



ANALYSIS OF URINE AND MOOTRA PARIKSHA -ANCIENT REVIEW

DR. PRIYANKA KAUSHIK.

ASSISTANT PROFESSOR

DEPARTMENT OF ROG NIDAN EVUM VIKRITI VIGYAN
BHARTI AYURVEDA MEDICAL COLLEGE AND HOSPITAL, DURG,
CHHATTISGARH
EMAIL ID -priyanka0139@gmail.com

ABSTRACT-

Though *Tailabindu pariksha* seems to be a crude method, but it has its own importance in diagnosing the disease and prognosis of the patient's condition. It may be an age-old method; however, it is time-tested and has been proved successful by the generations of Ayurvedic community. By corroborating the modern knowledge to this age-old method, its efficacy can be enhanced and new horizons can be explored. Ayurveda utilize a diagnose method using oil as an interpretation of the state of the doshas. Using a dropper put a drop of sesame oil in to the urine sample and examining it in the sunlight. If the oil drop spreads immediately in the urine sample indicates the illness is probably easy to cure.

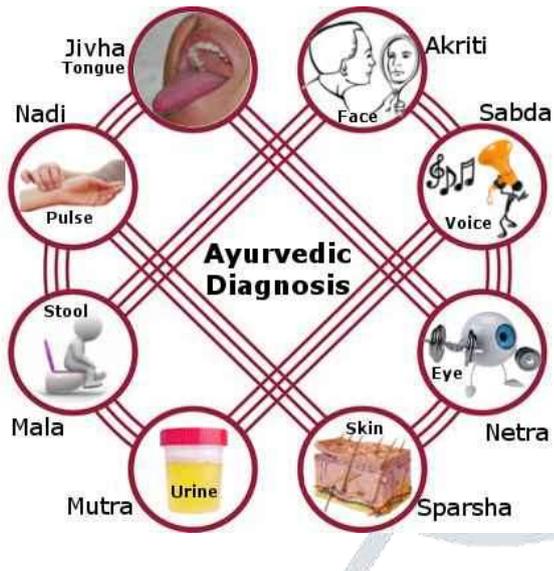
KEYWORD- *Ashtavidha pariksha* ,*Mutra Pariksha*, *Tailabindu Pariksha*, *Yogaratanakara Nidana*,

INTRODUCTION-

"Rogamadou pariksheta tatoanantaramoushadham" (*Charaka sutrasthana 20/20*) ^[1]

Ayurvedic texts suggest to diagnose the disease first and then to think over the treatment. For proper diagnosis of the disease and disease condition, patient's different pathophysiological conditions are examined under the broad heading *Ashtavidha pariksha* (8 types of investigations). The Eight-fold examination of a patient has given by Yogratnakara

- रोगाक्रान्त शरीरस्य स्थानान्यष्टौ निरीक्षयेत् ।
नाडी मूत्रं मलं जिह्वां शब्दं स्पर्शं दृगाकृती ॥



Eight-fold examination includes -

Nadi - Pulse examination

Mutra - Urine examination

Mala - Stool examination

Jihva - Tongue examination (Read more about tongue examination)

Shabda - Examination based on sounds

Drik-Inspection

Aakriti - Examination of whole body

- Among the above-mentioned diagnostic procedures, *Mutra pariksha*, (examination of urine) has been given special attention to in some of the medieval texts like *Yogaratanakar*, *Basavarajiyam*, *Chikitsasara* etc. Along with the examination of colour, appearance and consistency of urine, a special technique for the examination of the *Mutra*, *Tailabindu pariksha*, was developed to diagnose disease conditions and to find out about their prognosis.

