

# Siddha urinary diagnostic method Neerkuri in Neerilivu noi (Diabetes) - A review

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## ABSTRACT

*Siddhars* viewed every disease under the roof of diagnostic techniques, finding the root causes, clinical features and treatment methodologies. In *Siddha* system *Sage Theraiyar* who lived 350 years ago has worked out a detailed procedure of urine examination, which includes study of its *Niram* (color), *Nirai* (density), *Naatram* (odor), *Nurai* (froth) and *Enjal* (volume decrease) and oil drop spreading pattern em of medicine, diagnosis of the disease is based on *Ennvagai thervukal* (Eight-fold examination), in which *Neerkkuri Neikkuri* (Urine examination) is one among them. This study aims to validate the *Neerkuri* on the *Neerilivunoi* mentioned in *Siddha* texts. *Neerilivu* is one of the *Kapha* diseases propounded by *Siddhars*. It affects all the *Keelnokkukaal* (*Vatham*) and *Sapthathaathukal*. In *Pararaasaseharam* (Fifth Part) diabetes is called as losing water, water related disease and sweet urine in *Siddha* medicine and it is characterized by frequently passing hot urine, passing foamy urine like a pearl (drop) of fresh honey in the water, and this is an incurable disease. From the parallel analysis, the scriptures of *Sage Theraiyar* about the signs in a urinary examination closely correlate with diabetes mentioned in the modern medical literature.

## KEYWORDS

*Sage Theraiyar, Neerkuri, Neerilivunoi*

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## INTRODUCTION

*Siddha* system is a way of life morally and ethically founded upon and instituted by *Siddhars* to attain ultimate aim of reaching bliss. *Siddhars* viewed every disease under the roof of diagnostic techniques, finding the root causes, clinical features and treatment methodologies. A good diagnosis can make a good treatment protocol in any disease <sup>(1)</sup>. In *Siddha* system of medicine, diagnosis of the disease is based on *Ennvagai thervukal* (Eight-fold examination), in which *Neerkkuri Neikkuri* (Urine examination) is one among them. It is an effective and sensitive measure for the diagnosis and prognosis of diseases <sup>(2)</sup>. *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, and quantity and oil drop spreading pattern <sup>(3)</sup>. This study aims to validate the *Neerkuri* on the *Neerilivunoi* mentioned in *Siddha* texts. 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) <sup>(4)</sup>.

### Characteristics of diabetes in *Siddha* medicine

The disease *Neerilivu* is called by different names, *Mathumeham*, *Salarogam*, *Mihuneer*, *Vehumooththiram*, *Inippuneer*, *Mehaneer*, *Theanneerand* diabetes. *Neerilivu* is one of the *Kapha* diseases propounded by *Siddhars*. It affects all the *Keelnokkukaal* (*Vatham*) and *Sapthathaathukal*. On the international basis this had affected many people. At the beginning only the rich became victims to this disease but now it affects both the rich and the poor <sup>(13)</sup>. In the following causes and signs which are seen to the *Siddha* correspondence of diabetes are described. The description is based on *Siddha* texts and as such follows the principles of *Siddha* medical theory. In *Pararaasaseharam* (Fifth Part) diabetes is called as losing water, water related disease and sweet urine in *Siddha* medicine and it is characterized by

frequently passing hot urine, passing foamy urine like a pearl (drop) of fresh honey in the water, and this is an incurable disease <sup>(5)</sup>. It is grouped within the polyuria related conditions of which there are 20 types. These are categorized into three groups: fire (6 types), wind (4 types), and water related polyuria conditions (10 types). Moreover, diabetes is considered as one of the wind related polyuria related condition <sup>(13), (14)</sup>.

### Causes of diabetes

Consumption of ghee (semifluid butter), curd, and milk (which increase the coolness of the body), consumption of meat, not applying oil on the body, excessively walking in the sun, and excessive sexual intercourse with woman are considered to be causes of diabetes. Consuming excess or dearth food (eating disorder), having meals at irregular times (irregular eating), excess consumption of ghee and milk and excessive consumption of sour foods. Also having excessive sexual intercourse with a woman and excessively walking in the sun during summer may cause diabetes<sup>(6)</sup>. In books; “*Siddha Maruthuvam*, *Yuki vaidya Sinthamani*, and *Pararajasekaram* the following symptoms are cited for this disease, excessive excretion of urine, collection of ants and flies in places where a person passes urine, loss of physical strength exhaustion of body, dry mouth etc. Further in the same books the following have been quoted as the causes of this disease<sup>(13)</sup>.

