

# Neerizhivu: a comparative review as per siddha and modern classics

## Abstract

In recent years, as the Diabetes Mellitus proliferate worldwide and the disease takes an ever increasing proportion of national and international economy of health care. Though there is numerous existing cause of this dreadful disease the actual factors which become excited according to the Siddha system of medicine are the three humors which are the basic constituents of living body. The term Diabetes Mellitus describes a metabolic disorder of multiple etiologies characterized by chronic hyperglycemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both. Diabetes Mellitus is a condition which can be compared with Neerizhivu in Siddha. The other names described in the texts are the Madhumegam and Inippuneer. The signs and symptoms explained is increased urination both in frequency and quantity, there will be flies surrounding the urine voided place, weight loss, dryness of the skin, etc. The disease comes under the Mega diseases. The literature of Neerizhivu described in Siddha School of thoughts still remains the great scope of research in the field of Diabetes Mellitus. The ancient traditional knowledge of the disease is analyzed here and review is made to compare the disease Neerizhivu in meganeer correlated with is Diabetes mellitus in modern medicine. Neerizhivu has 20 sub types in three classifications Vazhi (vatha), Azhal (pitha), Iya (kapaha) Neerizhivu and 10 Avasthaigal correlated with different stages and complications of Diabetes mellitus in modern classics.

**Keywords:** neerizhivu, madhumegam, diabetes mellitus, inippuneer

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## Introduction

Diabetes mellitus has gigantic disgrace in recent times as it is fast becoming the world's largest silent killer. The diabetes mellitus is very difficult to diagnose in early stages. Diabetes is one of the most common non-communicable disease (NCDs). 415million people have diabetes in the world and 78million people in the South – East Asia region; by 2040 this will rise to 140million. There were 1.16million cases of diabetes in Sri Lanka in 2015. Our ancestors elaborated the knowledge of the disease neerizhivu in many school of thoughts. Saint Theraiyar in his "Theran karisal" has classified the diseases of the urinary system into two major categories of "neerina perukkal" and "neerarukal" noigal. Any pathology which gives rise to increased urination in quantity or frequency irrespective of the varied causes is included under neer perukkal noigal or mega neer or madhumegam or neerizhivu. Diabetes mellitus has also been viewed under "neerina perukkal noigal" which produces the symptom of polyuria in the affected individuals.

The Siddhars have given different classifications of Neerizhivu which have been documented based on the observations of the complaints of the patients. The classification of madhumegam has

been disclosed by Yugi muni in Yugi Vaithiya Cinthamani 800, Agathiyar in Agathiyar Kanma Kadam. Theraiyar in Theraiyar Vaagadam and by Thirumoolar in Thirumoolar vaithiyam 600. The complications due to long standing diabetes are explained under Neerizhivin Avasthaigal. Yugi muni in his Yugi Vaithiya Cinthamani 800 has elaborately discussed about ten Phases ensuing Neerizhivin Avasthaigal. Basically Neerizhivu is one disease associated with and increased frequency and quantity of urine and its turbidity which is due to various physical and chemical changes of body. It comprises 20 sub divisions in three group's i.e. Vatha neer (04), Pitha neer (06) and Kabha neer (10) which are correlated very much with different stages of Diabetes Mellitus.<sup>1-3</sup>

## Aim and objective

The ancient traditional knowledge or wisdom of the disease Neerizhivu is highlighted here and attempt is made to compare in aspect of disease with the modern medical science. For this purpose, right from definition, classification, pathogenesis, clinical features, complications and treatment aspect all have been taken into account both from the literature of Siddha and modern medicine (Tables 1–3).<sup>4</sup>

**Table 1** Comparison of Neerizhivu with diabetes mellitus

SI. No	Particulars	Neerizhivu	Diabetes Mellitus
1	Definition	Disease characterized by polyuria, presence of honey (or) Sweet odour in urine on heating. It is ultimately deteriorates all the seven udal thathus (seven fundamental tissues of the body)	Diabetes mellitus is a syndrome characterized by polyuria, polydipsia, polyphagia, and persistent hyperglycaemia with or without glycosuria. It is a metabolic disorders i.e. carbohydrate, protein and fat metabolism and to deficiency of insulin.
2	Aetiology	a. Thanvinai (kanma vinai) b. Puravinai (Acquired)	a. Type I Diabetes Mellitus Hereditary–diabetes have noted to be

**Table 2** Premonitory symptoms in siddha terminology

Premonitory symptoms in siddha terminology	Literary meaning	Modern terminology
Pala nirankalil neer kalithal	Physical Appearance of abnormality in urine	Diabetic nephropathy
Mel moochu, Mayakkam, sorvu	Dyspnoea	Respiratory Tract Infections/ketoacidosis Metabolic encephalopathy