Role of urine in etiopathogenesis and clinical features of diseases

- Suppression of urge of micturition is a causative factor for endogenous generalized edema (shopha)[Cha.Sa. Sutra Sthana 18/6], abdominal lump (gulma)[Cha.Sa.Nidana Sthana3/6], progressive wasting disease(shosha)[Cha.Sa.Nidana Sthana 6/6].
- Suppression of the urge of micturition is one of six types of udavarta (disease due to reverse movement of vata)[Cha.Sa.Sutra Sthana 20/3]
- Obstinate Urinary Disorders including diabetes (prameha) is characterized by excessive quantity of urine with altered characteristics. Excess fluid content of the body (kleda), vitiated kapha and fat (medas) enter the kidney (vrikka) and urinary bladder (basti).These factors vitiate urine (mutra) and increase its turbidity and frequency. The different morbid conditions are named after characteristic changes in urine due to vitiated dosha. [Cha.Sa.Nidana Sthana4/9]
- **importance of urine examination in ayurveda -in diagnosis of disease**
- To assess dosha involved
- Prognosis

➤ Symptoms indicating definite signs of death (Arista Lakshana)

- Properties of Normal urine
- Panchabhautika element of urine
- Jala – water
- Teja – fire
- Color - pale yellow
- Odor aromatic
- Appearance - clear, transparent
- Average volume - 1500 ml/day
- pH-6.0
- Specific gravity-1.001 - 1.003.
- Normal urine constituents -
Urea, creatinine, uric acid, sodium chloride, potassium chloride, magnesium, calcium, iron
- Abnormal urine

- Albumin

- Glucose

- Bile salts

- Bile pigments

- **Urine collection**

Method of collecting urine -

Collected in the early morning around 4 am in a glass jar. Only the middle stream is

collected discarding first few drops of urine. Examination of urine is done after sunrise.

Urine test is done based on 2 methods -

1. Physical test

2. Test by dipping oil in urine sample (Taila bindu pareeksha)

Physical test

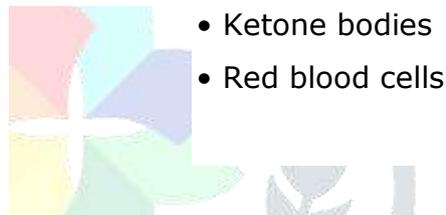
Physical test is done through -

- Inspection

- Examination of odor

- Examination by touch

- Interrogation



- Ketone bodies

- Red blood cells

- **Decreased urine**

Decreased urine symptoms (C. su 17/71, A.S su 19/6, S. su 15/11)

- Mutra vaivarnya - discoloration of urine
- Mutrakrichra - painful urination
- Pipaasa - thirst
- Mukha shosha - dryness of mouth
- Basti nisthodha - pain in urinary bladder

- Sa rudhira mutra-voiding urine mixed with blood

- Alpa mutra - voiding less quantity of urine

Cause of decrease in quantity of urine

- Less intake of liquid diet
- High temperature
- High blood pressure
- Dosha Prakriti

- ❖ **Examination by inspection**

Dosha assessment by urine test - (Y.R)

Vata - Urine appears whitish

Kapha Frothy urine

Pitta - Urine appears reddish in colour

Three doshas vitiation - Colour of urine becomes black

Any two dosha vitiation - Mixed features of dosha involved

Vata-parusha aruna (rough and dusky red), scanty urine

Pita - peetha (yellow).

Kapha shwaithya (pale whitish urine).

Sannipathaja - scanty

Vata and pitta kumbha Kamala -blackish yellow

MATERIALS AND METHODS-

Taila bindu pareeksha

Taila bindu pareeksha - Test by dropping oil in urine

This test is done by dipping oil in urine sample. It is mainly based on direction of oil spreading in the sample.

Importance -

Indicates dosha involvement in disease, its prognosis and signs of incurability. Bottle with lid to collect urine

- Round large mouthed glass bowl measuring around 4-5 inches in diameter and 1.5 inches deep.
- Dropper
- Urine of the patient
- *Tila taila* (Sesame oil)

To maintain uniformity, every patient was advised to sleep early (before 9 PM) with usual intake (2 to 3 glasses) of water during the dinner. Before sunrise, around 5 AM, patients were asked to collect the mid-stream urine of the first urination of the day in a clean and neat bottle. Urine thus collected was poured in a round wide mouthed glass bowl (4-5 inches in diameter and 1.5-inch depth), kept on a flat surface and is allowed to settle. After ascertaining that the urine was stable and devoid of wave or ripples or other influence of the wind, the urine was examined in day light at 6.30 AM. *Tila taila* was then taken in a dropper and one drop of the taila (approximately 1/20 ml) was dropped over the surface of urine slowly (keeping a distance of 1 mm from the surface of the urine to the lower end of the oil drop) without disturbing/touching the surface. It was then left for a few minutes, and the oil drop pattern in the urine was observed. The inferences were then recorded.

