



Exploring The Ancient Wisdom, Siddha Insights In Madhumega Avathaigal Illustrating With Chronic Complication Of Non-Insulin Dependent Diabetes Mellitus - A Literature Review

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Abstract:

Diabetes has spread throughout the world in recent years, and this disease has led to an increase in national and international healthcare costs. There are many causes of this terrible disease, but according to the Siddha system of medicine, the real triggers are the three bodily humors that are the main components of the living body. The term diabetes mellitus is characterized by chronic hyperglycemia of the metabolism of carbohydrates, lipids, and proteins due to metabolic disorders of various etiologies, disorders of insulin secretion, insulin action, or both. Diabetes is a condition comparable to Madhumegam in Siddha. Other names mentioned in the text are Neerizivu and Inippuneer. Common signs and symptoms include increased frequency and volume of urination, pus around the urethra, nausea, and dry skin. This disease is defined as the main disease. Madhumegaavataigal's text from the Siddha School continues to be the primary research authority on diabetes and its complications. Here, ancient and traditional knowledge of the disease is explored with a comparative review of complications of diabetes and MadumeghaAvathaigal in modern classics.

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Keywords: Madhumegam, avathaigal, neerizhivu, complications, diabetes.

Introduction:

Siddha medicine is an ancient system of medicine practiced by the Siddhars. They divide diseases into 4448. [2] According to the Siddha system, diseases are caused by changes in the 3 vital humors; Among the 22 types of meganeer, four are in vadham, six pitham and ten kapham. One called Madhumegam entered under pitam.

Diabetes and its complications are responsible for most of its morbidity and mortality; diabetes complications can be associated with avathikal in yugivaidyachinthamani. [3]

The prevalence of diabetes is between 1% and 30%. Compared to developed countries, developed countries have increased. Future DM patients will be 844 million by 2036. [4]

The prevalence of DM among adults was 8.5% in 2016, more than doubling from 4.7% in 1980. Type II accounts for 90% of cases. [5] In 2012, 1.5 million people died from DM, the 8th leading cause of death. This article provides a brief overview of the complications of diabetes and obesity.

Neerizhivunooi yilkaanum pathuvagai Avathaikal [3]

1. Nooi thoondhuvadharkku murkuriyaga udal paruthu kondaavarum. neerpuzhai agandhru varum
2. Siruneerperugi kettuizium veneer (sukkilam) kettu udalin olikundri kaanum.
3. Naavaratchi udan vayitru kaatru koodiperugum
4. Neervetkai migundhu muppini thodarum.
5. Siruneerperugi yizhindhu vindhunattam undagum.
6. Padukkaiyil kidakka vottaadhu.morchaiundagum.
7. Vaaikumati soovai yatru perumoochi undaai udalsoorum.
8. Udalil kazhalai kattigalundum.
9. Ojukkamthavaral, perukazhichal, puzhusaeralivai Undagum
10. Ilaippu nooi sayamundaai nooiyin anai kollumendrariyaum

1. Nooi thoondhuvadharkku murkuriyaga udal paruthu kondaavarum. neerpuzhai agandhru varum [3]

The main factors are rising obesity, physical inactivity, poor diet and urbanization meaning the number of type 2 diabetes patients is increasing. [6]

The second factor, loss of cell function, increases plasma NEFA levels. Despite its importance in insulin secretion, chronic exposure to NEFA causes dysfunction of the glucose-stimulated insulin secretion pathway and reduced insulin biosynthesis. Levels of lipid-derived NEFA increase in vivo insulin resistance and β -cell compensatory failure in humans. [7]

These two actions of NEFA contribute to the important etiology of type 2 diabetes in humans, linking cellular dysfunction and insulin resistance to risk factors for this disease. An increase in plasma NEFA levels and an increase in glucose levels in lipotoxic can lead to more severe glucolipotoxic effects. [8]

2. Siruneerperugi kettuizium veneer (sukkilam) kettu udalin olikundri kaanum.

Skin changes in diabetes

The partial spread, a symptom of this condition, can be explained by advanced glycation and accumulation of products in the skin. Uncontrolled DM leads to an increase in AGEs content. Impaired production of collagen and extracellular matrix is associated with aging, low hydroxyproline content, and superoxide dismutase activity. Significant disturbances and changes in the biochemical properties of the skin, such as elasticity and hydration, are detectable effects.

