


**Review Article**
**NEERKURI BY SAGE THERAIYAR - A REVIEW ON SIDDHA WAY OF URINE EXAMINATION IN THE LIGHT OF CONTEMPORARY CLINICAL METHODS**
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**ABSTRACT**

The *Siddha* system is said to have emerged in antiquity, from the highly evolved consciousness of the *Siddhars*. The clarified intellect and heightened intuition of Sage *Theraiyar*, resulting from Yogic powers, enabled to expound to the world the signs of a disease in the Urine of a person in his treatise "*Theraiyar Neerkuri Vaithyam*" a book that details urine examination findings for diagnostic and prognostic purposes. The present paper deals with scientific validation of *Neerkuri* (urine examination), an important diagnostic tool in *Siddha* system of medicine. The methodology of diagnosis in *Siddha* system is based on eight fold examination of pulse, tactile perception, tongue, color and complexion, speech, eyes, stools and urine. Of all these parameters, Urine examination has gained paramount importance next to pulse examination. This paper parallels analyses the signs of urine examination between a few quotes from Sage *Theraiyar* text and modern text. This is an attempt to understand the *Siddha* system of diagnosing pathological conditions which are a non-invasive, highly cost effective procedure which can be used for both diagnostic and prognostic purposes.

**KEYWORDS:** Sage *Theraiyar*, *Neerkuri*, Urine examination, *Siddha*, *Siruneer parichothana*.

**INTRODUCTION**

*Siddha* system of Medicine is a complete holistic medical system that has been practiced in India for 2000 years and above. *Siddhars* out of their supernatural wisdom have bestowed in this world, many wonderful remedies for myriad type of ailments. But then, they did not stop with that, they have also devised and propounded the diagnostic procedures with the sources of technology and tools at their disposal. The methodology of diagnosing is based on eight fold examinations which involve the examination of pulse, tactile perception, tongue, color and complexion, speech, eyes, stools, urine. Of all these parameters, Urine examination has gained paramount importance next only to Pulse examination. Sage *Theraiyar* who lived 350 years ago has worked out a detailed procedure of urine examination, which includes study of its color, smell, density, quantity and oil drop spreading pattern<sup>[1]</sup>. While at those times there were no technological advancements around as of today, Sage *Theraiyar* tried to convey the art of diagnosing and the appreciation of prognosis to the contemporary world through the observation of signs. "*Theraiyar Neerkuri Vaithyam*" is a book that details urine examination findings for diagnostic and prognostic purposes. Sage *Theraiyar's* contribution to the diagnostic and treatment methods in *Siddha* is significant. *Neerkuri* (Urine examination) consists of macroscopic observation of color, odor, froth, density and deposits. An attempt is made in the paper to unravel the science that lies behind in the *Neerkuri* which was propounded by Sage *Theraiyar*. By relating the ancient *Siddha* literature to today's, there will be both

augmentation of the diagnostic knowledge and the management of disease.

**METHODOLOGY**

The literature cited here was principally extracted from the *Theraiyar Neerkuri Vaithyam*. For the understanding and validation of the collected information, reputed journals and databases were referred. After the methodological collection of the above information, it was compared with the current scenario and parallels were drawn leading to a specific conclusion. Then a concise, but comprehensive review was made.

**OBSERVATIONS**
**Urine sample for *neerkuri* test**

A *Siddha* literature *Theraiyar Neerkuri* and *Neikuri*, illustrated the method to collect the urine sample from the patients to perform the *Neerkuri* test. Urine shall be collected in the early morning in the *Padiga paathiram* (Crystal vessel) and examined within 90 minutes. On the day before collection of urine, the patients shall have the diet containing balanced six tastes and consume up to his appetite level at the regular time. In more severely ill patients, above criteria is not to be applied during the collection of urine and could be done instantly. The collected urine sample would be examined for five parameters such as *Niram* (color), *Nirai* (Density), *Naatram* (odor), *Nurai* (Froth) and *Enjal* (Volume decrease).

## Interpretation of Neerkuri parameters

### Yellowish changes in urine

Excessive heat in the body results in blend reddish and dark urine, says Sage *Theran*<sup>[2]</sup>, color of the urine during excessive body heat is yellowish red. "Red blood cells can also be present in the urine, giving it a dark yellow to red tinge due to haematuria. One of the most common causes of haematuria is renal calculi"<sup>[3]</sup>. "In Renal calculi, there can be blood in the urine, visible to the naked eye or under the microscope (macroscopic or microscopic haematuria) due to damage to the lining of the urinary tract"<sup>[4]</sup>. "The American urological association has projected that increasing global temperature will lead to greater future prevalence of kidney stones"<sup>[5]</sup>.

### Reddish changes in urine

1. Flaming fire colored urine denotes high body temperature, says Sage *Theran*<sup>[2]</sup>. "The urine is dark yellow with a tendency to red, even to flame red, but often depends upon the presence of uroerythrine, this is brought about by acute febrile processes"<sup>[6]</sup>.
2. Urine of reddish black or dark red color indicates 'excessive blood' says Sage *Theran*<sup>[2]</sup>. "In Polycythemia- Abnormal urine color (dark red, rusty or brown) due to blood in urine found in 60% of cases"<sup>[7]</sup>.
3. Black and saffron colored urine is suggestive of *Kaamalai* otherwise it may cause *Pitha* diseases Sage *Theran*<sup>[2]</sup>. "Dark brown urine is characteristic of Liver disorders such as viral hepatitis or cirrhosis"<sup>[10]</sup>. '*Kaamalai*' is a condition of apathy with universal sluggishness. The word '*Kaamalai*' is split into '*Kaamam*' + '*illai*' means 'No interest' in the affairs of life.