Precautions

- i. Mid-stream of the day's first urine should be considered for the test.
 - ii. Bowl in which the urine is kept should be kept on a flat surface and must be devoid of external influences like wind.
 - iii. Oil must be dropped only when the urine becomes stable without any movement.
 - iv. Oil drop must be dropped from a very low height (1 mm height from the lower end point of the oil drop) without touching the urine with the dropper, because this can disturb the urine and give false results.
- ❖ Assessment based on action of oil dropped in sample -Dosha assessment
- Vata - oil attains round shape in urine sample
 Pitta - appearance of bubbles
 Kapha - pointed appearance of oil
 Three doshas vitiation - it sinks in urine sample
- If oil spreads in sample it indicates good prognosis of illness
 - If doesn't spread, signifies difficult prognosis.
- If it sinks, indicates in-curability of disease.
 If it moves towards south direction, it indicates patient suffering from fever and regains health gradually.
- North direction assures curability of disease.
- Spreading toward west direction signifies upcoming healthy and happier state of patient.
- In north east direction it indicates death of patient within one month.
 - Death of patient is indicated when it spreads towards south-west and south-east and breaking into many pieces.
- Spreading towards north-west assures the death of patient even if nectar is given to him.

- If the shape of oil attains like that of cow, weapon, head- less body, tortoise, quadrangular, triangular then such patients are not treated as it assures his death.
- If attains the shape of lotus, pond, pigeon, elephant, house etc, such patients are treated.
- If attains the shape like that of man or appearance of two brains indicates patient suffering from bhutha dosha.

Diagnosis of the disease by the examination of urine

By appearance of urine

1. Diagnosis of *Dosha* involvement

- In "*Vata*" aggravated diseases, urine of the patient appears as *Pandu varna* (whitish) or slightly '*Nilam*' (Bluish).
- In *Kapha* dominated conditions urine becomes "*Phenayukta*", i.e., frothy or *Snigdha* (cloudy).
- In *Pitta* aggravation urine appears yellowish or *Rakta varna* (reddish).
- In case of rakta-aggravation urine become *Snigdha*, *Ushna* (hot) and resembles blood.

In *Dwandaja*, i.e., a state of combined *Dosha* aggravation, mixed colours are seen in the appearance of the urine as per the *Dosha* involved in the disease's causation.

- In *Sannipata* state urine becomes *Krishna varna* (blackish). ^{[2],[3],[4]}

2. Diagnosis of disease involvement ^[2]

- In the case of diseases related to '*Ajirna*' (indigestion), urine appears like *Tandulodaka* (rice water).
- In *Navina Jwara* (acute fever) urine appears 'Smoky' and the affected passes more urine (*Bahu Mutrata*)
- In *Vata-Pitta jwara* - urine is smoky, watery and hot.
- In *Vata Shlesmajwara* - urine is whitish with air bubbles.
- In *Shlesma-Pitta jwara* - urine is polluted and is mixed with blood.
- In *Jirna* (Chronic) *jwara* - urine becomes yellowish and red.
- In *Sannipata jwara* - urine appears in mixed shades depending on the *Dosha* involvement. ^[2]

Also, it is said that if urine is placed in a glass jar and appears reddish in the bottom, the patient is suffering from *Atisara*(diarrhoea). If the urine has particles appearing like the droplets of ghee, it indicates *Jalodara* (Ascites). In *Amavata* (Rheumatoid arthritis), urine appears as *Vasa* (fat) or *Takra* (buttermilk). In *Vata jwara*, urine appears reddish or

kunkuma (saffron) in colour, and in excessive passage of stools', urine becomes yellowish. [5]

By shape of the spread oil drop

Diagnosis of *Dosha* involvement

- i. If *Tailabindu* takes a snake like image in the urine, it is *Vata roga*.
- ii. If urine takes an "Umbrella" shape it is *Pittaja roga*.
- iii. If urine spreads like Pearl (*Mukta*) it is *Kaphaja roga*. [2]

