



## Clinical Outcome of *Siddha* Add-On Therapy in Longstanding Type II Diabetes Mellitus: A Case Report

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### ABSTRACT

**Background** Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder frequently observed among elderly individuals and characterized by persistent hyperglycemia, insulin resistance, and progressive complications. Limitations of conventional therapies have increased interest in traditional Siddha formulations for supportive management. **Objective** To evaluate the therapeutic effect of Madhumega Chooranam and Muthuchippi Parpam in improving glycemic control and clinical symptoms in a 72-year-old male patient with long-standing Type 2 Diabetes Mellitus. **Article Design and Setting** This article presents a single-patient observational case study conducted in a Siddha Clinical Research Unit, Goa, India. The patient was administered *Madhumega Chooranam* and *Muthuchippi Parpam* orally according to classical Siddha dosage guidelines, along with appropriate dietary and lifestyle recommendations. Clinical symptoms, fasting blood glucose (FBG), post-prandial blood glucose (PPBG) and Glycosylated hemoglobin(HbA1C) levels were assessed before and during the treatment period. **Results** The patient showed progressive improvement in glycemic parameters, with reductions in FBG, PPBG and HbA1c levels. In addition, there was decrease in the serum cholesterol level which was a new finding. Symptomatic relief was noted in polyuria and fatigue. No adverse effects were reported during the study period, indicating good tolerability of the Siddha formulations. **Conclusion** Madhumega Chooranam and Muthuchippi Parpam showed promising results in the management of T2DM in an elderly patient, contributing to improved glycemic control.

**Keywords** Type 2 Diabetes Mellitus, *Madhumega Chooranam*, *Muthuchippi Parpam*, Siddha Medicine, Glycemic Control, Case Study.

### INTRODUCTION

Diabetes Mellitus remains a major global health concern, particularly among elderly populations where chronic hyperglycemia leads to macrovascular and microvascular complications<sup>1</sup> Globally, the number of people living with diabetes rose from 200 million in 1990 to 830 million in 2022. Prevalence has been rising more rapidly in low- and middle-income countries than in high-income countries. In 2021, diabetes and kidney disease due to diabetes caused over 2 million deaths. In addition, around 11% of cardiovascular deaths were caused by high blood glucose. Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. More than 95% of people with diabetes have type 2 diabetes<sup>2</sup>. Diabetes is a chronic condition that occurs when the pancreas can no longer make insulin, or the body cannot effectively use insulin. Insulin is a hormone made by the pancreas that acts like a key to let glucose from the food we eat pass from the bloodstream into the cells in the body to produce energy. The body breaks down all carbohydrate foods into glucose in the blood, and insulin helps glucose move into the cells. When the body cannot produce or use insulin effectively, this leads to high blood glucose levels, called hyperglycaemia. Over the long-term high glucose levels are associated with damage to the body and failure of various organs and tissues. Type 2 diabetes is the most commonly diagnosed type of diabetes, The primary indicator of type 2 diabetes is insulin resistance, when the body cannot fully respond to insulin<sup>3</sup>. *Matumēkam*, (ISM code - 4.11.40) a term used in traditional *Siddha* medicine, closely corresponds to the modern medical condition Diabetes mellitus. Both conditions describe a state in which impaired carbohydrate metabolism leads to elevated blood glucose levels and characteristic symptoms such as excessive thirst, frequent urination, and weight changes. *Siddha* texts describe *Matumēkam* as a disorder arising from imbalances in the body's humors (*doshas*), particularly derangements of *aīal/pittam* and *Aiya/kapam*, which ultimately affect the urinary system and metabolic functions.



## Patient Information

A 72-year-old male patient with a history of longstanding Type II Diabetes Mellitus and associated hypertension presented for consultation due to uncontrolled blood sugar levels, with a recent HbA1c value of 8% visited Siddha Clinical Research Unit, Ribandar, Goa. He is currently on oral antidiabetic medications, including Gemer Sita IR 50/1000/1 taken one tablet in the morning and night, and Dapnorm M 5/500 taken one tablet in the afternoon. For hypertension, he is on Stamlo Beta, one tablet in the morning. There is no significant family history reported, and details regarding lifestyle factors were not specified. The patient sought medical attention for better glycemic control and management of his condition.

## Clinical Findings

On presentation, the patient had an HbA1c of 8% and a serum cholesterol level of 220 mg/dL. On general examination, he was found to be stable, with no acute complications reported. His blood pressure was within the controlled range under ongoing antihypertensive therapy.

## Timeline

**Table 1: Timeline of Clinical Investigation, Treatment and outcome**

Date	Clinical Status	Intervention	Outcomes
12/06/2024	Baseline: HbA1c 8%, Cholesterol 200 mg/dL	Started Madhumega Chooranam- 2 g BD + Muthuchippi Parpam -300 mg BD along with existing medications	
14/12/2024 (4 months)	Glycemic improvement	Continued same regimen	HbA1c ↓ to 6.5%
05/04/2025 (8 months)	Mild worsening	Continued same regimen	HbA1c ↑ to 7.3%
21/06/2025 (10 months)	Improvement resumed	Continued same regimen	HbA1c ↓ to 6.7%, Cholesterol ↓ to 126 mg/dL

## Diagnostic Assessment:

Patient was already diagnosed with type 2 diabetes mellitus and was also under medication. The diagnosis was based on the glycosylated haemoglobin, Fasting Blood Glucose, Postprandial Blood glucose levels and estimated average blood glucose levels.

