, Parental ancestors
  - Centre, Oneself
  - North, Children/grandchildren
b) Evil Spirits Urinalysis for Female Patient

Turtle lying on its stomach

- East: Left side of the turtle
- South: Head of the turtle
- North: Tail of the turtle
- West: Right side of the turtle

Location of Evil Spirits

- South-west: Deities (god or goddess)
- West: Humans
- North-west: Spirits
- South-East: Cemetery
- East: Home
- North-east: Fields
- South: Maternal ancestors
- Centre: Oneself
- North: Children/grandchildren

Urine examination in Ayurveda

In Ayurveda samhita such as Charaka, Sushruta and Vagbhata Samhita there is no specific description of urine examination. In Charaka, Sushruta and Vagbhata samhita urine characteristics are mentioned in many diseases’s signs (lakshna) such as in Prameha prakrana\(^{23}\), mutra vaha stroto dushti lakshna\(^{24}\) Raktapitta, mutra vishayak arishta\(^{25}\) etc.

The characteristics of urine in different diseases mentioned in Ayurveda are compiled by Dr P.S. Vyadagi in his textbook of Vikriti Vigyan and these are mentioned below.

Characteristics of urine in various disorders

- **Udaka meha**: transparent, abundant, white, cold, odourless and water like.
- **Ikshu meha**: sweet like sugarcane juices, little viscous, turbid and cold.
- **Sandra meha**: dense deposition of precipitate in vessel
- **Sandra Prasad meha**: partly precipitates and partly clear
- **Shukla meha**: white urine like flour with frequent micturation
- **Shukrameha**: contain seminal fluid or looks like seminal fluid.
- **Sheet meha**: frequent micturition with excessive sweetness and cold.
- **Sikta meha**: small particles appears in urine.
- **Shnermeh**: passes urine with difficulty slowly and slowly in little quantity.
- **Alalmeha**: urine becomes like threads, frothy and saliva like.
- **Kshar meha**: smell, color, taste and touch of urine like those of alkalise.
- **Kaal meha**: huge quantity of black urine.
- **Neel meha** - urine becomes sour taste and colour appears like that of the feather of chasa bird (blue ray)
- **Rakta meha** - color of urine is red with saline taste and smells like that of the decoction of *manjistha* having fleshy smell.
- **Haridra meha** - color of urine is like that of decoction of *haridra* having pungent taste.
- **Vasa meha** - frequently passes urine mixed with *vasa* or similar to it.
- **Majja meha** - frequent micturation mixed with *majja*.
- **Hasti maha** - large quantity of urine comes out constantly like an excited elephant.
- **Madhumeha** - color of urine becomes pale and unctuous having sweet and astringent taste.
- **Accha mutra- ashmari, udaka meha**
- **Amla mutrata- amla meha, neel meha**
- **Mutra baddha- purishaj anaha, asadhya lakshana of antravidradhi.**
- **Mutra sanga or mutra avarodha-asadhya lakshanaof ashamari, vataj ashtheela, vataj mutrakrichhara, sarkara mutrakricchha, niruddha prakarsha, vataj parinamashula, prayasthila, sarkara asadhya lakshna, maha shwas, suka niridhaj udavarta, vata vasti, visuchika upadrava**
- **Mutrakricchha-ashmari purvaroop, kaphaj arsh, samanya lakshna of Gulma**
- **Mutra kricchra roga, mutra sada, pakvasayagatavata- yakshma asadhya lakshana**
- **Sharkra, mutranirodhaj udavarta-shukrashmari**
- **Krishna mutrata-vataj arsha, kamla asadhya lakshna, vataj pandu, vataj svarbheda, kalameha**
- **Lavana mutrata- lavanameha, lohit meha, raktameha**
- **Mutralpata –vataj ashmari, mutrotsang, vata kundalika, vataj mutrakrichhara, sanair meha.**
- **Madhura mutrata- ikshubalika meha, kshodrameha, Madhumeha, sheet meha.**
- **Muhurmuhu mutra pravriti- vataj ashmari, pittaj mutrakrichhara, vataj mutra kricchra, shnermeha**
- **Pichhila mutra-lalameha, udaka meha**
- **Peetmutrata-kamla asadhaya lakshana, Pittaja mutra kricchra, mutra sada, Pittaja pandu, pandu purvarupa, Pittaj Prameha, pittaj svarbheda, usna vata.**
- Prabhuta mutrata- Prameha ptyatma lakshna, sheetmeha, udak meha.
- Sarujmutrata – ashmari, pittaj mutrakricchra, mutrakshaya, mutrotsanga, vatakudalika
- Shukla mutrata- mutrasada, kaphaj pandu, pishtmeha, udak meha
- Visramutram- manjishthameha, raktameha
- Raktapeetmutrata – kamla
- Sraktamutrata-ashmari, pittaj mutrakricchra, mutrakshaya, mutrotsanga, vatakudalika
- Sharkara –gudagata vata, sharkra

In Charaka samhita, the characteristics of mutravaha sroto dushti lakshna are excessive micturition. Excessive obstruction vitiated diminished or frequent thick urine with pain. The characteristics of urine showing arishta or death signs are Sandra urine with constipated stool, cold body, udar rog or shwas rog.