Also, it is said that if the *Vata* is predominant, then the *Taila* attains *Mandala* (circular shape); in *Pitta* diseases it attains *Budbuda* (bubbles) shape; in *Kapha* diseases it becomes *Bindu* (globule or droplet) and in the *Sannipata* the *Taila* sinks in the urine. [3],[4],[5]

2. Diagnosis of disease involvement

- i. If the dropped *Taila bindu* takes a *Chalini* (sieve) shape in the urine sample and then spreads, it is a definite indication of '*Kuladosha*' (genetic disorder).
- ii. If the dropped *Taila bindu* takes the image of human being (*narakaram*) or skull it indicates '*Bhutadosha*' and is treated accordingly. [2]

Prognosis of disease by the examination of urine By spreading nature of the oil

If inserted oil spreads quickly over the surface of urine, that disease is *Sadhya* (curable or manageable).

- i. If the oil does not spread it is considered as *Kashta sadhya* or difficult to treat.
- ii. If the dropped oil directly goes inside and touches the bottom of the vessel, then it is regarded as *Asadhya* or incurable. [2] Also, in another text it is mentioned that if the oil does not spread and remains as a droplet in the middle of the urine the disease is considered incurable. [5]

By spreading direction of the oil

- i. If the oil spreads in the direction of *Purva* (east) the patient gets relief.
- ii. If the oil spreads in the south direction, the individual will suffer from *jwara* (fever) and gradually recovers.
- iii. If the oil spreads in the northern direction, the patient will definitely be cured and become healthy.
- iv. If the oil spreads towards the west, he will attain *Sukha* and *Arogya* i.e., happy and healthy.

- v. If the oil spreads towards the Ishanya (Northeast), the patient is bound to die in a month's time; similarly, if the oil spreads into *Agneya* (Southeast) or *Nairutya* (Southwest) directions, or when the instilled oil drop splits, the patient is bound to die.
- vi. If the oil spreads on to *Vayavya* (Northwest) direction, he is going to die anyway. [2]

By spreading shapes of the oil

- i. It is a good prognosis if the oil creates the images of *Hamsa* (swan), lotus, *Chamara* (chowri composed of the tail of Yak), *Torana* (arch), *Parvata* (mountain) elephant, camel, tree, umbrella and house. [2],[5]
- ii. If the taila attains the shape of a fish, then the patient is free of dosha and the disease can be treated easily.
- iii. If the drop of the taila attains the shape of *Valli* (creeper), *Mrdanga* (a kind of drum), *Manushya* (human being), *Bhanda* (pot), *Chakra* (wheel) or *Mriga* (deer) then the disease is considered as the *Kashtasadhya* (difficultly curable). [5]
- iv. If the spreading oil creates the shapes of tortoise, buffalo, honey-bee, bird, headless human body, *astra* (instrument used in surgery, like knife etc), *Khanda* (piece of body material) physician should not treat that patient as that disease is incurable. [2]
- v. If the shape of the drop of *taila* is seen as four-legged, three-legged, two-legged that patient will die soon. [5]
- vi. If the shape of the drop of *taila* is seen in the shape of *Shastra* (sharp instruments), *Khadga* (sword), *Dhanus* (bow), *Trishulam* (type of weapon with three sharp edges) *Musalayudham* (pestle), *Shrugala* (jackal), *Sarpa* (snake), *Vrishchika* (scorpion), *Mushika* (rat), *Marjara* (cat), arrow, *Vyaghra* (tiger), *Markata* (monkey) or *Simha* (lion), then it is understood that the patient will die soon. [5]
- vii. **Prognosis as per the shape of oil drop in urine** [Y. R. mutra pariksha /15-18]

Good Prognosis	Bad Prognosis
Swan	Tortoise
Lotus	Buffalo
Elephant	Honey-bee

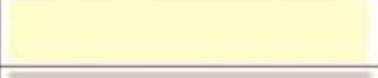
Umbrella	Headless human body
House	Any instrument used in surgery or Any part of body

Prognosis of disease as per mode of spread of oil in urine [Y. R. mutra pariksha /5-6]

Observation	Interpretation
Oil spreads quickly over the surface of urine	The disease is curable/ manageable
Oil does not spread	Disease is difficult to be treated or cured
Oil sinks and touches the bottom of the vessel	Disease is incurable