### Bluish changes in urine

1. The sky colored urine is suggestive of a toxic state of the body, Sage *Theran*<sup>[2]</sup>. "A bacterial infection caused by '*Pseudomonas aeruginosa*' can cause urine to turn green or blue". "*Pseudomonas aeruginosa* secretes a pigment named '*pyocyanin*' which is responsible for the urine to turn blue. *Pyocyanin* is virulence factor of the bacteria and has been known to cause death"<sup>[8]</sup>. (A state of bacterial toxemia)
2. If there is a bluish tinge in the urine, it suggests extreme carbon, Sage *Theran*<sup>[2]</sup>. In children and elderly persons, it may indicate *Vatha* disease. "Drummond's syndrome (Blue Diaper Syndrome) is a rare, autosomal recessive metabolic disorder characterized in children by bluish urine. It is caused by a defect in tryptophan absorption. Bacterial degradation of tryptophan in the intestine leads to excessive indole production and thus leads to indicanuria which on oxidation to indigo blue causes peculiar blue colored urine"<sup>[9]</sup>.

### Whitish changes in urine

1. Crystal clear white urine is suggestive of extreme *kabam*, Sage *Theran*<sup>[2]</sup>. The patient may not survive; if at all they survive, it is like a person drowned in sea coming back alive. "Diabetes Insipidus is a condition characterized by excessive thirst and excretion of large amounts of severely diluted urine, caused by a deficiency of the anti diuretic hormone. Urine analysis demonstrates dilute urine with a low specific gravity"<sup>[11]</sup>.

2. Urine in serious long standing conditions like tuberculosis appears to be like that of milk, Sage *Theran*<sup>[2]</sup>. "Chyluria is a medical condition involving the presence of chyle in urine stream, which results in urine appearing milky white."<sup>[12]</sup> "Tuberculosis is a bacterial infection, which usually infects the lungs, but can also infect other parts of the body including the lymph nodes, kidneys, bones and joints. When infection of the lymph node occurs, the lymphatic system can be blocked, thereby resulting in Chyluria"<sup>[12]</sup>.

### Nirai (density) of urine

1. If the voided urine is denseless and clear it is due to excessive *Kabam* or due to melting of the *Kabam*, Sage *Theran*<sup>[2]</sup>. "Diabetes Insipidus is a condition characterized by excessive thirst and excretion of large amount of severely diluted urine, caused by an insensitivity of the kidneys to ADH. Urine analysis demonstrates dilute urine with a low specific gravity"<sup>[13]</sup>. Also, many conditions which can precipitate diuresis indicate the melting up of cumulative *Kabam*. In late winter and early summer season, due to cold climate, *Kabam* instead of sweat gets excreted out of our body through urine.
2. Dense urine indicates derangement of all the three humors, Sage *Theran*<sup>[2]</sup>. This indicates edema and the tendency of the body to develop tumors. Increased urine specific gravity is seen in congestive cardiac failure. Backward failure of the right ventricle leads to congestion of systemic capillaries. This generates excess fluid accumulation in the body. This causes swelling under the skin (termed peripheral edema) and usually affects the dependent parts of the body first (causing foot and ankle swelling in people who are standing up, and sacral edema in people who are predominantly lying down)"<sup>[14]</sup>.

### Nurai (froth) of urine

The frothy urine with yellow, black or red color indicates the symptoms of jaundice, Sage *Theran*<sup>[2]</sup>. "In jaundice-scanty yellow frothy urine is seen. Foamy urine is caused by bilirubin in the urine (bilirubinuria)"<sup>[15]</sup>.

### Enjal (decreased volume) of urine

*Enjal* is precipitation of dissolved matter of the urine on the increase in urinary concentration (Reduction of volume). Any decrease of urine in volume in spite of normal intake of water suggests the onset of '*Paandu*' as per the *Siddha* literature '*Paandu*' means pallor of the body, which is generally caused due to anemia, Sage *Theran*<sup>[2]</sup>. This could be possibly being a severe anemic condition manifested in the chronic kidney disease. "Renal failure describes a medical condition in which the kidneys fail to adequately filter toxins and waste products from the blood. It is characterized by oliguria<sup>[16]</sup> (decreased urine production quantified as less than 400ml/day in adults). In renal failure, there will be decreased production of erythropoietin, which leads to anemia, this can result in tiredness etc."<sup>[17]</sup>. Here in the above lines from literature, two physiological systems via urological and hematological are implied to be affected. Therefore, it can logically be constructed that Erythropoietin deficient anemia of chronic kidney disease has been referred to very succinctly and subtly.

**CONCLUSION**

From the above parallel analysis, it is clear that the scriptures of Sage *Theraiyar* about the signs in a urinary examination closely correlate with that of the urinary manifestation of signs in various medical conditions mentioned in the modern medical literature. The urinary signs and symptoms of the medical conditions mentioned in modern literature have already been scientifically validated. Therefore the Sage *Theraiyar's* signs and symptoms of urinary examination following the close lines of modern medical literature automatically stands validated. So it is the need of the hour to focus on this precious urinary diagnostic tool *Neerkuri*. Further researches are yet to be done in the field of *Siddha* diagnostic methods, particularly *Neerkuri* which will help us in better understanding of disease conditions.

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