Furthermore, loss of skin surface lipids due to gastric dysfunction and decreased hydration in the stratum corneum. [9]

Different types of diabetes

Skin disease will occur in 79.2% of people with diabetes. Skin changes can be the first symptom of diabetes or can develop at any time as a result of diabetes Acanthosis is the most common skin type of diabetes in Nigerians.

Acrochordons

Apicorasicular or fibroepithelial polyps, cut appendages, and benign fibromas are benign growths of normal skin in narrow ducts, usually in the eyelids, neck, armpits, and groin.

Diabetic dermopathy

Diabetic dermopathy less than 1 cm, atrophic depression, macules, or papules are considered signs of insulin resistance. Lesions heal and disappear on their own within 1-2 years, leaving atrophic hypopigmentation at the site of origin.

Eruptivexanthoma

Eruptive xanthoma, the sudden onset of yellow papules with an erythematous base, seen on the plants, elbows, and knees. It is very rare and often occurs in patients with type 2 diabetes. It can be an early symptom of diabetes.

RubeosisFaciei

Rubeosisfaciei is a microangiopathic complication associated with DM. Appears flushed and is associated with poor glucose control. [10]

3. Naavaratchi udan vayitrul kaatru koodiperugum

Polydipsia can occur as a result of high blood sugar and is one of the symptoms of diabetes. [11]

Diabetic gastroparesis

Diabetic gastroparesis (DGP) is a gastrointestinal problem in DM that causes nausea, vomiting, early satiety, bloating, and abdominal pain. Postprandial pain and swelling, major morbidity, and significant impairment of glycemic control.

Both type 1 and type 2 diabetes are equally prevalent, develop after at least 10 years of diabetes, and often have evidence of autonomic dysfunction. Diabetic enteropathy occurs in parallel with other forms of diabetes. If the movement of the midgut creates the same barrier as the stomach, this can lead to an overgrowth of intestinal bacteria. Gastroesophageal reflux can occur with diabetic gastroparesis due to the emptying of the stomach.

Intestinal diseases also dominate a large group of diabetics. [12]

4. Neervetkai migundhu muppini thodarum

Diabetic ketoacidosis

Biochemical criteria for diagnosing diabetic ketoacidosis hyperglycemia are >200 mg/dl, venous pH <7.3 , or serum bicarbonate. Ketonemia Blood b-Hydroxybutyrate ≥ 3 mmol/L Moderate or severe ketonuria.

Clinical signs of diabetic ketoacidosis

Dehydration, tachycardia, tachypnea, wheezing, acetone breath, nausea and vomiting, abdominal pain, blurred vision, confusion, insomnia, gradual loss of consciousness, and finally fainting (coma).

Risk factors for DKA in patients with certain diabetes include insulin secretion for various reasons. Decreased insulin delivery in patients with limited medical care and insulin pump use.

Symptoms of cerebral edema

Cushing's triad of increased blood pressure, bradycardia, and respiratory depression is a late but important symptom of increased intracranial pressure. Decreased O₂ saturation. [13]

Warning signs and symptoms of cerebral edema

Anxiety, irritability, increased insomnia, confusion, irritability. Progressive, worsening, or severe dizziness, sleep, or improved vascular, clinical neurologic status, and slowing heart rate. [14]

5. Siruneerperugi yizhindhu vindhunattam undagum.

Complications of diabetes and some lower urinary tract symptoms. Lower urinary tract dysfunction, such as urinary urgency, frequency, nocturia, and dysuria, may be due to an atonic or coated bladder.