Mutra (Urine examination)

Diagnosis of the disease by the examination of urine in Ayurveda

Vata		Excess vata creates clear and scanty urine. It may be whitish or bluish.
Vata		Vata urine may turn darker with their tendency towards worry and stress which effects the kidneys and adrenal glands.
Vata/Pitta		In cases of fever the urine may appear smoky colored. In vata/pitta fever the urine is smoky and hot. In vata fever it may be saffron colored.
Pitta		Pitta urine is dark yellow or reddish. It may be oily, hot and copious. It may have a strong smell.
Pitta		In cases of indigestion the urine becomes like rice water. If it becomes reddish at the bottom there may be diarrhoea.
Pitta/Kapha		In rheumatoid arthritis urine appears like buttermilk. Pitta/Kapha urine shares qualities of both doshas like oiliness, cloudiness and copious.
Kapha		Kapha urine is white or yellowish, thick and copious. It may be frothy, foamy, oily, turbid, or cloudy.
Kapha/Vata		Kapha/vata fever urine is whitish with air bubbles.



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- Foods eaten can change the urine odour. For example, asparagus, cabbage, cauliflower, or garlic can give a strong smell. Urine of the vata individuals has bitter and astringent odor. Urine of the pitta individuals has pungent, rotten, and acid odor. Urine of Kapha has sweet odor.
- Drinking coffee, tea, some herbs and diuretic drugs can increase the frequency and volume of urine. Vata has low volume, increased frequency and tendency to urinate at night. Pitta has high volume and less frequency. Kapha has high volume, normal frequency, and tendency to urinate at night.
- Temperature of the urine is cold in vata, hot in pitta, and cool in kapha.
- When there is constipation or the body has less intake of water, urine will be dark yellow.
- Red coloured urine indicates a blood disorder.
- Urine examination for illness
- If the oil drop moves to the middle of the urine sample and spread indicates the illness is probably difficult to cure.
- If the drop sinks to the bottom of the urine sample indicates the illness may probably impossible to cure.
- If the drop spreads in a snake-like shape with wave movements on the urine surface indicates vata disorder.
- If the drop spreads in a umbrella shape with multi-colored like a rainbow indicates pitta disorder.
- If the drop spread into pear shape on the urine surface indicates kapha disorder.
- Normal urine has uremic smell. Urine with foul odour indicates presence of toxins in the system.
- Acidic smelling urine with burning sensation indicates excess of pitta.
- Sweet smelling urine indicates possibility for diabetes.
- Gravel in the urine sample indicates the possibility for stones in the urinary tract.
- Dark yellow coloured urine indicates jaundice; darkish yellow or brown coloured urine indicates fever, which is a pitta disorder.
- Tea, coffee and alcohol are the substance stimulate urination and aggravates pitta.
- Scanty urine indicates water retention in the body accumulated in the tissues. This affects the blood and increases the blood pressure; thus, urine production is important to maintain blood pressure and volume.

Thirteen types of urinary disorders

मूत्रौकसादो जठरं कृच्छ्रमुत्सङ्गसङ्घौ।

मूत्रातीतोऽनिलाष्ठीला वातबस्त्युष्णमारुतौ।।२५।।

वातकुण्डलिका ग्रन्थिर्विड्घातो बस्तिकुण्डलम्।

त्रयोदशैते मूत्रस्य दोषास्ताँल्लिङ्गतः शृणु।।२६।। [CHA. SIDDHI 9-25,26]

Mutraukasada (dense urine), *mutrajathara* (accumulation of urine in abdominal cavity), *mutrakrichchra* (dysuria), *mutrotsanga* (residual urination), *mutrasamkshaya* (suppression of urine formation), *mutratita* (delayed micturition), *vatasthila* (hard globular swelling like tumor), *vatabasti* (vata affection of bladder), *ushnavata* (vata-pitta vitiation of urine/burning micturition), *vatakundalika* (scanty and painful flow of urine), *granthi* (cyst at the neck of bladder), *vidghata* (feces coming through urine) and *bastikundala* (circular distension of bladder) are the thirteen varieties of *mutra dosha* (urinary disorders) and listen to them with their symptoms.

