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**Research Article** 



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# Effect of Integrative approach using Siddha medicines, Isha Yoga and Dietary modifications in treatment of Madhumegam (Diabetes mellitus) in holistic approach-observational study

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#### **Abstract**

**Objective:** Siddha and Yoga have emerged as beneficial systems in the management of type 2 Diabetes Mellitus. This study was planned to understand the impact of an integrated approach using Siddha medications, Yogic practices and diet modifications in the management of Type 2 Diabetes.

Method: 10 Patients with type 2 diabetes between the ages of 35-70 years with no co-morbidities like kidney, cardiac or eye complication were recruited. They were started on Siddha medications along with allopathic medications, which they were on already and they were given diet advice and yogic practices were taught.

Setting: Isha Life Health Solution, Chennai, India

Intervention: Integrated management of type 2 diabetes using Siddha Medications, yogic practices and dietary modifications.

Results: Results were analyzed using paired "t" test. There was a statistically significant reduction in terms of fasting and postprandial sugar levels and HbA1c. There was improvement in diabetic related symptoms.

Conclusion: It was evident from this study that integrating Siddha medications with yogic practices and dietary modifications can have beneficial effects on type 2 diabetes. Translating this evidence into recommendation for clinical practice needs long-term studies and evaluation.

Keywords: Siddha, Isha Yoga, Diabetes Mellitus 2, Madhumegam

### Introduction

Diabetes is agroup of metabolic diseases in which an individual has high blood glucose either because insulin production is not adequate, or the body doesn't respond properly to insulin, or both. Patients with high blood sugar will typically experience polyuria, (frequent urination), increased thirst (polydipsia) and excess hunger (polyphagia). The incidence of diabetes is around 425 million adults worldwide and by 2045, this will rise to 629 million.

India has more diabetics than any other country in the world, according to the International Diabetes Foundation, although the country has now been surpassed in the top spot by China. Diabetes currently affects more than 62 million Indians, which is more than 7.1% of the adult population. Nearly 1 million Indians die due to diabetes every year.

#### Siddha and Yoga

Siddha system of medicine is one of the ancient forms of Indian medicine. The word "Siddha" means realized one (in Sanskrit) who is endowed with faculties called Siddhi; refers to the mastery over one's self.

The physiological concepts of these medical systems are based on the principle that everything in the universe is composed of five basic elements ether, air, fire, water and earth. Food and air supply basic elements which, converted into a juice (rasam), produce successively the seven body constituents, lymph, blood, muscle, fat, bone, marrow and semen; each constituent resulting from the degradation of the precedent. The balance of Dathus, and concomitantly of the three Doshas (v ta -wind',pitta -bile'-kapa -phlegm') depend on the appropriateness of the diet and proper way of life.

In Siddha, Madhumegam comes under NeerArugalNoi and it's of 20 types. The diagnosis and management of Madhumegam is based on tridosha theory. The diagnosis and treatment of a particular disease is primarily based on correcting the imbalance in these doshas

Yogic science says our human body is composed of five progressively subtle bodies like Annamayakosha, (Maya means "made of" and Anna means "food" or physical matter) Pranayamakosha, Manomayakosha (which means "body made of thought processes") Vijnanamayakosha (vijnana means "the power of judgment or discernment) Ananda Maya kosha, the subtle most body which is experienced as Ananda (spiritual bliss).

Standard allopathic modalities alone cannot be effective in managing diabetes mellitus since they can

only maintain the blood sugar levels in the body, but not reversing the pathophysiology.

The holistic integrated approach has shown to be effective and safer in the management of type 2 diabetes. Integrating siddha medications with lifestyle modifications like yoga and diet has shown to improve glycaemic control in type 2 diabetics and it's also possible to reduce the dependence on allopathy medications. Although there are many studies that reveal efficacy of CAM modalities, there are very few studies which report the efficacy of these modalities when integrated together. Hence this study was planned to show the efficacy of integrating Siddha medicine with lifestyle changes like yoga and diet.

#### **Materials and Methods**

# Subjects:

Ten (n=10) subjects (male-7 female-3) aged between 35-70 years with type 2 diabetes mellitus were recruited for the study who were seen as out patients at Isha Health Solutions, India. Patients were screened initially for co morbidities like renal, cardiac and retinal complications.