The higher prevalence of complaints in women with prediabetes and women with diabetes suggests that hyperglycemia may be an earlier and more common consequence. Hyperglycemia, oxidative stress, and polyuria play important roles in contributing to diabetic dysfunction.

Diabetes mellitus is cytopathic

As the population ages, diabetes and lower urinary tract dysfunction will increase significantly. A recent clinical study in 2011 reported that 22.5% of patients had bladder disease, of which 48% were not incontinent. The etiology for incontinence is microvascular damage to the bladder, changes in detrusor muscle function, or urothelial dysfunction.

Polyuria

Bladder wall repairs, such as hypertrophy, dilatation, increased adherence and compliance, and remodeling of the structural relationship between detrusor, urothelium, and collagen, reflect physical adaptation to diuresis and may be an important factor in compensatory bladder function early in diabetes. In the final stages of decompensated bladder function, there is a decrease in intracranial pressure and an increase in postvoid residual urine. Therefore, polyuria induces changes in the function of the gallbladder in diabetes [15]

6. Padukkaiyil kidakka vottaadhu.morchaiundagum

Restless legs syndrome

Restless legs syndrome is a disorder of the part of the nervous system that causes the legs to move. It is usually considered a sleep disorder because it interferes with sleep. Sleep disturbances are one of the most devastating symptoms for RLS sufferers who have serious insomnia and wake up throughout the night. The effects of daytime sleepiness and reduced productivity. Conversely, RLS symptoms can be worsened by lack of sleep. [16]

Uremia

Chronic kidney disease causes several neurological complications that affect the central and peripheral nervous systems. Central nervous system complications of CKD include stroke, seizures, movement disorders, cognitive impairment, encephalopathy, depression, and anxiety. [17]

7. Vaaikumati soovai yatru perumoochi undaai udalsoorum.

Taste disturbances

The absence of the sense of taste, decreased sense of taste, and impaired sense of taste are associated with DM. Based on these symptoms, it is very important to diagnose DM early, start early treatment and thus prevent complications. [18]

Diabetes and neuropathy and microangiopathy can cause loss of taste. Taste receptor defects may be responsible for newly diagnosed DM cases without complications Taste disturbances may be an important indicator of diabetes in patients at risk. The altered sense is not only at certain times but throughout the day. Rather than being an indicator of disease duration or severity, it may be an indicator of changes in blood sugar levels. Antihypertensive drugs for hypertensive diabetes are also known to have adverse effects on taste. Other medications known to negatively affect the sense of taste include sulfonylureas, which are commonly used in diabetics. [19]

The lack of taste can lead to an increase in glucose intake (sweet food and drinks) because more glucose must be consumed to produce the same taste sensation. According to some studies, obese patients may prefer sweet food than normal weight people. Pneumomediastinum DKA is a rare complication of Kussmaul breathing, a compensatory mechanism of breathing in metabolic acidosis that raises alveolar pressure by 20-30 mmHg above normal inspiratory pressure, leading to alveolar rupture. [20]

Vomiting in DKA increases intracranial pressure secondary to the Valsalva maneuver DKA is often associated with severe vomiting, especially in the first 24 hours caused by acidosis. Severe gastroparesis with hyperglycemia and increased vomiting, probably due to fibrotic changes in the lungs of people with uncontrolled diabetes, leading to alveolar rupture at low intracranial pressure.

Fatigue is a common and distressing complaint among people with diabetes and can interfere with the ability to perform daily diabetes self-management tasks. Fatigue in diabetes can be caused by the interaction of physiological, psychological, and lifestyle factors. Fatigue can also be a cause and effect of diabetes self-management. [21]

A 2012 Indian study evaluating 50 cases of DM with oral complications found taste disturbances in 20%. Another Indian study found that taste changes were more common in people with uncontrolled diabetes than in those with uncontrolled diabetes. [22]

8. Udalil kazhalai kattigalundum.

Carbuncle

Carbuncles are often associated with diabetes Carbuncles are not uncommon even after antibiotics, especially in people with uncontrolled diabetes.