Management of urinary disorders

दोषाधिक्यमवेक्ष्यैतान् मूत्रकृच्छ्रहरैर्जयेत्॥४९॥

बस्तिमुत्तरबस्तिं च सर्वेषामेव दापयेत् ।

These conditions should be examined in terms of dominance of dosha and treated by measures that relieve *mutrakrichchra* (dysuria). *Basti* (rectal enemas) and *uttara basti* (Bladder enemas) should be administered in all these conditions.

Management of increased state

- Increased state of urine is treated by removing the cause by either cleansing (*shodhana*) procedures or medicines to facilitate the natural excretion.[Su.Sa.Sutra Sthana 15/17]
- In diseases due to suppression of urge of micturition, the treatment includes fomentation, sitz bath, massage, administration of ghee in large doses in divided form before and after meals (*avapeedaka sneha*), three types of therapeutic enema (*basti*) with oil, decoction and instillation of medicine through urinary orifice(*uttara basti*) [Cha.Sa.Sutra Sthana 7/9]

Management of decreased state

- Consumption of substances having the nature of increasing or promoting the formation of sufficient quantity of urine.[Su. Sa. Sutra Sthana 15/11]
- Sugar cane juice, *varuni* type of wine, thin gruel (*manda*), liquid food articles and substances having sweet (*madhura*), salty (*lavana*) and sour (*amla*) tastes and moist in nature are administered. [Cha.Sa.Sharira Sthana 6/11]

Time of administration of *uttara basti*

‘स्त्रीणामार्तवकाले तु प्रतिकर्म तदाचरेत्।
 गर्भासना सुखं स्नेहं तदाऽऽदत्ते ह्यपावृता॥६२॥
 गर्भं योनिस्तदा शीघ्रं जिते गृह्णाति मारुते।
 बस्तिजेषु विकारेषु योनिविभ्रंशजेषु च॥६३॥
 योनिशूलेषु तीव्रेषु योनिव्यापत्स्वसृग्दरे।
 अप्रसवति मूत्रे च बिन्दुं बिन्दुं स्रवत्यपि॥६४॥
 विदध्यादुत्तरं बस्तिं यथास्वौषधसंस्कृतम् ।६५।

In women, *uttarabasti* should be administered during the menses as the vagina is then open and easily receives the *sneha* administered, thereby the *vata* being subdued it easily becomes impregnable. *Uttarabasti* with appropriate medicines should be administered in disorders of *basti* (Urinary bladder), prolapse of uterus, severe pain related to uterus, 20 diseases of uterus and vagina (described in [Cha.Sa.Chikitsa Sthana 30th chapter], menorrhagia-metrorrhagia conditions, retention of urine and dribbling incontinence.

Contraindicated diet and lifestyle

Lifestyle:

Avoid exercise, suppression of natural urges, coitus , exposure to strong wind, strong rays of the sun

Diet:

Avoid dry and ununctuous food, pastries, herbs like Phoenix dactylifera (kharjura), Feronia linonia (Linn.) (kapittha), Syzygium cumini(jambu), Nelumbo nucifera Gaertn (bis) and food with astringent taste. [Cha.Sa.Chikitsa Sthana 26/76]

Herbs acting on urinary disorders

- Saccharum Officinarum Linn.(ikshu) is considered as the best medicine for promoting the formation of urine.
- Tribulus terrestris (gokshura) is considered as the best drug for treating dysuria. [Cha.Sa.Sutra Sthana 25/40]

The group of drugs acting on urine as described in Charak Samhita [Cha.Sa.Sutra Sthana 4/13-15]