**Design:** Observational study

#### **Methods**

All subjects went through integrated approach of Siddha medications, dietary modifications and yoga along with the allopathic medications which they were on already. There was flexibility in changing medications for the patients depending on the symptoms. Initially patients were assessed by Allopathy and Siddha Doctors, Nadi was checked, prescribed medications accordingly along with diet advice and yogic practices which was taught by trained Hatha yoga teachers. Fasting and post prandial sugars and HbA1c were checked initially and 3 months after the intervention.

#### Siddha protocol

Treatment plan	Drugs used in treatment plan with their dosage and time
Madumegam Kudineerchoornam	1 tsp with 1 glass of water reduce into 1\4 th of glass tds before food
Maduram capsule	2 tds bf
Hepacure syrup	3 tsptds bf
Seenthil choornam	1 tspbd
Triphala choornam	1 tsp bedtime

#### Intervention

A validated Siddha protocol developed on the basis of classical scriptural references were used.

Yogic practices for diabetes comprised of Yogasanas, Pranayama, and meditation was taught.

Dietary advice and plan given.

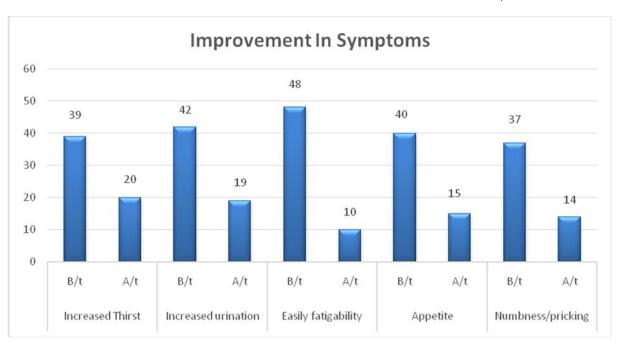
#### **Outcome measures**

FBS,PPBS and HbA1C were assessed initially and 3 months after the intervention.

# Symptoms score

The average severity of all the symptoms related to diabetes was recorded initially and three months after the intervention.

Severity was scored on a 4 point scale of 0-3 (0: Nil, 1: Mild, 2: Moderate, 3: Severe)



#### **Medication Score**

Reduction in the allopathic medications like oral hypoglycaemic agents and Insulin dose. We could observe about 30% reduction in these drugs.

# **Statistical Analysis**

Paired samples "t" test was used; a significance value set at 0.05 for two-sided hypothesis testing.

#### Results

The mean age was 45 +/- 8.3 years with no comorbidities like cardiac, renal and retinal complication. After 3 month of intervention, there was reduction in blood sugar levels in terms of FBS, PPBS and HbA1c.

#### **FBG**

95% CI for mean difference: (5.49, 41.51)
T-Test of mean difference = 0 (vs 0): T-Value = 2.87
P-Value = 0.015

#### **PPBG**

95% CI for mean difference: (31.0, 85.3)
T-Test of mean difference = 0 (vs 0): T-Value = 4.72
P-Value = 0.001

#### HbA1c

95% CI for mean difference: (0.76, 6.06)
T-Test of mean difference = 0 (vs 0): T-Value = 2.83
P-Value = 0.016

# **Discussion**

This observational study on ten subjects with T2DM has shown significant reduction in FBG, PPBG and HbA1c along with the reduction of allopathic medications.

## Strength of study

This is the first attempt to test the efficacy of multi modalities in holistic approach of diabetes in a Non-residential setting using standard tools of assessment. The development of an integrated module by an exhaustive search of all available texts of Siddha and Yoga with a sound conceptual basis for the holistic approach is the major contribution of this study. Rendering the traditional knowledge in an acceptable capsule for the present day elite community of diabetics has been achieved by this observational study.

# Limitation of the study

Sample size was small and no control group was planned. There is lack of a control group using either of Siddha and Yoga; the comparison with other single method study is not very valid. As this was an observational study and not an efficacy trial the conclusions from the study are only pointers to a larger study and not a proof of concept.

#### Conclusion

This observational study has shown the safety, feasibility and indication of a potentially beneficial effect of an integrated Siddha and yoga module in achieving good glycaemic control with reduced requirement of allopathic medication in patients with T2DM.

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