Diagnosis is often delayed because it occurs on the back of the neck or in the pelvis and is therefore not easily seen. Carbuncles are usually caused by *S. aureus*, and if left untreated, usually boil/abscess around the base of the hair follicle, and can even lead to diabetic ketoacidosis, which can be fatal. [23]

cancer

Diabetes (especially type 2) is associated with an increased risk of certain cancers (liver, pancreas, endometrial, colon and rectal, breast, and gallbladder). For some other cancers, the association appears to be missing or the evidence is inconclusive.

Risk factors such as aging, obesity, diet, and physical inactivity are common in diabetes and some cancers. Possible mechanisms for the direct relationship between diabetes and cancer include hyperinsulinemia, hyperglycemia, and inflammation, and exogenous insulin is associated with an increased incidence of cancer. Cancer is the 2nd leading cause of death in the world, diabetes is the 12th leading cause of death in the US, and diabetes is the 2nd leading cause of death. awkward situation [24]

9. Ojukkamthavaral, perukazhichal, puzhusaeralivai Undagum

Diabetes affects the main components of the physical structure of the hand, especially in combination with CAD, renal failure, diabetic neuropathy, or complications of obesity such as retinopathy or obesity.

Psychological component, especially in young subjects living with type 1 depression, and social component disrupting family relationships and friendships. cognitive component, especially when dementia occurs. [25]

Diabetes

This condition lasts from several weeks to several months and is often accompanied by fecal incontinence. Colon or colonic neuropathy can cause severe diarrhea (often called 'diabetic diarrhea') that is difficult to control. [26] Because diabetics are susceptible to infections by a variety of mechanisms, impaired cellular innate immunity plays an important role in the pathogenesis of increased infections in DM. The second important mechanism is greater adherence of microorganisms to diabetic cells. Some microorganisms are more virulent in a high-glucose environment. [27]

The most common symptoms are diarrhea, abdominal pain, bloating, flatulence, and wasting due to malabsorption. The prevalence of giardiasis is 15% (30/200) in the spatial distribution between intestinal parasites and diabetes. suggesting that the two diseases may interact. [28]

Ants/canker sores/canker sores

A 75-year-old diabetic patient complained of large leg ulcers and dull pain. The author removed 30 ants from that generation. [29]

'Myiasis' is a term used to describe a non-iatrogenic infection of tissues by the larvae of flies, commonly called ants. Diabetes, immobilization, poor hygiene, and poor immune status contribute to myiasis. [30]

10. Ilaippu nooi sayamundaai nooiyin anai kollumendrariyaum

Tuberculosis

The ancient Indian writings of SiddharUguimahamuni describe "mechanical" symptoms (urinary disorders) such as weakness from obesity, dehydration, and glycosuria, and eventually fainting or tuberculosis. [31]

"Uncontrolled diabetes can cause many complications, including vascular disease, neuropathy, and increased susceptibility to infection. Diabetes can increase susceptibility to diseases caused by *M. tuberculosis* through several mechanisms. [32]

Discussion:

Madhumeagam includes 20 subtypes of the disease and is further divided into three groups [3] namely Kaphaneerizhivu(10), Pithaneerizhivu (6), and Vathaneerizhivu (4), which are similar to different stages of diabetes. With the progression of the disease, there is an increase in hyperglycemia and a simultaneous decrease in plasma insulin Avathaigal mentioned by Ugugimuni is similar to diabetes and its complications. In madhumeagaavathaigal, it is compared to complications of diabetes. Untreated or improper administration of Madhumeagam led to 10 accidents.

Conclusion:

The review concluded that Madhumeagaavathaigal is similar to diabetic complications. This work presents the Siddha perspective on Diabetes based on changes in vatam, pitam and kabham. Therefore, etiology, pathogenesis, clinical features, complications, etc. It can be concluded that Madhumeagaavathaigal is diabetes and its complications are similar to Siddha and Modern Medicine. Both systems of medicine must work together to improve people's health in the global arena. However, the Siddha system needs to be standardized and scientifically validated to prevent diabetes and its complications.

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