In Yogratnakara (a treatment-based book), urine examination is mentioned in detail as compared to Bhihatrayi and laghutrayi and it is mentioned under Aṣṭvidha parīkṣā along with nāḍī parīkṣā (pulse examination), mūtra parīkṣā (urine examination), mala parīkṣā (stool examination), jīvha parīkṣā (tongue examination) etc. It is mentioned that collect middle stream of urine and then examine for better results.

Table 2: The characteristics of urine according to Yogratnakara

<table>
<thead>
<tr>
<th>Dosha</th>
<th>Matra</th>
<th>Varna</th>
<th>Pardarshakata</th>
<th>Anya</th>
<th>Guruta</th>
<th>Prakshepa or mishrita dravya</th>
<th>Pratikriya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vata</td>
<td>Alpa</td>
<td>Pandurnee</td>
<td>Vishad</td>
<td>Raksh</td>
<td>Laghu</td>
<td>-</td>
<td>Kshariya</td>
</tr>
<tr>
<td>Pitta</td>
<td>Alpa</td>
<td>Raktavarna, Peet, harit</td>
<td>Ushna</td>
<td>Guru, snigdh</td>
<td>-</td>
<td>Aamvijatya dravya, and body tissue element</td>
<td></td>
</tr>
<tr>
<td>Kapha</td>
<td>Prabhu ta</td>
<td>Shveta</td>
<td>Apardashi, picchil, saphen</td>
<td>Guru, ruksa</td>
<td>Aamvijatya dravya, and body tissue element</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vatpitta</td>
<td>Alpa</td>
<td>Dhunrajlabh</td>
<td>Apardarshi</td>
<td>Ushna, ruksa</td>
<td>Laghu</td>
<td>-</td>
<td>Katu</td>
</tr>
<tr>
<td>Vatakaphaj</td>
<td>Shveta</td>
<td>Budabud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pittaka</td>
<td>Sarakta</td>
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</tr>
</tbody>
</table>

Tail Bindu Pariksha-

Put one drop of Tila taila (sesame oil) with the help of trina (grass) in collected urine, if it spreads it indicates good prognosis, if it doesn’t then it signifies difficult prognosis and if it sinks it indicates incurable diseases.  

In Charaka samhita, the characteristics of urine according to Yogratnakara, the characteristics of the urine according to Yogaratnakara, the characteristics of urine according to Yogaratnakara.
If *Tila taila* drop spreads towards east direction, it indicates good prognosis and person will be cured very soon.

If *Tila taila* drop spreads towards south direction, it indicates person is suffering from fever and patient will cure gradually.

If drop spreads towards North direction definitely patient is going to be free from diseases.

If drop spreads towards West region, it signifies person become healthy and happier.

If drop spreads towards North East region definitely patient is going to die within a month.

If drop spreads towards South-East, South-West region and the spread drop scatters into many pieces, it indicates death of the patient.

If drop spreads towards North West region definitely patient is going to die, even if nectar was given to him.

If drops attain various shapes like cow, headless body, weapon size, tortoise, quadrangular, triangular don’t treat such patients.

If drops attain various shapes like lotus, ponds, pigeon, elephant, house etc. then treat the patient.

If drops attains various shapes like that of man or appearance of two brains signifies person is suffering from *bhuta dosha*.

If drops attains various round shapes it indicates *vata dosha* vitiation, pointed indicates *kapha dosha* vitiation and bubbles indicates *pitta* vitiation and if it sinks indicates involvement of all the three *doshas*.

**DISCUSSION AND CONCLUSION**

Urine examination mentioned in the classical text book of *Ayurveda* i.e. *Charaka samhita*, *Sushruta samhita*, *vaghbata samhita* and in *laghutrayi* is not mentioned in specific chapter but mentioned in different chapters such as *Prameha*, *rakta pitta* and *arishta prakaran* etc. Later on, addition of knowledge regarding urine examination is mentioned in *Yogaratnakara*, *chikitsasara* etc.

Both the systems have mentioned prerequisite conditions for urinalysis, a suitable time and container used to examine urine, urine of healthy and unhealthy person, urine indicative of impending death.

Urine examination mentioned in *Yogratnakara* was based upon three *doshas* and *tail bindu pariksha* and it indicates the prognosis of various diseases. While in Tibetan system of medicine, has
not mentioned ‘tail bindu pariksha’. In Tibetan medicine, in addition to three principle energy examination (vata, pitta, kapha) of the patient, patient suffering from evil spirits, has also been mentioned. In Tibetan system, death due to blood disorders, poisoning have mentioned specifically. Each and every point of urinalysis in Tibetan system of medicine is described in detail except tail bindu pariksha.

We can conclude that study of urine examination is well developed in Tibetan system of medicine as well as in Yogratnakara. The reason may be that the Tibetan system of medicine is influenced by Tibet, Greek, Chinese and many other traditional systems of medicine as mentioned in root tantra text book and have added knowledge regarding a lot of diseases and concepts. While in Ayurveda many Acharyas have added knowledge related to urine examination, however in brihatrayi and laghutrayi ‘mutra pariksha’ is not mentioned specifically and elaborately but later in Yogratnakara text book, mutra pariksha is mentioned in detail. By studying urine examination deeply in both the systems physicians can make diagnosis and prognosis of various diseases easily and accurately.
REFERENCES

2. Ibid
4. Ibid
5. Ibid


12. Ibid


26. Parmeswarappa’s ayurveda vikriti vijyana &roga Vijyana vol-1 by Dr. P.S. Byadgi, chaukhambha publications New delhi.

27. Yogratnakara.

28. Yogratnakara.