### Signs of diabetes

The signs of diabetes include feeling laziness, excessive sweating, body odour, always wanting to sleep, dry tongue, grease formation on tongue, sweet taste in mouth, desiring to consume cold drinks and foods, dry chest and throat, rapid growth of hair and nail, and ants and flies gather around the urine <sup>(5)</sup>. The signs mentioned in *Segarasasegaram* text are somewhat different and include burning sensation in the stomach, paleness of body skin, weight loss, consciousness loss, dry tongue, feeling thirsty, excessive urination during the night (nocturia), difficulty in walking, blurred vision on humid, foggy, and rainy days, excessive urination, and feeling depressed. Another set of signs is described including burning sensation in the stomach, sweating, difficulty in walking, blurred vision, wanting to quench thirst by drinking buttermilk and coconut water, loss of appetite, dry tongue, body ache, passing clear and foamless urine during day and night, extreme pain, ear congestion, and unable to fall asleep (insomnia) .urine with properties of coconut water during the night, dry tongue, feeling thirsty, body weakness, laziness are seen as signs and may cause death <sup>(6)</sup>. Types of diabetes in *Siddha medicine* 24 types of *neerilivu* (what according to the textbook is considered to be diabetes are distinguished and further divided into seven categories. These categories are based on the impact the basic elements have on the human body and the types are identified based

on the taste and odour of the urine. The seven categories are:

**1. Wind associated diabetes** – *Vaathaneerilivu* including three types. The urine can be characterized by:

An odour of *Mangifera indica* L. (Anacardiaceae) flower and sour taste, or an odour of *Crocus sativus* L. (Iridaceae) flower and sour-bitter taste.

**2. Wind-fire associated diabetes** – *Vaathapiththaneerilivu* including four types. The urine can be characterized by:

An odour of *Curcuma longa* L. rhizome (Zingiberaceae) and sour-bitter taste, an odour of *Nerium oleander* L. (Apocynaceae) flower and sweet-pungent bitter-sour-astringent taste, An odour of milk and buttery taste, and An odour of brain odour and bitter taste.

**3. Fire associated diabetes** – *Piththaneerilivu* including three types. The urine can be characterized by:

An odour of fruit juice and bitter taste, a salty odour and taste, and an odour of *Jasminumsambac* (L.) Aiton(Oleaceae) flower and producing a burning sensation when urinating

**4. Fire-wind associated diabetes** – *piththavaathaneerilivu* including two types. The urine can be characterized by: An odour of cow urine and astringent taste and An odour of *Santalum album* L. (Santalaceae) wood and peppery taste.

**5. Water associated diabetes** – *Siletpananeerilivu* including four types. The urine can be characterized by: An odour of *Pandanusodorifer* (Forssk.) Kuntze (Pandanaaceae) flower- cow manure-lemon-blood and sweet taste.

**6. Water-fire associated diabetes** – *Siletpanapiththaneerilivu* including four types. The urine can be characterized by:

An odour of *Magnolia champaca* (L.) Baill.ex Pierre (Magnoliaceae) flower, a taste like *Syzygiumcumini*(L.) Skeels (Myrtaceae) fruit, a bad odour and a bitter-sour taste as well as ants gathering around the urine, and An odour of slaked lime (calcium hydroxide) and producing a burning sensation (similar to the one caused by lime (calcium oxide) when urinating.

**7. Water-wind associated diabetes** – *Siletpanavaathaneerilivu*. The urine can be characterized by: A strong odour and sour taste. (7).

### Diabetes complications like in Medical biology

Diabetes complications have been reported in *Siddha medicine*. Some of the complications include lower abdominal pain, tiredness after urinating, flatulence, increased deficiency in sperm secretion, sperm in urine, general body weakness, loss of appetite, abscess formation, diarrhea, unconsciousness, and death (7).

## DISCUSSION

### Colour (Niram) of urine

Whitish changes in urine, Crystal clear white urine is suggestive of extreme *kabam*, *Sage Theran*. Pale white and clear urine due to reduction of warmth in body indicates incurable nature of illness. Urine with mucous discharge and whitish in colour denotes the *kaphadosha* due to excess heat. Milky white (*shayaneer*)-destruction of marrow and possibility of wasting disease. Semen like urine – highly depleted *kaphadosha* and disturbance of all *doshas*. Urine with no sediment – incurable disease. Urine like milk or butter milk – incurable disease. Urine resembling washings of spoiled meat – bad functioning of kidneys and depletion of blood and *kapha*. The dense urine with the consistency like melted ghee indicates *Neerilivu*<sup>(8)</sup>. The patient may not survive; if at all they survive, it is like a person drowned in sea coming back alive. “Diabetes 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<sup>(9)</sup>.”

### Density (Nirai) of urine

If the voided urine is denseless and clear it is due to excessive *Kabam* or due to melting of the *Kabam*, *Sage Theran*<sup>(8)</sup>. “Diabetes 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>(10)</sup>.

### Odour(Naatram) of urine

Gee smell, Cow urine smell, Raw meat washed water smell and toddy smell indicates possibility of diabetes. disease of muscle or adipose tissue<sup>(8)</sup>. Sweet or fruity smelling urine may be due to ketones. Ketones are formed when the body burns fat for fuel, and this can occur when there is not enough insulin to move glucose in to cells for energy<sup>(12)</sup>.

## CONCLUSION

*Neerilivu* is one of the *Kapha* diseases propounded by *Siddhars*. It affects all the *Keelnokkukaal* (*Vatham*) and *Sapthathaathukal*, this disease could be easily diagnosed by eight-fold examination. *Neerkuri* is a tool to elicit the disease Diabetes. Based on the *Neerkuri* examination observed as finding, this showed the involvement of *Kapha* and *Vatha* in the pathogenesis of *Neerilivu*. 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 diabetes 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.

### CONFLICT OF INTEREST

None declared.

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