Action	Medicines
Anti-diuretics (mutra samgrahaniya)	Syzygium cumini(jambu), Mangifera indica Linn.(amra), Ficus lacor Buch.(plaksha), Ficus benghalensis Linn.(vata), Albizzia lebbeck(kapitana), Ficus racemosa(udumbara), Ficus religiosa (ashwattha), Semecarpus anacardium (bhallataka), Bauhinia racemosa(ashmantaka), Acacia catechu Willd (somavalka)
Urinary depigmenters (mutra virajaniya)	Flowers of different kinds of water lilies and lotus like Nelumbo nucifera (padma), Nymphaea stellata Willd.(utpala), , Nymphaea pubescens (kumuda), White Ginger Lily (saugandhika) etc. Glycyrrhiza glabra Linn. (madhuka), Callicarpa macrophylla (priyangu) and Woodfordia fruticosa (L.) Kurz.(dhataki)
Diuretics (mutrala)	Roots of Dendrophthoe falcate Linn(vrukshadani), Tribulus terrestris (shwadanshra), Indigofera enneaphylla Linn(vasuka), Gynandropis gynandra (vashira), Bergenia lingulata(pashanabheda), Desmostachya bipinnata (darbha & kusha), Saccharum spontaneum Linn(kasha), Saccharum sara(gundra)

The following groups of herbs (gana) are also used in treatment.

- Veeratarvadi gana[Su. Sa. Sutra Sthana 38/13]
- Bruhatyadi gana[Su. Sa. Sutra Sthana 38/32]
- Ushakadi gana [Su. Sa. Sutra Sthana 38/38]
- Parushakadi gana [Su. Sa. Sutra Sthana 38/44]
- Trunapanchamula [Su. Sa. Sutra Sthana 38/76]

Therapeutic use of urine

Urine is a product of animal origin (jangama dravya) used in therapeutics. [Cha.Sa.Sutra Sthana 1/68-69]

Eight types of urines are described for medicinal uses such as: urine of ewe, she-goat, cow, she-buffalo, elephant, she-camel, mare and she-donkey.[Cha.Sa.Sutra Sthana 1/93] These are used in the preparation of evacuation enema(basti), purgatives(virechana), poultice (upanaha), affusion (parisheka) and in antidote (agada) preparations. It is indicated in afflictions such as retention of faeces, urine and flatulence (anaha), generalized enlargement of abdomen (udara roga), abdominal lumps (gulma), piles, dermatosis (kushtha) and leukoderma. [Cha.Sa.Sutra Sthana 1/95-96]

Urines possess activity as digestive stimulants, antidotes to poison and vermicides. These are excellent in the treatment of anemia(pandu). [Cha. Sa. Sutra Sthana 1/97] Oral administration of urine pacifies kapha, regulates peristaltic movement of vata and evacuates morbid pitta through lower channels. [Cha. Sa.Sutra Sthana 1/98-99]

DISCUSSION-

Diagnosis of a disease involves clinical assessment of the patient and laboratory investigations. The latter, especially the examination of the excretory and secretory products of the body, has always been important for the diagnosis of the disease from the ancient to the modern-day times. Now a day, with the advancement of modern technology, clinical assessment is clouded by the diagnostic tools, which have become a costly affair for the patients. So, to minimize the cost of the diagnosis, age old practices like *Tailabindu pariksha* mentioned in the Ayurvedic classical texts can be employed.

Tailabindu pariksha, is based on the consistency, thickness, density of urine and by seeing the shape of a spread oil drop on the urine surface. These changes in the properties of the urine as compared to normal occur due to the release of various excretory substances in the urine in different disease conditions which can be assessed by the patterns' formed by the oil drop during the *Tailabindu pariksha*, and thereby the diagnosis and prognosis can be assessed. According to *Ayurveda*, due to alteration of the body's normal physiological functions during diseases and the production of *Vata*, *Pitta* and *Kapha*, the chemical composition of urine also changes which ultimately changes the pattern of *Tailabindu pariksha*.

CONCLUSION-

The present study is a basic step to know about the methods and techniques used in urine examination like *tailabindu pariksha*. In the field of research in Ayurveda, many studies are being conducted to standardize the techniques and various parameters of oil drop examination (Taila bindu pareeksha) of urine to extend it in terms of modern parameters and make use of it as a cost-effective method for diagnostic and prognostic aspects.^[9] ^[10]It is being studied and used in clinical practice in the prognostic aspects of various disorders

including malignancy. The mechanism of urine formation in the intestine and its connection with the renal system may provide substantial solutions in management of chronic kidney diseases. A recent experimental study conducted on rats with impaired renal function (induced by intragastric administration of adenine), has proven that intestinal tract had excretory function compensative for renal function.^[12]

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