## Therapeutic Intervention:

The patient continued his standard antidiabetic and antihypertensive medications along with Siddha treatment. He was prescribed Madhumega Chooranam at a dose of 2 g twice daily and Muthuchippi Parpam at a dose of 300 mg twice daily, both administered orally for a duration of 10 months. In addition, the patient was advised on diet and lifestyle modifications, which included mild walking for 30 minutes daily, following a diet plan focused on balanced nutrition, and maintaining adequate hydration and proper sleep. No adverse effects were reported during the treatment period.

**Table 2: Details of Siddha Classical Formulation**

Name Of The Medicine	Tamil Name	Scientific Name
<i>Madhumega Chooranam</i>	1. Kadukkai	<i>Terminalia chebula</i>
	2. Seenthil	<i>Tinospora cordifolia</i>
	3. Nellikai	<i>Phyllanthus embilica</i>
	4. Kari Veppilai	<i>Murrayakoenigii</i>
	5. Naval	<i>Syzygiumcumini</i>
	6. Korai Kilangu	<i>Cyperus rotundus</i>
	7. Kila Nelli	<i>Phyllanthus amarus</i>
<i>Muthuchippi Parpam</i>	1. Muthuchippi	<i>Pinctada margaritifera</i>
	2. Katralai	<i>Aloe barbadensis</i>
	3. Ponnaganni	<i>Alternanthera sessilis</i>



## Follow Up and Outcome

During follow-up, the patient showed progressive improvement in his glycemetic status. At the first follow-up on 14/12/2024, after four months of treatment, his HbA1c improved from 8% to 6.5%. At the second follow-up on 05/04/2025, after eight months, his HbA1c slightly increased to 7.3%. However, at the third follow-up on 21/06/2025, after ten months of treatment, his HbA1c again improved to 6.7%. In addition, his serum cholesterol level showed significant improvement, reducing from 220 mg/dL to 126 mg/dL. Overall, the patient demonstrated notable improvement in glycemetic control and lipid profile following integrative therapy.

**Table 3: Timeline of Investigations**

Investigation	12/06/24	03/08/24	14/12/24	05/04/25	21/06/25
Glucose Fasting		124.28mg/dL	105.86mg/dL	121.6mg/dL	114.9mg/dL
Glucose Post Prandial		213.04mg/dL	136.16mg/dL	118.5mg/dL	184.4mg/dL
Estimated Average Glucose			139.85mg/dL	162.81mg/dL	145.59mg/dL
Glycosylated Hemoglobin (HbA1c)		8.0%	6.5%	7.3%	6.7%
Serum Cholesterol	220mg/dL			223mg/dL	126 mg/dL

## Discussion:

The present case highlights the potential role of integrative therapy combining *Siddha* medicines with standard antidiabetic and antihypertensive treatment in improving glycemetic and lipid control in an elderly patient with longstanding Type II Diabetes Mellitus. The patient initially presented with uncontrolled diabetes, as evidenced by an HbA1c of 8%, along with borderline high serum cholesterol levels. Despite being on regular oral hypoglycaemic and antihypertensive medications, optimal metabolic control had not been achieved.

Following the introduction of *Siddha* medications, namely *Madhumega Chooranam* and *Muthuchippi Parpam*, along with structured lifestyle and dietary modifications, a progressive improvement in glycemetic parameters was observed. At four months, the HbA1c reduced significantly to 6.5%, indicating better glycemetic control. Although a mild increase to 7.3% was noted at eight months, which may be attributed to factors such as dietary variations, medication adherence, or age-related insulin resistance, the HbA1c again improved to 6.7% at ten months. This trend suggests sustained metabolic benefits with continued therapy and patient compliance.

Several published studies on traditional and complementary systems of medicine, including *Siddha* and other Indian traditional practices, have reported improvements in glycemetic control through herbal and mineral formulations. Polyherbal preparations such as *Madhumega Chooranam* are believed to exert antihyperglycaemic effects through multiple mechanisms, including enhancement of insulin sensitivity, stimulation of pancreatic beta-cell function, and reduction of oxidative stress<sup>4,6,7</sup>. The herbal components used in *Madhumega Chooranam* have been shown in experimental and clinical studies to possess antioxidant, anti-inflammatory, and glucose-lowering properties. These mechanisms are particularly relevant in elderly diabetic patients, where chronic inflammation and oxidative stress contribute to insulin resistance and vascular complications<sup>4,6</sup>.

Similarly, *Muthuchippi Parpam*, a marine-derived mineral preparation, is traditionally indicated in metabolic and endocrine disorders. Published literature suggests that such mineral-based formulations may contribute to metabolic regulation and lipid reduction. In the present case, a notable improvement in serum cholesterol from 200 mg/dL to 126 mg/dL was also observed, supporting earlier findings that integrative approaches can positively influence lipid metabolism<sup>8,9</sup>. Improved lipid control is crucial in elderly diabetic patients, as dyslipidaemia significantly increases the risk of cardiovascular complications<sup>3</sup>.