**Table 3** General symptoms and signs of neerizhivu along with modern aspect

Premonitory symptoms in siddha terminology	Literary meaning	Modern terminology
copy Kai kal erivu, mathamathappu	Numbness and burning sensation in hand feet	Diabetic neuropathy
Pisupisuththa viyarvai, siruneer naatrathudan elithal	Unctuous sweating, bad odour of urine	Hyperglycaemia leads to glycosuria and infections
Vanthi, naavaratsi	Vomiting, Dryness in mouth	Osmotic diuresis leads to electrolyte imbalance (Diabetic Ketoacidosis, Diabetic Non Ketoacidosis)
Udal veluthathal, paruthal pisupisuththa viyarvai, sompi thirithal	Excessive sweating, laziness	Obesity induced symptoms Hypoglycaemia

**Table 4** Neerizhivin 10 avasthaigal along with modern explanation

SI. No	Avasthaigal	Literary meaning	Complications according to the modern medical science
1	Udal Paruthathal	Obesity	Metabolic Dyslipidaemia
2	Venner Kedum	Liquefaction of semen	Diabetic nephropathy and ERDS, Asthenospermia, oligospermia
3	Navaratsi, Vayitriil Kaatru Kooduthal	Dryness in tongue, and flatulent abdomen	Autonomic neuropathy due to metabolic derangements
4	Neer vetkai, Muppini	Severe thirst and abnormality, and delirium	Mental disturbances due to metabolic acidosis / alkalosis
5	Vinthu Nattam	Loss of semen	Retrograde ejaculation and spermaturia, premature ejaculation
6	Moorchai	Difficulty in breathing and sleeplessness	State of unconsciousness, encephalopathy due to hypoglycaemia or metabolic disease
7	Suwai Maaral, Mel Moochu, Udal Vali	Tastelessness and general weakness	Diabetic keto, non keto and lactic acidosis
8	Kalalai, Pilavai	Forming of abscess or carbuncles	Carbuncles, abscesses, diabetic foot
9	Pethi, padukkayil kidakkavottathu, Pulu Serum	Diarrhoea, bed ridden, bed sores	Recurrent infections
10	Elaippu, Maranam	Secondary disease like TB or some other complications finally leading to death	Superadded opportunistic infections like Tuberculosis

### Description of neerizhivin 10 avasthaigal

If proper treatment and care is not taken, the disease Neerizhivu leads to lots of complications. Yugimuni has given vibrant description about the complications as avasthaigal. The onset of the following sufferings will be followed gradually if the disease is not controlled or left untreated. Following charts gives details posture of the various complications in relation with modern point of view.<sup>5,6</sup>

### Discussion

Neerizhivu comprises 20 sub varieties of diseases with various physical and chemical changes in urine and is further classified in

to three groups i.e. Kapha neerizhivu (10), Pitha neerizhivu (6) and Vatha neerizhivu (4) which are resembles very much with different stages of diabetes mellitus. It has been observed that with progression of the disease there is increased hyperglycemia and simultaneously fall in plasma insulin. Whatever the Avasthaigal mentioned by the Yugimuni are the same as that of modern science which are described after various research activities and with proper evidences. In short we can say that the vatha pitha and kabha Neerizhivu are different type of diabetes along with hyperglycaemia kabha neerizhivu is due to malfunctioning of the pancreas result to improper insulin secretion (insulin resistance), pitha neerizhivu is due to over functioning adrenal, thyroid, glycogen and cortisol and vatha neerizhivu is because of true

insulin deficiency due to Auto immune or idiopathic destruction of  $\beta$  cell of islet of Langerhans of pancreas. There is possibility that insulin independent type of diabetes leads to the stage of insulin dependent diabetes. Thus the concept of different stages of diabetes mellitus is well comparable with the types of neerizhivu as describe in Siddha Medicine. Modern medical science also says that Type 2 diabetes can converted to type 1 due to untreated or improper management as well as in Neerizhivin 10 avasthaigal.<sup>7-11</sup>

## Conclusion

The review is concluding as Neerizhivu noi can be used as a synonym of diabetes mellitus. This work highlights the Siddha perspective of Diabetes based on the derangement of three humors vatham, pitham and kabham. So, it is can be concluded description of etiology, pathogenesis, clinical feature, complications etc. appears to be similar in both Siddha and Modern medicine in respect of Neerizhivu i.e. Diabetes Mellitus. Both systems of medicine should unite and lift the health among humans on to the world arena. Siddha Medicine is a cost effective remedy for a number of maladies. However the Siddha System needs to be standardized and validated scientifically.

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## Conflict of interest

Author declares that there is no conflict of interest.

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