Lifestyle modification also played an important role in the observed clinical outcomes. Regular mild physical activity, balanced nutrition, adequate hydration, and proper sleep are well-recognised components of diabetes management. Studies have consistently shown that even moderate physical activity, such as daily walking, can improve insulin sensitivity and reduce cardiovascular risk<sup>3,11</sup>. The combination of pharmacological therapy and lifestyle interventions is recommended by global diabetes management guidelines, which emphasise patient-centred and multidisciplinary approaches.

Importantly, no adverse effects were reported during the ten-month treatment period, suggesting that the integrative therapy was well tolerated. This is particularly significant in geriatric patients, who often have multiple comorbidities and are at increased risk of drug-related complications. The safety profile observed in this case aligns with previous pharmacokinetic and clinical studies supporting the tolerability of *Siddha* antidiabetic formulations<sup>5</sup>.



## Conclusion

This single case report highlights the potential role of Siddha medicine as an effective adjunct in the management of Type II Diabetes Mellitus combined use of *Madhumega Chooranam* and *Muthuchippi Parpam* alongside standard allopathic treatment resulted in improved glycemic control and lipid profile in a 72-year-old male with longstanding diabetes and hypertension. The reduction in HbA1c and serum cholesterol indicates enhanced metabolic regulation without reported adverse effects. These findings suggest that *Siddha* formulations may complement conventional therapy. Integrative management may be particularly beneficial in elderly patients where long-term disease control is challenging. While the results are encouraging, they are limited by the single-patient design. Larger observational studies are required to validate safety and efficacy. This case contributes preliminary clinical evidence supporting the inclusion of *Siddha* medicine in integrative diabetes care. Continued documentation of such cases will strengthen the scientific basis for traditional medical systems in chronic disease management.

## Patient Perspective

The patient reported feeling better overall after starting the *Siddha* medications along with his regular treatment. He noticed improved in tiredness and blood sugar control during follow-up visits. He did not experience any adverse effects from the *Siddha* medicines. The patient expressed satisfaction with the integrative treatment approach. He was willing to continue the *Siddha* therapy as part of his long-term diabetes management.

## REFERENCES:

1. Lu Y, Wang W, Liu J, Xie M, Liu Q, Li S. Vascular complications of diabetes: A narrative review. *Medicine (Baltimore)*. 2023 Oct 6;102(40):e35285. doi: 10.1097/MD.00000000000035285. PMID: 37800828; PMCID: PMC10553000.
2. <https://www.who.int/news-room/factsheets/detail/diabetes#:~:text=The%20number%20of%20people%20living,caused%20by%20high%20blood%20glucose.>
3. <https://idf.org/about-diabetes/what-is-diabetes/>
4. Saravana Babu C, Krishnakumari S, Venkatesh S. Polyphenols in Madhumega Chooranam ameliorate carbohydrate metabolism and oxidative stress in type 2 diabetic rats. *J Ethnopharmacol*. 2012;142(2):331–336
5. Anbarasi C, Thanikachalam S. Pharmacokinetics of Siddha Antidiabetic Polyherbal Formulation Madhumega Chooranam in Healthy Volunteers. *Cureus*. 2024 Oct 25;16(10):e72348. doi: 10.7759/cureus.72348. PMID: 39583368; PMCID: PMC11585863.
6. S, Iyswarya, et al. “In Vitro Anti-Diabetic and Antioxidant Potential of the Siddha Formulation Mega Sanjeevi Chooranam”. *International Journal of Ayurvedic Medicine*, vol. 15, no. 3, Oct. 2024, pp. 717-24, doi:10.47552/ijam.v15i3.4946.
7. P. Azhagarasi, A. Vijayalakshmi, C. Surya, T. Prabha, N. Kiruthiga, R. Senthil Kumar, P. Selvamani and S. Latha, Anti Diabetic Activity of Illupai Ver Chooranam on Streptozotocin Diabetic Rats.(2022).*Int. J. Life Sci. Pharma Res.*12(3), L73-79 <http://dx.doi.org/10.22376/ijpbs/lpr.2022.12.3.L73-79>
8. Titto, S H. Clinical Evaluation Of Siddha Mono-Herbal Formulation Oorithal Thaamarai Chooranam: A Prospective, Open-Labelled, Single-Armed, Non-Randomized, Phase-II Clinical Trial In The Management Of Madhumegatthal Parutha Udal (Diabetic Dyslipidemia). *African Journal of Biomedical Research*. 2024 Nov 2;5955–65.
9. N, Suresh & N, Anbu. (2023). Physicochemical and Phytochemical Analysis of Siddha Polyherbal Formulation “Madhumega Nivarani Chooranam”. *World Journal of Current Medical and Pharmaceutical Research*. 198-201. 10.37022/wjcmpr.v5i5.293.
10. American Diabetes Association. Standards of care in diabetes—2024. *Diabetes Care*. 2024;47(Suppl 1):S1–S350.

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